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Certification scheming

EVERY man and his dog is talking about certification. Two paradigms are being promulgated. In one, certification is a major focus for action to halt the loss and degradation of the world's forests. Certified wood, it is claimed, offers the buyer reassurance that he is not contributing to forest destruction and the new forestry bogey of illegal logging. Certification is good for both forests and consumers, and the main problem is that standards are not always high enough. This paradigm originates and is accepted mainly in developed countries.

In the other paradigm, which is more common in tropical countries, certification—even 'voluntary' certification—is an impediment to trade and an attempt by developed countries to once more impose their views on developing countries. For many reasons, certification is much more difficult to achieve in natural tropical forests than in temperate forests and plantations—less than seven million hectares of the 109 million hectares of currently certified forest[1] are in the tropics—and certification standards are too high.

Straddling these two paradigms are people who believe that certification, though not a cure for every forest

Contents

Regular features

Editorial Alastair Sarre
Design Justine Underwood
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Cover image *Photo: A. Sarre*

... Editorial continued

management ailment, can play a positive role in the tropics. In a recent report[2], Stephen Bass and his co-authors argued that one of the greatest benefits of certification to date has been its ability to improve forest policies, in particular by raising awareness about the possibilities for sustainable forest management and by decentralising and democratising policy processes. Others say that certification offers an incentive—if not a financial then a moral one—for communities, companies and forestry workers to raise their forest management standards. But perhaps the biggest single driver for certification so far has been its usefulness in marketing; timber buyers in particular have found the device useful for improving relations with the environmental movement.

Progress in tropical forest certification has been slow; Eba'a Atyi and Simula (page 3 of this edition) point out some of the impediments. One of these is the inflexibility of standards: tropical forests, they argue, are disadvantaged when certification standards focus on the end-results of management practices and do not recognise stages on the way to sustainability. They recommend a phased approach to certification, one that might help bridge the two paradigms. The first phase, they suggest, would be to demonstrate compliance with forest laws.

The success of such a phased approach depends on the support it receives from the various certification bodies—including the global Forest Stewardship Council (FSC), the regional (and aiming to become global) Pan European Forest Certification (PEFC) scheme, and national schemes such as those created in Malaysia, Indonesia and Brazil. These bodies are staking out their territories in the global forest landscape. Mok (page 10) writes that the FSC is now implementing a strategic action plan to bring 30% of the world's forests under certification to FSC standards and increase to 15% the share of the global roundwood market held by FSC-certified forests by 2007. The PEFC, reports Gunneberg (page 8), is developing a procedure for the endorsement of national and regional schemes outside Europe, including in the tropics. Knight (page 6) writes that the home improvement company—and major player in the certification debate—B&Q prefers to staple its colours to the FSC mast. Both the Indonesian Ecolabelling Institute (page 9) and the Malaysian Timber Certification Council (page 12) call for a phased approach to tropical forest certification, something the FSC so far seems to be resisting.

The scheming of the various certification actors looks set to continue for some time. Will it be time (and money) well spent? Leslie and his co-authors argue that forest certification in its current form will remain a marginal activity, with little influence on the retention of forest values (such as biodiversity) in natural tropical forests. One reason for this is the declining real value of timber grown in such forests; even now, such timber is not able to generate sufficient revenues to make sustainable (or certifiable) forest management an attractive land use option, and it seems likely that it will be even less capable of doing so in the future.

Nevertheless, establishing an effective apparatus for forest certification remains a useful endeavour. Temperate forests and plantations cannot match some of the services provided by tropical forests, particularly biodiversity conservation. Should these services become marketable, certification will be a way of reassuring customers that they are getting what they are paying for.

Alastair Sarre
and
Amha bin Buang

[1] *The figures for certified area quoted here are taken from a report by Richard Eba'a Atyi and Markku Simula (see page 3) and were current in January 2002. In July 2002 the total area of certified forest had increased to about 130 million hectares.*

[2] *Bass, S., Thornber, K., Markopoulos, M., Roberts, S. and Grieg-Gran, M. 2001.* Certification's impacts on forests, stakeholders and supply chains. *Instruments for sustainable private sector forestry series. International Institute for Environment and Development, London.*

Forest certification: pending challenges for tropical timber

Plenty of work needs to be done before certification becomes common in the tropics

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Uncertain certificate: This timber at the CIB concession in northern Congo was certified by the Keurhout Foundation, although the certificate is now under review. An ITTO project being implemented by the Wildlife Conservation Society and the Government of Congo is helping to raise management standards in the concession. *Photo: E. Müller*

FOREST certification is expanding rapidly. In January 2002 the area of certified forest was estimated at 109 million hectares; this is almost four times higher than it was two years ago and twice the level of a year ago. The total includes third-party audited areas under the two international systems (Forest Stewardship Council—FSC and Pan-European Forest Certfication—PEFC), national schemes (Canada, Malaysia and the United States), and those forests for which a Keurhout declaration had been issued.

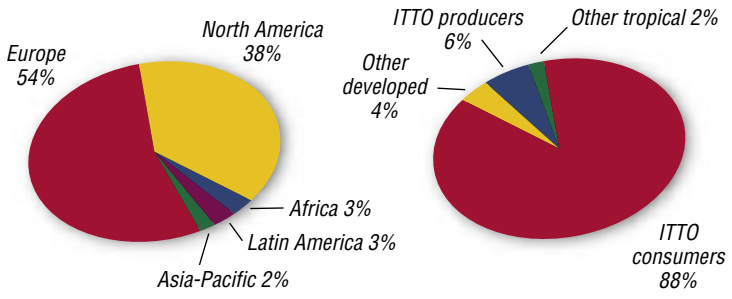
Geographically, the certified forest area is distributed unevenly: more than half is located in Europe and almost 40% in North America *(Figure 1)*. Developing countries account for no more than 8% of the total, of which three-quarters (6.5 million hectares) are in ITTO producing member countries. The imbalance has changed over time; for example, in 1996 the share of developing countries in the total was 70% (Baharuddin & Simula 1996).

The market share between the schemes has also changed. A few years ago, all the world's certified forests were registered under the FSC; the scheme's current market share is 23%, falling well behind that of the PEFC (38%). The national schemes in North America (Sustainable Forestry Initiative—SFI, The American Tree Farm System—ATFS, and the Canadian Standards Association—CSA) account for a quarter of the world total. With the exception of Malaysia and the certifications approved by Keurhout, all the forests certified under national systems are located in the North. In the case of the FSC, the developing world accounts for 19% of the certified area, which is more than double the world average.

Several ITTO producing member countries have been actively developing their own national certification schemes. The most advanced are found in Indonesia (LEI), Malaysia (MTCC), Brazil and Ghana.

Regional bias

Figure 1: Certified forests by region, January 2002



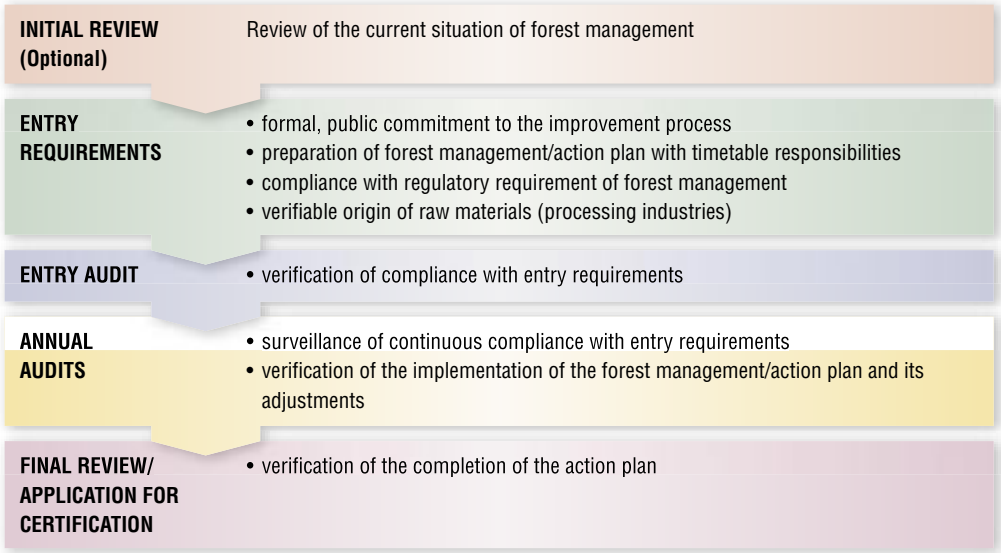
Total area 109.1 million hectares

Impediments to progress

In contradiction to its initial focus, which was on "distinguishing between tropical deforestation and good tropical forest management" (Bass et al. 2001), the overall direct impact of certification in timber-producing tropical countries has remained very low. Several issues need to be addressed if more rapid progress is to be made.

Inflexibility of standards: one of the reasons that so few natural tropical forests have been certified over the last nine years relates to the inflexibility of performance standards. Tropical forests, where efforts to implement SFM are recent and often far from definitive, are disadvantaged because certification standards tend to focus on the end-results of SFM practices. Current certification standards do not recognise stages on the way to SFM. In addition, certification standards that specify particular types of inputs and

Verification system of progress towards SFM



Source: Adapted from Cozannet & Nussbaum (2001)

technologies can impose a greater cost burden in tropical situations than in developed countries, or even exclude producers without access to the required inputs (Markopoulos 2000).

Lack of recognition of broader local land-use issues: certification focuses primarily on forest management units and often fails to take into account other land-use issues—such as the development of agriculture—which can have a significant impact on forests. For example, comprehensive land-use planning at the landscape or regional levels may include delineating permanent forests and designating forested areas where the development of agriculture will be allowed. In such a case, only permanent forest would be affected by certification, which would not recognise efforts to sustain land-use practices on a larger scale. Certification is not able to address the root causes of deforestation, which is not its purpose, either.

Conflicts and/or incompatibility between legal settings and certification standards: in some cases there may be conflicts between national laws and forest certification standards. For example, the ownership of land, common-use rights to forest products and services and the sharing of responsibilities between the government, the local people and the forest concessionaire may be locally defined in a way which does not correspond to the requirements of voluntary certification. What may be considered 'illegal' based on public law or unacceptable for voluntary certification standards may still be part of customary law and the traditional rights of local people living in and around forests.

The above points are just a few examples of constraints that should be addressed before certification can work on a large scale in the tropics. Local standards developed through an inclusive participatory process within an appropriate international framework should result in performance requirements that are relevant to and achievable by concession holders, communities and other forest owners in specific country conditions.

Options for tropical timber producers

Forest certification remains one of the most contentious issues in international forest policy because it is a trade-related instrument and countries feel that it could influence their competitiveness and market access. In particular, tropical timber producers are concerned about the difficulties they face in achieving certification status and the expected increase in production costs, while market benefits look uncertain and distant. Developing countries are in a quite different situation compared to developed countries with regard to their certification needs and possibilities and in the resources they have for making use of certification. In developing countries, certification is often perceived as yet another difficult-to-meet market requirement imposed by importers and as something that may constitute a barrier to trade rather than be an aid for promoting their exports.

Where ITTO producing member countries lag behind the other countries, accelerated action and more support are needed to give them access to, and to benefit from, certification. The development of certification standards has proved to be costly and time-consuming. A number of options are available in the development of certification in ITTO producing member countries:

(i) **the certification of best-managed concessions to the requirements of the generic FSC standard in cases where the necessary preconditions exist:** a number of examples are already available but experience suggests that progress is likely to be slow and the impact on SFM will remain limited;

(ii) **development of national certification standards:** this work should meet the international requirements set for such standards. For marketing purposes, the standards should be recognisable by buyers and eventually also by a suitable international scheme. For the time being, the FSC offers the only option for international recognition, which means that the structure of the national standard should strictly follow the FSC Principles and Criteria structure and the scheme should meet FSC rules for national initiatives. Bolivia is an example of where a national, FSC-endorsed standard has worked well.

If the FSC approach is not feasible in a particular country, other avenues such as the Keurhout Foundation, based in the Netherlands, can be explored—as is happening in Malaysia and the Congo Basin. In this case, the direct market benefits would be linked to exports to the Dutch market. The PEFC also has provisions for recognising non-European schemes, even though no such endorsement has taken place yet (see article page 8);

(iii) in view of the uncertainties related to option (ii)—in the case of the FSC, a lack of firm policies and clear rules on the endorsement of other schemes, long time periods needed for consultation, etc—**countries may consider developing regional schemes** (such as the planned Pan-African certification scheme; see page 11), drawing on the ITTO/regional set of criteria and indicators for SFM.

In the Pan-African case, the harmonised ATO/ITTO Principles, Criteria and Indicators may serve as a common framework for a national or regional certification standard. This approach is demanding, because an adequate governing structure would have to be established but, on the other hand, the regional scheme would reduce the proliferation

of national schemes that could otherwise emerge. The standard(s) and arrangements could be tailored to fit local conditions and requirements.

In addition to Africa, the regional approach has been suggested for the ASEAN, Central American and Andean countries, but these initiatives have not lead to concrete action. Currently, the strongest support appears to exist for the Pan-African scheme.

Due to weaknesses in organisation and capacities, the above strategic approaches have not resulted in a rapid expansion of certification in the ITTO producing member countries. Further action may be needed to clarify the strengths and weaknesses of such approaches, their feasibility in local conditions, and the acceptability of the results in the major certification-demanding markets.

Stepwise approaches

Several proposals have been made by different fora for stepwise approaches that would recognise the progress being made towards SFM by developing country producers. The reason behind such proposals is that the FSC requirements have been so high that the scheme's progress in the natural tropical forests has remained slow and other options have not been available.

A related development is the growing importance given to curbing illegal logging and illegal trade. Some consumer countries or buyers have established policies which state that wood products must originate from sustainable and/or legal sources. The issue of how legality should be defined is not addressed here, but such policies usually recognise two alternative 'levels' for the quality of forest management and the wood supply chain. Compliance with the legal requirements is inherent in all the forestry standards, which are broader and often more demanding than the law. As regards trade and industry, the control of the origin of raw materials and its 'legality' is part of the chain-of-custody (CoC) verification. Certification of CoC does not, however, necessarily provide full verification of the origin of wood that does not have a certificate for the quality (and legality) of the forest management regime under which the timber was harvested. Therefore, a CoC certificate holder may be involved (intentionally or unintentionally) in handling illegally procured timber.

In view of the seriousness of illegal harvesting and illegal trade in tropical timber (see, for example, *TFU* 12/1), synergies between improved enforcement and certification could be tapped through a phased approach. One first step could be the verification of legal compliance, with the gradual introduction of other elements of SFM. This kind of phased approach would have specific protocols stepwise covering the various elements of SFM but the verification procedures would be identical to 'full' certification assessments. The approach could allow applicants to make claims on their progress towards full certification status. These claims would always be based on external verification.

In forest management, sustainability requires that the concession holder or forest manager address all its elements as specified in the SFM standards. These elements may be formulated into operational modules as suggested by Cozannet and Nussbaum (2001; *see diagram on opposite page*). In large-scale concession forestry, the core component of the management system is the forest management plan, supported by an adequate inventory and demarcation of the permanent forest estate (eg see ITTO 1998). This is also recognised by many producing countries, which have revised or instituted minimum legal requirements for inventories and management plans. Appropriate management planning is a fundamental requirement in all certification systems.

The Keurhout Foundation has also applied a stepwise approach in some African concessions. In the initial audit, the current status of forest management is established as defined in the five Keurhout principles (see www.stichtingkeurhout.nl). An action plan is then prepared, addressing gaps and corrective action requirements. An external body subsequently verifies the implementation of the action plan through surveillance visits.

The stepwise approach is still under conceptual development but it offers an attractive option for enterprises that need to demonstrate to their customers that verified progress is being made towards SFM. Cozannet and Nussbaum (2001) list a number of issues that have to be addressed if market claims are to be made during the process:

- who should carry out reviews and audits;
- the type of claim that may be made;
- ensuring an adequate level of transparency;
- the potential for a conflict of interest between advisory and verification functions; and
- the link with certification.

The phased approach can take various forms and merits further consideration, particularly from the viewpoint of tropical timber producers.

ITTO support

ITTO has made a significant contribution to providing an appropriate policy framework, a range of tools, and direct support on the ground to promote SFM (see page 16). However, the Organization's role in promoting the certification of tropical forests is still largely undefined as long as it may go beyond building capacity. A more limited role has been mainly advocated by ITTO consuming member countries, while producing members tend to emphasise a more active role for ITTO. The issue merits further examination in view of making full use of certification as a potential tool for promoting SFM and credibly demonstrating progress towards this goal in the ITTO producing member countries.

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Selling wood, not forests

The B&Q retail chain specifies FSC certification to its suppliers, but wants all schemes to focus more on the needs of retailers

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WHEN I look at the complexity of the current debates around certification, and the narrow-minded passion with which various views are put across, I sometimes think we need to stop and take stock of what we are all trying to achieve. By looking too closely at the detail it is easy to convince ourselves that we all want different things from the same certification processes. And in some ways we do, but there is also a good deal of common ground—when we take the time to recognise it. So let me try to give a buyer's perspective on certification.

We should start by recognising that timber certification is still a relatively new concept. As recently as 1991, B&Q had no proper information about where its timber was coming from, let alone how it was produced. When a journalist asked how much tropical timber we stocked, alarm bells rang. The more questions we asked of ourselves and of our suppliers, the louder those bells rang. B&Q alone had over 25 different labels on our products—all trying to reassure our customers that our products were from soundly managed forests. They didn't! The only thing that was going to provide an adequate degree of reassurance, to us as well as to our customers, was a credible, independent certification process. That is why we became so actively involved in the creation of the Forest Stewardship Council (FSC).

The FSC and PEFCC are likely to compete actively with each other for the foreseeable future—and that need not be a bad thing.

Ten years of commercial experience have not changed our view that the FSC is the best of the certification schemes. But no one who knows B&Q (or Kingfisher, the parent company) will be in any doubt about the reasons why we choose to support FSC. Our decision has nothing to do with sentiment or force-of-habit, but is based on the hard commercial reality that the FSC is the scheme that best suits our current needs. Those needs are summed up in our timber-buying policy, which is:

> *To continue to build our customers' trust that all our wood and paper products come either from proven, well-managed forests or recycled material, thereby continuing to grow sales and build pride for our entire supply chain.*

The FSC provides our customers, our buyers and our suppliers' buyers with three key elements of reassurance:

- the simplicity of one label: none of those groups just mentioned has either the time or the set of skills needed to judge the different labels;
- a label that delivers high forestry and audit standards: the heartwood of a certification system is the standard, and we believe that the FSC standard delivers on all the issues that our customers expect us to be concerned about; and
- a label that has strong support from the environmental NGOs.

We continue to specify FSC timber for all these reasons, even though it limits the freedom of choice we would prefer when searching the world for new products. But that isn't our biggest problem with certification. The real difficulty is that out of far too many available schemes not one has sufficient product focus.

We buy wood and sell wood products, not forests, and want to see certification schemes demonstrate a much greater awareness of the needs of retailers. This is demonstrated best through the missed opportunity for embracing the certification of post-consumer waste. At B&Q we have had to remove the FSC label from some of our products because the recycled content has become too high. We are using another label, but that leaves our buyers and customers confused as to the best option—a high recycled content or a high good-forestry content! The customer-focused approach must be to embrace both in the same certification scheme.

We also recognise that the FSC is not entirely popular with some sections of the industry, usually on the grounds that they prefer to work with the Pan European Forest Certification Council (PEFCC). This latter scheme is not currently recognised by B&Q as an acceptable route for validating timber from well-managed forests. In an ideal world, these two 'umbrella' organisations would either merge or come to some agreement about mutual recognition. But neither of those things is going to happen any time soon.

The FSC and PEFCC are likely to compete actively with each other for the foreseeable future—and that need not be a bad thing. Bringing the two schemes together would not remove the flaws they both possess. Keeping them apart will foster competition, keep bureaucracy to a minimum and may lead to more of a customer focus in their operations. It is also worth pointing out that the people who are most in favour of mutual recognition are also the people who tend to say that a monopoly would be a bad thing.

Apart from the two 'umbrella' schemes there is a mass of individual certification schemes, with a spectrum of standards and audit procedures. This is unfortunate, unproductive and confusing, but mainly for companies that have not taken a clear strategic decision about why they are seeking certified timber in the first place. Those who want certification for its own sake, rather than to provide specific reassurance on specific points for specific purposes, deserve no sympathy.

B&Q is relaxed about the existence of more than one certification scheme. In 2001, 75% of its timber was certified by the FSC, another 20% was certified by the Finnish scheme and 10% could be described as 'work in progress'. This last category is potentially the most interesting. B&Q believes that by working closely with

**Kingfisher is the world's third-largest home-improvement retailer, owning B&Q and Castorama, which have stores in the UK, France, Poland, China, Taiwan Province of China and Canada.*

forests that are not FSC-certified but are in the process of gaining certification it will provide commercial incentives for forest certification and secure sustainable sources of timber. For instance, in Vietnam B&Q is working with a company called Scancom, which supplies B&Q with hardwood for garden furniture while running a development program towards FSC certification as members of the Tropical Forest Trust (TFT; *see box below*).

At a time when FSC-certified tropical timber is still difficult to obtain, and when companies are under increasing pressure to demonstrate that they are operating responsibly, the TFT scheme and the Certification Support Programme operated by SGS (a certifying company) make good sense and deserve support. In either case there has to be an independently verified action plan driving continuous improvement and leading towards certification.

It is difficult to predict how the market for certification will develop. My suspicion is that the FSC and the PEFCC will remain the dominant players, with each gradually achieving distinctive identities and accrediting a range of individual certification schemes. The broad support base of the FSC will make it the stronger brand, based on high standards appropriate to high-profile products and high public awareness. The PEFCC, I predict, will find its primary role in less sensitive markets, based on guaranteeing compliance with national standards. There may also be a niche for schemes certifying to even higher standards than the FSC provides, perhaps under the 'organic' banner.

B&Q's vision of making wood from well-managed forests more competitive than wood from poor or unknown forestry deliberately does not specify the means the company will employ to achieve that aim. We will continue to engage in the certification debate and do what we can to influence its course. But we will also work flexibly with whichever schemes seem most likely to help us achieve our real objectives. A 'perfect' certification scheme would have the following features:

- a clear product focus, making it responsive to the real needs of buyers;
- one label, to aid recognition and marketing;
- high but realistic standards, covering all the key issues;
- buy-in from all stakeholder groups, including positive support from NGOs (because our customers trust their judgement);
- strong chain of custody—to maintain credibility and provide reassurance;
- reliability unquestioned;
- minimal costs; and
- accepts recycled timber on equal terms.

It would be interesting to see the lists that other participants in the timber supply chain would come up with. My suspicion is that there would not be many areas of disagreement, which might be a useful first step in acknowledging that we share a common goal—making wood more competitive than other raw materials, so that we actually sell more wood, and all from well-managed forests.

My suspicion is that the FSC and the PEFCC will remain the dominant players, with each gradually achieving distinctive identities and accrediting a range of individual certification schemes.

The Tropical Forest Trust

Formed by a group of 'northern' companies—six garden furniture retailers and their supplier—in August 1999, the Tropical Forest Trust (TFT) is a non-profit ethical investment company that manages its (now 18) members' investments to help tropical forest managers move step-by-step towards FSC certification. TFT members direct their wood procurement programs to the forests being assisted by the TFT because they know its management is moving toward FSC certification.

Since its incorporation, the TFT has:

- launched three forest management projects in Southeast Asia;
- achieved FSC certification at its project site in Perak State, Peninsular Malaysia;
- driven the process to 'clean up' its members' supply chains by monitoring and reporting on the implementation of chain-of-custody systems in 35 wood-processing factories in Vietnam;
- assisted its members to boost the volume of FSC-certified wood in their supply chain by facilitating contacts with wood sources that are already FSC-certified;
- funded an FSC pre-assessment of a village forestry project in Lao PDR and supported the process to close out corrective actions;
- sponsored national FSC workshops in Cambodia and Malaysia and supported similar events in Lao PDR and Indonesia;
- funded the participation of indigenous peoples in workshops to raise awareness of FSC certification in Malaysia; and
- supported further education for tropical forest managers.

The TFT has developed a three-year strategic plan that sets targets for further assisting tropical forest management stakeholders through the FSC certification process.

Adapted from the TFT's Three-year Plan 2001.

More information can be obtained at www.tropicalforesttrust.com, or contact Scott Poynton at s.poynton@tropicalforesttrust.com

PEFC goes global

The PEFC Council is expanding beyond Europe to include schemes developed against other sustainable forest management processes

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THE Pan European Forest Certification (PEFC) Council is an independent, non-profit, non-governmental organisation promoting the independent third-party certification of environmentally appropriate, socially beneficial and economically viable forest management. It does this by encouraging national or regional, multi-stakeholder-developed, independent third-party forest certification schemes based on political processes for the promotion of sustainable forest management such as the ITTO Criteria and Indicators for Sustainable Forest Management, the Montreal, Tarapoto, Near East, Lepaterique, Dry Zone Africa, Dry Zone Asia and Ministerial Conference on Protection of Forests in Europe (MCPFE, also known as Helsinki) processes and the African Timber Organization/ITTO initiative. PEFC provides a framework and umbrella for the mutual recognition of independent, national forest certification schemes so developed.

PEFC is the largest certification system in the world, with more than 43 million hectares certified by twelve endorsed schemes; the area is increasing rapidly (*see table* and also the interactive database at www.pefc.org). PEFC provides a logo for timber products from such schemes.

PEFC is not only for Europe

Since it was established three years ago the PEFC Council has seen an increase in membership from nine to 19 schemes, including three schemes from North America—the Canadian Standards Association Sustainable Forest Management Standard, the Sustainable Forestry Initiative, and the American Tree Farm System—which will all be seeking endorsement in the near future. This year, three more non-European schemes—from Australia, Chile and Malaysia—have applied for membership and more applications are expected.

The PEFC Council was established on the basis of some fundamental principles that were in danger of being eroded by other efforts to promote sustainable forest management. These principles included, among others:

- respect for and use of regional political processes for promoting sustainable forest management as a basis for developing certification standards;
- support for the subsidiarity principle for each country and encouraging a bottom-up approach to the multi-stakeholder development of certification standards based on the regional political processes to ensure the long-term buy-in of the users of the schemes and of society in general;
- respect for the democratic principles appropriate to each country for developing, with broad stakeholder participation, national certification schemes which can be delivered by certification bodies accredited by national accreditation bodies that are independent of the standards-setting bodies and scheme owners; and
- the genuine separation of the bodies responsible for setting the standards from those assessing and delivering the final certificate to ensure the total independence and impartiality of certification decision-making.

PEFC and independence

Increasing numbers of stakeholders in countries around the world want the certification schemes they develop to be truly independent and appropriate to the political, cultural, economic and ecological realities of their particular country. A simple question can be used to check the independence of any mutual-recognition or endorsement process: can the national scheme remain fully operational should the scheme owners decide to withdraw from a mutual recognition or endorsement process? In the case of the PEFC umbrella the answer is emphatically 'yes'. If a national scheme were to decide to withdraw from the PEFC Council, the use of independent certifiers accredited by national accreditation organisations would ensure it remained fully operational. This would not be the case if, for example, the PEFC Council was to be an accreditation body. This independence requires a responsible and mature approach by all the schemes (and stakeholders) involved in a mutual recognition umbrella.

Most of the schemes that currently form the PEFC Council have been developed against the MCPFE process and have been assessed against the Pan European Operational Level Guidelines (PEOLG). Unfortunately, many of the other regional processes have not yet produced equivalents to the PEOLG; nevertheless, it is appropriate and proper that national schemes should be assessed against the regional processes used to develop them.

The PEFC Council is now reviewing its procedures to facilitate the endorsement process; a set of proposals will

Continued next page

Endorsed and certified

Area of forest certified under schemes endorsed by the PEFC Council, July 2002

Scheme	Area certified *(hectares)*
Austrian Forest Certification Scheme	3 924 000
Belgian Forest Certification Scheme	–
Czech Forest Certification Scheme	–
Finnish Forest Certification Scheme	21 910 000
French Forest Certification Scheme	239 989
German Forest Certification Scheme	5 584 592
Latvian Forest Certification Scheme	8000
Norwegian Living Forest Standards and Certification Scheme	9 352 000
Spanish Certification Scheme for SFM	86 690
Swedish Forest Certification Scheme	2 052 115
Swiss Q Label Certification Scheme	64 574
UK Certification Scheme for SFM	–
Total	**43 221 960**

The challenge of growing certification

A phased approach could be the best way of making more rapid progress

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FOR many developing countries in the tropics, forest certification is a tall order. Many social, political, ecological and economic factors undermine efforts made by these countries in making progress towards sustainable forest management (SFM). In most cases these factors are very complex, intertwined, and extremely difficult to resolve. As a consequence, forest stakeholders in these countries need to work much harder to achieve SFM compared to their counterparts in the temperate, developed world.

Such difficulties are not well recognised in the consuming (developed) countries. This is unfortunate given the dominance of developed countries in determining the norms and values of SFM and also given that the credibility and international acceptance of certification schemes are in most cases determined by NGOs in those countries.

Developing countries are lagging way behind in SFM certification (see page 3). There is a wide gap between the existing level of forest management and what is required by SFM certification standards. This is not all the fault of poor logging practice: some components of the gap are external factors beyond the control of a forest concession-holder. For example, the issue of disputed land tenure has become one of the key stumbling blocks to SFM. Land tenure conflicts between concessionaires or forest owners and local communities, which are not uncommon, often result from flawed government policies on land tenure and natural resource management. This problem is exacerbated by the fact that developing countries often lack the necessary institutional infrastructure to mediate and resolve these conflicts. In Indonesia, for example, virtually all forest areas are under some kinds of tenurial conflict. The Soeharto administration often suppressed local communities and violated their rights over forest lands. Nowadays, the reverse is taking place. Community claims over forests can be found everywhere, from Sumatra to the Papua islands. Some of these are legitimate and reasonable, but others are difficult to comprehend and often include financial claims way beyond what could be deemed reasonable. If the conflict is relatively mild it can often be settled directly by concession-holders in negotiation with community claimants—at a given cost. But in most cases the conflict is much more serious and expensive and cannot be settled easily. Unfortunately, if a multi-stakeholder conflict resolution mechanism is not yet established and if social institutions are unable to mediate the conflict to ensure a win-win solution, forest management units (FMUs) involved in such a conflict will not be certifiable.

Even in the developed world, settling tenurial conflicts is not easy. Australia, for example, took decades before it came up with the Mabo decision in the early 1990s, which went some way towards addressing Aboriginal land-tenure claims in the country. The task is even more difficult when there is political instability and major transitions in power, as is sometimes the case in tropical countries.

Rampant illegal logging poses another hurdle for certification. Illegal logging is in fact not the cause of the problem but a symptom of deeper causes. In Indonesia these causes include: weak legal infrastructure and law enforcement; a political transition that sidelines military and police forces (which in turn leads personnel from these forces to look, on an individual basis, to activities such as illegal logging); legal mayhem as a result of the flawed design of decentralisation; and a lack of willingness on the part of some forest concession-holders to implement legal and sustainable forest management. A high level of illegal logging adds to the complications of certification in developing countries and makes it even less credible in the minds of consuming countries.

For Asian-crisis countries, and other poor countries in the tropics, the costs required to bridge the gap between current practice and the standards of certification can be enormous, and way beyond the financial capacity of forest stakeholders. For national certification initiatives such as the Indonesian Ecolabelling Institute (LEI) and the Malaysian Timber Certification Council, all these challenges significantly

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be presented to members at the Council's General Assembly in November. This includes a proposal for pursuing the endorsement of non-European schemes, although debate on the appropriate structures and procedures to better integrate the other regional processes into the PEFC scheme is ongoing.

The current proposal is that when standards developed by a regional process are submitted to the PEFC Council for endorsement, the documentation shall include a common reference base for each process that is compatible with the PEOLG with respect to scope and the level of requirements. It is therefore proposed that the PEFC Council will approve such a reference base prior to commencement of the scheme assessment (this will of course require studies to be undertaken to inform decision-making); the standards will be assessed against such a reference base. Where such a reference base is not provided, the default procedure will be to use the PEOLG as the basis for the endorsement (as is currently the case). All other scheme requirements will be assessed against the existing PEFC Council requirements as amended from time to time by the General Assembly.

Although initially developed to address the European situation, the PEFC Council's approach now has worldwide appeal. We look forward to closer cooperation with national forest certification schemes around the world to further develop our global mutual recognition umbrella.

The Forest Stewardship Council's expansion plan

The FSC aims to increase to 30% the area of the world's production forests under certification to FSC standards and to 15% the share of the global roundwood market held by FSC-certified forests

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THE Forest Stewardship Council (FSC) is a unique, non-profit, international standards and accreditation organisation committed to promoting the conservation, restoration and protection of the world's production forests. The FSC's forest management standard-setting processes are transparent and inclusive, with the participation of a wide range of stakeholder groups, including those that are traditionally marginalised in forest policy debates. By providing multi-stakeholder fora for the discussion of forest management issues, the FSC has successfully energised policy processes that had been stagnant due to low participation and a lack of trust among stakeholders.

The FSC has more than 400 individual, corporate, institutional and organisational members in 50 countries. Its membership, divided into social, environmental and economic chambers, includes: major environmental organisations such as Greenpeace, Friends of the Earth and the Worldwide Fund for Nature/World Wildlife Fund; social organisations that represent the interests of forest-dependent communities, indigenous peoples and forest workers; and progressive forest management and forest products companies. It has also earned the endorsement of mainstream environmental organisations in the United States such as the World Resources Institute, the Natural Resources Defense Fund, the Sierra Club and the Wilderness Society, and of major timber retailers worldwide, including Home Depot, Lowe's and Nike in the US, IKEA in Sweden, B&Q in the United Kingdom, Intergamma in the Netherlands, and OBI in Germany.

Although the FSC promotes responsible forestry through certification, it does not certify; rather, it accredits certification bodies to conduct the certification and monitoring of good forest management. More than ten certification bodies have been accredited, none of which is based in the tropics. Some accredited certification bodies have agents and partners carrying out FSC audits in tropical countries, notably in Bolivia and Brazil but also in Indonesia and Malaysia. The FSC has endorsed regional standards for these audits in Bolivia, Brazil and Colombia, and FSC members are collaborating to develop standards for FSC endorsement in Argentina, Cameroon, Chile, Ecuador, Ghana, Guatemala, Guyana, Indonesia, Malaysia, Mexico, Nicaragua, Papua New Guinea and Vietnam. Not all of these countries have FSC-endorsed national initiatives, but all base their drafts on the FSC Principles and Criteria for Forest Management.

More than 29 million hectares of forests in 55 countries across five continents have been certified to FSC standards. The certified areas range from small-scale community forests in the Solomon Islands to the entire holdings of the State of Pennsylvania in the US and the lands of the largest commercial timber and paper companies in Europe and North and South America. However, about three-quarters of the FSC-certified area are in temperate and boreal forests. Most of the certified tropical forests are in South America. For example, over one million hectares have been certified in Bolivia, while some 333 000 hectares of natural Amazonian forest have been certified in Brazil; only small areas have

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Continued from page 9

enlarge their scope of responsibility, yet they have very limited institutional, human and financial resources. Not only do they need to develop credible certification standards and establish national capacity to implement the standard, they have to make extra efforts to achieve international recognition, which their developed-world counterparts need not do.

In the case of LEI, in addition to the development of certification standards and the building of national capacity, we must be actively involved in many non-certification issues. For example, LEI takes part in an Indonesian NGO coalition for natural resource management and land reforms. This coalition successfully convinced Indonesia's highest law-making body, the People's Assembly (*Majelis Permusyawaratan Rakyat*), to issue a decree on these issues. Moreover, in the face of early lukewarm responses from some European buyers, LEI needs to work harder to convince them that supporting national initiatives—while remaining in support of an international one—can provide huge incentives for FMUs in developing countries to proceed towards SFM certification. With all these challenges, a big-bang approach to certification seems to be unproductive. All certification supporters need to work together to bridge the gap.

Of all other alternatives, a phased approach to certification appears to be the most useful. This can be divided into two phases: legal compliance and, later, a mutually agreed, gradual progression to SFM certification. In the first stage, forest concessionaires apply for some form of assessment leading to the recognition of legal compliance, including compliance with the terms and conditions of forest management stipulated in the agreement between the state and the forest concessionaire. In the second stage, forest concessionaires, certifiers and other forest stakeholders lay down a (perhaps five-year) plan for achieving SFM in the FMU, with a clear timetable and indicators of achievement. Each year, certifiers and other stakeholders assess the annual improvement against the timetable and indicators. Progress is reported in a verification report, which is accessible to buyers and other stakeholders. In the final year, a full SFM assessment is undertaken to examine if a certificate can be issued to the forest concessionaire.

Such a phased approach will only be attractive to forest stakeholders in developing countries if buyers in the developed world are prepared to recognise the approach. ITTO can play significant roles in stimulating research and debate on the approach.

so far been certified in Africa and the Asia-Pacific region. Nevertheless, the first FSC-certified particleboards and non-timber forest products (Jungle Gum Chicle, Hand Care Cream, After-Shave Gel) came from the tropics.

In spite of steady growth in the area of certified forest, FSC certification covers only about 6% of the world's production forests, mostly outside the tropics. The current rates of global deforestation, forest degradation and inappropriate forest management, particularly in the tropics, and the declining quality of tropical forest management, do not bode well for the myriad species and communities that are forest-dependent, nor for the balance of the world's people, whose lives are indirectly, though indisputably, linked to the world's forests. Without marked increases in the area under FSC certification and improved systems for getting the certified products to market, the world's forests remain imperilled. However, certification will expand rapidly in the tropics only when there is an increase in the area of well-managed forests and in the demand for independent evidence of good management.

The challenge ahead in improving forest management is both daunting and formidable, not only in the tropics, with its multitude of problems and unfavourable conditions, but also in the temperate and boreal regions where the forests have hitherto been assumed to be well-managed. Meeting such a challenge is beyond the power and capacity of a small non-profit organisation like the FSC, but could be done successfully with help from major international agencies like ITTO, FAO and the World Bank, and by their member governments. However, none of these has made commitments or adopted procurement policies to obtain its wood-based products (paper, furniture, building timber) from well-managed forests (ITTO has, however, committed to promoting a trade based on sustainably managed forests through its Objective 2000). Consequently, the FSC's immediate role is to increase the area of certified forests covered by its standards, not only in the tropics but also worldwide. It has begun implementing a strategic action plan to attain the objectives of bringing 30% of the world's forests under certification to FSC standards and increasing to 15% the share of the global roundwood market held by FSC-certified forests by 2007. The plan, which will accord priority to the tropics, calls for a significant expansion and decentralisation of the FSC's service-delivery mechanisms as follows:

- regional offices will be established in Latin America, Europe, Asia and Africa. National offices will be added in Russia, China, and throughout Latin America;
- the service-delivery role of these regional and national operations will be expanded with appropriate professional staffing. This will improve the FSC's responsiveness to its clientele and enable it to deliver a higher quality of service in each market area;
- FSC standards-setting, certification and education activities will be stepped up in such critical areas as Africa's Congo Basin, China, Russia and Southeast Asia. In each of these areas, rogue forest operators engage in practices that range from egregious to outright criminal, destroying ecosystems, habitat and human lives in the pursuit of fast profits;
- the FSC Secretariat will be relocated to an international centre of policy. This physical move of the operational centre of the organisation will raise the FSC's international profile, help position it as a credible world leader, and greatly enhance its ability to provide counsel on trade policy;
- accreditation processes will be streamlined without sacrificing integrity. The FSC's network of accredited certification bodies will be expanded to make FSC certification more readily accessible to forest landowners and forest products manufacturers around the world; and
- the FSC will also develop and implement programs to increase market awareness of its trademark logo, thus enhancing its value and revenue-generating potential. In addition to designing measures that foster greater on-product use of the logo by certified manufacturers, the FSC will build awareness and brand value through uniform, high-profile public affairs and communications activities worldwide.

Pan-African certification

Among tropical regions, Africa is particularly lagging behind in forest and timber certification: only the Keurhout Foundation has so far certified forests (in Congo and Gabon) in West and Central Africa. Given the increasing demand of certified tropical timber products, the African forest industry is facing market constraints.

Some initiatives have been taken to make more progress in forest certification in the tropics, including in Africa and particularly in African Timber Organization (ATO) member countries. For instance, in 1999 the Inter-African Association of Forest Industries (IFIA) identified the promotion of forest certification as one of its main strategies. In October 2000 the ATO Ministerial Conference adopted an IFIA-proposed pan-African certification concept as a policy for promoting the development and implementation of a regional approach to forest certification among member countries. The Pan-African Certification Scheme would use as its basis the ATO/ITTO Principles, Criteria and Indicators for Sustainable Forest Management (PCI), which were developed jointly by ATO and ITTO. The recent ITTO workshop on forest certification recommended that support be provided to regional initiatives of forest certification in the tropical regions.

In a first step towards such support, the International Tropical Timber Council approved and funded a project at its most recent session to establish capacity to implement the ATO/ITTO PCI at the national level in African ITTO member countries (see page 21 for details on this project).

Can national schemes meet international requirements?

The Malaysian Timber Certification Council is striving for the international recognition of its certification scheme and says an international certification evaulation system is needed

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THE Malaysian Timber Certification Council (MTCC) recognises that a national scheme and the standard it adopts have to meet certain basic requirements if they are to be credible and acceptable to stakeholders and the international market.

In the case of forest management standards, various sets of internationally agreed criteria and indicators (C&I) for sustainable forest management (SFM), including those of ITTO, the Montreal Process and the Helsinki Process, have been formulated. It is recognised that these sets need to be further elaborated through the inclusion of standards of performance or verifiers—which should reflect local conditions in the country or region concerned—before they can be used for other purposes such as internal auditing or certification.

Similarly, in establishing a certification scheme, there is a need to determine the basic requirements of a credible scheme, taking into account local conditions.

With regard to standards, it should be kept in mind that C&I for SFM are intended to monitor trends towards the achievement of SFM. The assessment of forest management practices for the purpose of timber certification requires a standard containing standards of performance or verifiers that are clearly defined and have measurable threshold values. The certification standard should be balanced, pragmatic and achievable by the forest manager in line with current best practice in forest management under local conditions. This is especially important in the case of the management of tropical forests in developing countries. The set of C&I used for timber certification is therefore likely to be a subset of the C&I for SFM, particularly in the initial phase of implementing certification.

Despite efforts to take into account local conditions and to achieve a transparent and consultative approach during the process of formulating the standard, the fact remains that in the key markets there are a number of competing timber certification schemes, each with their own proponents and supporters. In such a situation, those national schemes that are market-oriented face great difficulty in gaining acceptance in these markets. This is because buyers and consumers will have strong reservations about accepting certified products from national schemes, especially those from developing countries, since they are unable to assess the credibility of any new certificate. Under such circumstances, national certification schemes may have no choice but to seek endorsement, recognition or compatibility with the better known and more widely accepted schemes in the market.

In the case of the MTCC, there are ongoing efforts to comply with the requirements of the Keurhout Foundation in the Netherlands under the Malaysia-Netherlands cooperation program in timber certification; meanwhile, the MTCC-Forest Stewardship Council (FSC) collaboration is aimed at the development of a forest management standard for endorsement by the FSC.

International evaluation system

There is an urgent need for an international system to evaluate different certification schemes in order to facilitate mutual recognition between credible schemes. It is recognised, however, that considerable work remains to be done before any agreement can be reached regarding the establishment of such an international evaluation system, especially with regard to what constitutes a credible scheme and which forum or organisation should undertake the task of establishing this system. The workshop convened by ITTO last April was a step in the right direction and built upon previous seminars and workshops convened by various organisations.

It is hoped that in the process of identifying the minimum requirements to be included in a scheme for it to be considered credible, the list of requirements should not be so demanding as to disqualify credible schemes, especially those from developing countries. In deciding the list, the need for continual review and improvement of the scheme and its standards should be a guiding principle.

Step-wise approaches

The MTCC supports the idea of adopting a stepwise approach for developing country producers to recognise their progress towards SFM. The phased approach being taken by the MTCC in the implementation of its scheme can be considered to be one form of this stepwise approach.

The standard currently used for assessing forest management units is the Malaysian Criteria, Indicators, Activities and Standards of Performance for Forest Management Certification (MC&I), which is itself based on the ITTO Criteria and Indicators for Sustainable Management of Natural Tropical Forests.

The MTCC plans to use a standard that is compatible with the FSC Principles and Criteria (P&C). A multi-stakeholder National Steering Committee (NSC) is currently revising the MC&I to make it compatible with the FSC P&C. An action plan has been adopted towards the formation of an FSC National Working Group (NWG) to advance the work of the NSC. The NWG, when established, will further develop a standard for submission to the FSC for its endorsement.

In summary, if certification is to achieve its intended purpose of improving forest management practices in the countries or regions where improvements are most critically needed, work towards an international arrangement for an evaluation system of certification schemes must be expedited, supplemented by stepwise approaches to assist and encourage developing country producers.

Forest certification and biodiversity

Certification can play an important role in biodiversity conservation, but perhaps not in its current form

by Alf Leslie, Alastair Sarre[1] Manoel Sobral Filho[1] and Amha bin Buang[1]

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DEFORESTATION, whatever its causes and motivation, is the most powerful direct threat to forest biodiversity. As currently practised, timber harvesting, although a long way behind in the directness or totality of its effects, is among the next most serious of threats. The conservation of biodiversity is, therefore, best met by halting deforestation and keeping commercial timber production out of the forests. This is the principle underlying the reservation of totally protected areas (TPAs).

However, few countries are willing or able to place all their natural forests in TPAs. Most, under present conditions, have no choice but to continue encouraging the industrial utilisation of the timber growing in their natural forests because of the income and employment this provides. Conventional wisdom holds that biodiversity can also be conserved in these production forests provided that the forest is under sustainable forest management (SFM), a fact that can be conveyed to consumers through certification. We argue here that the role of certification—as it is currently envisaged—in biodiversity conservation will be limited, although in slightly different forms it may eventually become an important tool for such conservation.

Biodiversity and SFM

The Convention on Biological Diversity defines biodiversity as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and other ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems". Forests, and tropical forests especially, are the largest repositories and protectors of terrestrial biodiversity; tropical forests are said to harbour fully half the Earth's terrestrial biodiversity. Many ecologists refer to 'landscape-scale' processes in assessing the role and conservation of biodiversity, where the landscape is seen to comprise several 'ecosystems' and where different components of the landscape are managed in different ways.

ITTO's Guidelines for the Conservation of Biological Diversity in Tropical Production Forests suggest that there will be some *allowable* loss of biodiversity in tropical production forests that would be mitigated by a comprehensive and integrated TPA network. The function of production forests in biodiversity conservation would then be twofold: first, good forest management for the production of timber (and other goods and services) would allow the persistence and flourishing of a large (but unspecified) portion of the original biodiversity; second, the production forest would act as a buffer around the TPAs and provide corridors that allow the free flow of genetic material between them.

Forest certification

Certification of forest management has been defined as an attempt to link green consumers to producers who are seeking to improve their forest management practices and obtain better market access and higher revenue by providing an independent assessment of forest management operations. Certification under a given scheme gives producers the right to use a trademarked label to provide consumers with information on the quality of the forest management that gave rise to the timber products they wish to purchase. Armed with this information, consumers are able to choose between certified and non-certified timber products and may be prepared to pay a premium for certified timber products. Ultimately, the idea is that timber producers, processors and traders, faced with the potential loss of markets, and with the possibility of financial incentives, will adopt SFM or make sure that it is adopted by their suppliers so that they can use certification as a marketing device. In this way, forest degradation will be halted in certified forests.

Forest certification has expanded at a rapid pace since its beginnings in the early 1990s. In January 2002, about 109 million hectares had been certified (see page 3), but the total volume of certified timber available on the market from this area has not been reliably estimated.

Given the high level of biodiversity in tropical forests, the role of certification in biodiversity conservation hinges to a large extent on its success in the tropics. However, certification is currently at the margins there: according to Eba'a Atyi and Simula (2002), 6.5 million hectares of forest had been certified in ITTO producer (tropical) countries by January 2002; this comprises 4.2 million hectares certified by the Keurhout Foundation and 2.3 million hectares by the Forest Stewardship Council (FSC). An estimated one-third of the tropical forest area certified by the FSC consists of plantations; all those certified by Keurhout are natural forests.

Certification

In the initial stages of certification development, the target of concern was the international trade in tropical timber. However, the effect of this trade on biodiversity loss cannot be at all significant, with less than 10% of the industrial roundwood harvested annually from the world's forests entering the international trade; of this, no more than about 10% originates in tropical forests. Measures directed at that trade cannot, therefore, be much more than a marginal direct influence in promoting sustainable (or better) forest management.

Export markets for industrial timber are dwarfed by domestic markets within the tropical countries themselves, where there has been little evidence to date of demand for certified timber. Moreover, harvesting for fuelwood and charcoal dwarfs that for industrial timber in most tropical countries. An extreme example is in the Democratic Republic of Congo, where it is estimated that around 46 million m^3 of fuelwood are harvested each year, compared to less than a quarter of a million m^3 of industrial roundwood.

In the tropical countries as a whole, harvesting for fuelwood accounts for an estimated 77% of the total wood volume harvested annually (FAO 2001); such harvesting is not currently affected by certification and is unlikely to be affected in the foreseeable future.

Measuring biodiversity for certification

The measurement of biodiversity and the effects of management on it are still hugely problematic—as reflected in the vagueness of performance standards for biodiversity-related criteria—and therefore provides ample room for argument and controversy, not to mention the risk of undetected loss of biodiversity in the forest itself. Feedback from a series of ITTO-funded training workshops on using the Organization's Criteria and Indicators for Sustainable Forest Management suggests that even rudimentary information on biodiversity is lacking at the forest-management-unit level in the tropics. Thus, it is probably impossible to determine the direct benefit of improved (or certified) forest management on biodiversity because this benefit cannot yet be reliably measured in forestry operations.

Certification's role in SFM

There is some evidence to suggest that certification has had an influence in improving forest management standards, at least in certified forests and forests in the process of being certified. In Bolivia, for example, substantial efforts have been undertaken to improve forest management to the extent necessary for certification under the FSC. Certification can provide encouragement—including the provision of technical assistance and possibly commercial incentives through its marketing potential—to some companies and landowners to improve their forest management practices. However, certification has tended to exclude small forest enterprises in the face of problems related to cost, compliance with standards, and access to the certification process.

... it is probably impossible to determine the direct benefit of improved (or certified) forest management on biodiversity because this benefit cannot yet be reliably measured in forestry operations.

To be useful in biodiversity conservation, SFM must be part of a national land-use strategy which assigns appropriate attention to biodiversity conservation and integrates timber production and TPA areas in a way that maximises the contribution of both to biodiversity conservation. Certification does not appear to be a driver for the planning and implementation of such a land-use strategy; certificate holders, for example, are not generally expected to show proof that their harvest patterns contribute to a sustainable landscape. Certification standards can be developed to address this shortcoming and certification is certainly one tool in a broader array of strategies that can be deployed to contribute to biodiversity conservation at the landscape scale. But it is difficult to see it as a driver for landscape-scale conservation measures.

Perhaps the most tangible benefit of certification to date has been its contribution to transparency. The independent auditing of forest operations increases the information available on forest operations; the act of opening a company's—or a nation's—operations to scrutiny is in itself an important step towards transparency and therefore towards SFM.

Certification as potential market barrier

According to many ITTO producer member governments, the exclusion of non-certified timber from markets discourages SFM by reducing the trade in tropical timber and therefore the export revenue earned by developing countries. Fewer resources would then be available with which to build capacity for SFM; this would create a vicious circle of fewer incentives leading to diminished efforts towards SFM, which would make certification even more difficult to obtain.

The cost of improving management

Technically, SFM can be done—provided that all stakeholders agree to an allowable level of impact on forest values, including biodiversity, and provided that the inevitable impact on biodiversity in the production forests does not reduce the productivity of that forest. There are conflicting data on the relative cost of reduced impact versus conventional logging, with some studies finding slight decreases in cost (due mainly to increases in efficiency and less wood wastage) and others finding higher costs (due to the need for extra training, higher standards of road-building, etc). It seems, though, that the low level of reduced impact logging (RIL) uptake in the tropics is prima facie evidence that it is either more expensive or that any potential financial advantages are outweighed by other considerations. Even if RIL were universally cheaper than conventional logging, which seems unlikely, it is only one element of SFM: there will be further impacts on profitability as timber yields are reduced in line with sustainability. Such impacts probably won't be offset by higher prices for certified timber. According to Eba'a Atyi and Simula (2002), there is little likelihood that certified timber will command a price premium in the market "in the long run".

Timber values

The existing global plantation resource and the standing natural temperate forests in Canada, Russia and elsewhere already have the ability to supply, within the next 10–15 years, a greatly expanded proportion of the world demand for wood, with the potential to create regional 'gluts' of wood. This wood will have several cost advantages over wood grown in sustainably managed natural tropical forests and is likely to out-compete it in many uses. The price of timber, already depressed, will probably remain low, but

the cost of natural tropical forest management (under SFM regimes) will almost certainly grow. Even if the tropical natural forest-based timber industry continues, it will only be able to compete if it keeps its costs as low as possible, constraining efforts towards SFM. Moreover, SFM is not just competing with unsustainable logging or the looming 'plantation effect', it is competing with an entire suite of alternative land uses. The incentives for cash crops such as soybeans, oil palm and many others are significant, and the disincentives for SFM, including a relatively low profitability, the need for such high standards of environmental performance, and the costs of certification, make the choice between natural forest management and forest conversion very easy for many landowners and developers.

The relevance of certification to biodiversity

It is hard to avoid the conclusion that the economic forces at work—such as the potential glut of timber on world markets, the low economic development in many tropical timber producing countries and therefore a lack of interest in certification in domestic markets, and the attractiveness of alternative land uses—will overwhelm any potential impact of forest certification (in its present form) on biodiversity conservation.

If the prediction of increasing availability and consumption of plantation timber is realised, more natural forests in developed countries are likely to be removed from timber production. This will have a positive effect on biodiversity conservation because most such countries will be able to meet the costs of forest protection for the (generally) non-marketable services they provide. Conversely, the biodiversity of the tropical forests will be even more at risk than they are today because the prospects for sustainably managed production forests, which would form the basis of a landscape-scale biodiversity conservation strategy, will diminish with decreasing financial viability, and the risk of wholesale clearance will increase.

High-value markets

The key task, therefore, appears to be to find innovative ways of increasing the financial value of natural tropical forests. One option is to supplement the revenues generated by SFM for timber and non-timber products by direct payments for other, global, goods and services, particularly biodiversity conservation and carbon storage. Certification could play an important role here by providing independent verification that biodiversity conservation or carbon management standards are being met. A prerequisite for 'global' funding in such situations would be the implementation of landscape- and regional-scale biodiversity conservation plans, within which the production forests could form a significant part.

Another strategy is to pursue markets for high-quality, high-value timber. Tropical forests grow a few timbers with decorative or durability qualities of sufficiently high appeal to give them an effective demand with relatively high and inelastic price ceilings. The fast-grown commodity timbers of the existing plantations are no substitute for them, even allowing for the technological advances in sight. Competitive advantages of this calibre offer a strong base on which to develop high-value end-markets and to capture a large part of a forest's economic rent within the country of origin. Certification would be necessary to guarantee to consumers that the timber they are buying is from a sustainably managed source. However, given the limited distribution of such species, this strategy may not work in a large part of the tropical forest estate.

The 'high-value' option is likely to have a relatively low environmental impact because of the low density of such species in the forest, but management to favour such species (and prejudice others) would be viewed dimly by some and would have its own implications for biodiversity conservation. This points to one of the key questions that certification proponents still need to answer: how much biodiversity loss can be tolerated before forest management does not qualify for certification? This question is relevant to the fundamental economic problem: the lower the standard that has to be met, the lower the additional cost incurred to achieve SFM and the lower need be the additional payments for global services. 'How much biodiversity loss is acceptable?' is therefore a key question that must be answered as the search continues for effective tropical forest conservation mechanisms.

It is hard to avoid the conclusion that the economic forces at work … will overwhelm any potential impact of forest certification (in its present form) on biodiversity conservation.

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ITTO's role in certification

ITTO has made a substantial contribution to the development of forest and timber certification

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ITTO WAS one of the first international intergovernmental organisations to address the evolving issue of forest and timber certification. Intense and protracted policy discussion within the International Tropical Timber Council in the early 1990s (stimulated in part by an ITTO report on incentives in 1991) led ITTO to commission its first study of the issue in 1993. Since then it has: conducted several more studies; developed guidelines, criteria and indicators and auditing systems for sustainable forest management; financed projects to assist producing member countries to develop approaches to certification and to progress towards sustainable forest management; participated in and sponsored and jointly organised international seminars; and, most recently, convened its own international workshop on the subject.

ITTO studies

To date, ITTO has commissioned six studies relating to forest and timber certification. These are:

- *Incentives in Producer and Consumer Countries to Promote Sustainable Development of Tropical Forests* (1991) by the Oxford Forestry Institute and Timber Research and Development Associates;
- *The Economic Linkages Between the International Trade in Tropical Timber and the Sustainable Management of Tropical Forests* (1993) by the London Environmental Economics Centre (LEEC);
- *Certification Schemes for all Timber and Timber Products* (1994) by Baharuddin Haji Ghazali and Markku Simula;
- *Markets and Market Segments for Certified Timber and Timber Products* (1995) by John Wadsworth and Peter Boateng;
- *Development in the Formulation and Implementation of Certification Schemes for All Internationally Traded Timber and Timber Products* (1996) by Baharuddin Haji Ghazali and Markku Simula; and
- *Timber Certification: Progress and Issues* (1997) by Baharuddin Haji Ghazali and Markku Simula.

The purpose of these studies was to collect, collate, analyse and disseminate relevant information on forest and timber certification with a view to enhancing awareness and understanding of the developments surrounding the issue and its implications for the continuing effort to enhance the management of tropical forests in member countries. The study undertaken in 1994 was discussed by an ITTO Working Party on Certification of All Timber Products held in Cartagena de Indias, Colombia, the findings and recommendations of which were considered by the International Tropical Timber Council at its 16th Session.

ITTO policy documents

ITTO's mission of assisting efforts to bring tropical forests under sustainable management has included the development of a pioneering series of ITTO guidelines and criteria and indicators. To date, the series comprises:

- *ITTO Guidelines for Sustainable Management of Natural Tropical Forests* (1990);
- *ITTO Criteria for the Measurement of Sustainable Tropical Forest Management* (1992);
- *ITTO Guidelines for the Establishment and Sustainable Management of Planted Tropical Forests* (1993);
- *ITTO Guidelines on the Conservation of Biological Diversity in Tropical Production Forests* (1993);
- *ITTO Guidelines on Fire Management in Tropical Forests* (1997);
- *The ITTO Criteria and Indicators for Sustainable Management of Natural Tropical Forests* (1998)
- *ITTO Manuals for the Application of Criteria and Indicators for Sustainable Management of Natural Tropical Forests* (1999); and
- *ITTO Guidelines on the Restoration, Management and Rehabilitation of Degraded and Secondary Tropical Forests* (in press).

This series constitutes a compendium of tools essential to ITTO members in enhancing the management of tropical forests and in enabling them to engage in voluntary forest and timber certification. ITTO has conducted a series of workshops in member countries to train trainers in applying the ITTO criteria and indicators and the use of the ITTO manuals in the field. It is currently in the process of conducting more national-level workshops in ten member countries to train officials, forest managers and forest concessionaires in using the *ITTO Manuals for the Application of Criteria and Indicators for Sustainable Management of Natural Tropical Forests*.

Developing auditing systems

ITTO has also undertaken work on the development of auditing systems as a tool for monitoring and verifying progress towards sustainable forest management and as an essential component of forest and timber certification. This work includes:

- *Comparative Study on the Auditing Systems of Sustainable Forest Management* (2000) by E.O. Nsenkyire and Markku Simula; and
- *Framework for an Auditing System for ITTO Criteria and Indicators for Sustainable Forest Management* (2001) by Baharuddin Haji Ghazali and Markku Simula.

Based on the auditing framework, ITTO is now developing a training package for the conduct of training courses in those ITTO producing member countries that wish to establish credible auditing systems for the ITTO criteria and indicators.

ITTO projects

Project activities are an important component of ITTO's work and a practical means of assisting developing member countries to implement appropriate policy initiatives relevant to the mandate and objectives of the Organization. Since its establishment, ITTO has funded more than five hundred projects, pre-projects and activities valued at more

than US$230 million. All ITTO project activities are concerned with one or more aspects relating to the management, conservation and sustainable development of tropical forests. A number of these projects are related to forest and timber certification, particularly:

- *Training Development on Assessment of Sustainable Forest Management in Indonesia* (PD 1/95 REV.4 (M)); and
- *Development of Export Market Intelligence Monitoring System in Fiji* (PD 3/97 REV.1 (M)).

As a result of the project in Indonesia, about 150 sustainable-forest-management assessors are now registered by the Indonesian Ecolabelling Institute (LEI). According to LEI, this pool of well-trained and more-experienced personnel have developed to the point where the activation of sound ecolabelling certification has become possible in Indonesia. The project in Fiji developed a timber-flow monitoring system to monitor the chain of custody of harvested timber from the point of origin to the point of export. Several new project proposals relating to forest and timber certification have been submitted to ITTO and will be considered by the International Tropical Timber Council for approval and financing after review by the Expert Panel on Project Appraisal.

In the related field of criteria and indicators, the following ITTO projects are being implemented:

- *Implementation and Evaluation of the Criteria and Indicators for Sustainable Natural Forest Management* (Colombia; PD 8/97 REV.2 (F));
- *Publication, Testing and Clarification of the ITTO Criteria and Indicators for the Sustainable Management of Gabon's Forests* (Gabon; PD 9/98 REV.2 (F));
- *Testing of the Revised ITTO Criteria and Indicators and Dissemination of Results Applying to Cameroon* (Cameroon; PD 23/99 REV.2 (F));
- *Training of Trainers in the Application of the ITTO and the National Criteria and Indicators of Sustainable Forest Management at the Forest Management Unit Level* (Indonesia; PD 42/00 REV.2 (F)); and
- *Promotion of Sustainable Management of African Forests* (PD 124/01 REV.2 (M); to be implemented by the African Timber Organization and ITTO).

International seminars and workshops

Over the years, ITTO has participated in a number of international seminars and workshops on forest and timber certification. On 19–20 February 2001, for example, ITTO cooperated with FAO and GTZ in the FAO-GTZ-ITTO Seminar on Building Confidence Among Forest Certification Schemes and Their Supporters, which was held at FAO headquarters in Rome. A year later, ITTO convened its own workshop, the ITTO International Workshop on Comparability and Equivalence of Forest Certification Schemes, in Kuala Lumpur, Malaysia (see box for the workshop's recommendations).

Ongoing work

Continuing ITTO work on forest and timber certification is driven by the fact that certification and labelling are making great strides in developed countries while tropical and other developing countries are lagging behind. There is thus a clear and urgent need to support the efforts of those developing countries that want to engage in certification and labelling to promote sustainable forest management and to enhance market acceptance of their forest products.

The latest decision taken by the Council on forest and timber certification is Decision 11(XXXII), titled 'The potential role of phased approaches to certification in tropical timber producer countries as a tool to promote sustainable forest management'. Stemming from this decision, ITTO is now undertaking a study of the potential role of phased approaches to certification as a tool for promoting sustainable forest management. When this study is completed, ITTO will convene three regional workshops to disseminate and discuss its results and implications and to offer recommendations to the International Tropical Timber Council. At the same time the Organization will do its part to facilitate improved understanding, information-sharing and dialogue between interested parties from both consumer and producer countries on phased approaches to certification.

Future work

The future ITTO agenda on forest and timber certification is likely to develop mainly from the results of the above ITTO on-going work in this area and also in related fields such as auditing systems and criteria and indicators. Further developments in the evolving issue of forest and timber certification at the national, regional and international levels are also likely to impact on future ITTO work in this field.

What the workshop reckoned

The ITTO International Workshop on the Comparability and Equivalence of Forest Certification Schemes, held 3–4 April 2002, was attended by 68 participants with a keen interest in certification. Participants agreed that ITTO's role in promoting sustainable forest management and its certification should be strengthened, and they made the following recommendations. ITTO should:

- provide support to its producing member countries for capacity-building in forest certification, including institutional strengthening, stakeholder participation, auditing systems, training, and better understanding of certification. The Organization should be more responsive to project proposals related to certification;
- monitor progress in the comparability and equivalence of certification systems and explore opportunities for promoting convergence in forest certification standards in member countries, including through regional initiatives;
- facilitate discussion involving stakeholders and provide support for exploring the feasibility of a phased approach to certification as a means of improving equitable access to certification by producers;
- recognise the potential contribution of forest management and chain-of-custody certification to the control of illegal logging and trade in tropical timber;
- facilitate dialogue and cooperation between consuming and producing member countries, and educate stakeholders and the general public about the principles and complexities of sustainable forest management and of the certification of natural and planted forests;
- give more emphasis in its efforts to promoting enabling conditions for sustainable forest management and its certification in its member countries;
- support research to examine the effectiveness and efficiency of alternative sets of indicators for satisfying specific certification criteria and to clarify certification impact on sustainable forest management;
- keep its members informed on initiatives related to international frameworks for the mutual recognition between certification systems; and
- provide support to regional certification fora and related organisations in the tropical regions.

China's plywood industry takes off

China is reducing plywood imports as its domestic industry booms

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AN old Chinese saying that translates roughly to 'it is safer to foretell the distant future than to say what will happen tomorrow' sums up the recent history of China's plywood trade. Who would have thought even four years ago that China would become a net exporter of plywood *(Figure 1)* by 2001?

China's plywood trade has developed at a frantic pace. Imports plunged from around 1.7 million m³ in 1998 (they were as high as 2.3 million m³ in 1993) to just 650 000 m³ in 2001. In contrast, exports leapt from less than 200 000 m³ in 1998 to almost 1 million m³ in 2001. According to 2001 customs data, Chinese-made plywood was exported to the following main markets: Republic of Korea, 206 000 m³ (21.3% of total exports), Hong Kong, 169 000 m³ (17.5%), Japan, 121 000 m³ (12.5%), the United States, 92 000 m³ (9.5%) and Taiwan Province of China, 85 000 m³ (8.8%). New data for 2002 show that imports of plywood continue to fall; in the first quarter, plywood imports amounted to 124 000 m³, compared to 194 000 m³ for the same period last year. Meanwhile, the volume of 2002 first-quarter plywood exports were 31% higher than for the corresponding period last year.

A sector transformed

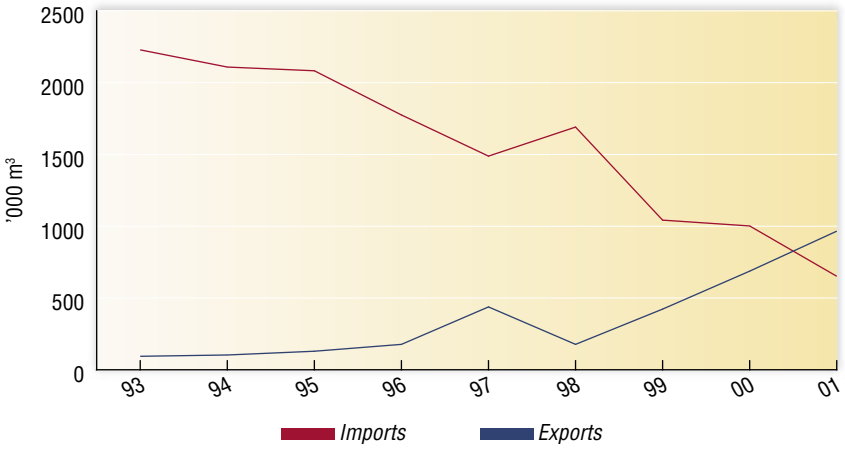
1998 was clearly a watershed for Chinese imports of logs and plywood *(Figure 2)*. A slow decline in log imports suddenly became a rapid escalation; within three years the volume of tropical log imports had more than doubled.

This shift was triggered by a reduction to zero of log import tariffs. Prior to 1998, plywood dominated tropical timber imports, but the low-cost plywood from Indonesia and Malaysia had seriously undermined the competitive position of Chinese manufacturers. Many mills were forced to cut production, sack workers and even close down.

Chinese authorities reacted by removing log import tariffs and cracking down on plywood smuggling. With no tariffs on logs, local manufacturers used imported logs to not only fill a gap in log supplies (created by drastic cuts in domestic natural forest harvests made as part of the country's new forest protection regulations), but also to start exporting significant quantities of cheap plywood.

Cross-ply

Figure 1: China's export and import of plywood, 1993–2001



More to the story

Until recently, many domestic plywood manufacturers could not compete with foreign plywood imports, even with the tariff reductions. This was especially true for the state-enterprise plants, which commonly are small-scale, have very basic technology and equipment and produce low-quality plywood.

Over the past five to ten years, with the arrival of numerous foreign enterprises and the creation of many joint ventures, China's plywood industry has taken on new life. Stiff competition and consumer demands for quality plywood have driven many of the old mills out of business, but a number of small-scale plywood enterprises, such as those grouped in Nanhai city, Guangdong, Jiashan county, Linyi city, Shandong and Wenan counties, and Hebei, have merged into sizeable and competitive mills. Accurate statistics on the country's plywood production are difficult to come by, but according to State Forestry Administration data it amounted to almost 10 million m³ in 2000.

Zhejiang Province

In particular, the timber industries in Zhejiang Province have developed rapidly in recent years. A number of contributing factors can be identified: skilled labour, good geographical location, good ports and transport infrastructure, access to resources and nearby markets, and the adoption of modern management and technology. The timber sector in this province ranks first in China for installed production capacity (for plywood, fibreboard and mouldings), market share, quality/grade of products, and economic efficiency. Industrial capacity has expanded rapidly; the province's annual production of plywood, fibreboard and other timber products now exceeds 37 billion yuan. The plywood sector, centred in the city of Jiashan, has more than 200 enterprises, which together have an annual production capacity of over 3 million m³, or about a third of the country's total plywood production capacity.

Foreign investment

Over the past few years, as admittance to the World Trade Organization drew closer, inflows of foreign direct investment (FDI) were running at around US$15–20 billion per year, but this has increased spectacularly since 2000. In the first eight months of 2001, for example, utilised FDI in China grew 20.4% year-on-year to US$27.44 billion; FDI is predicted by some to reach US$60–70 billion per year in the medium term. Most of this investment will be directed to the manufacturing and services sectors.

Already there has been substantial additional investment in the wood-processing sectors. The high costs of local labour, land and raw materials and the limited domestic markets have encouraged plywood enterprises in Taiwan Province of China, Hong Kong, Singapore and other countries to invest in and relocate to mainland China. Advanced processing plants have been established to take advantage

of China's highly educable, low-cost workforce, abundant and competitively priced commercial land, and a huge domestic consumer market.

China's plywood production costs have fallen dramatically in recent years, largely as a result of improved productivity based on skilled labour. For example, the average wholesale price of domestically manufactured plywood in 2001 was US$250 per m³, while the average CIF price for imported plywood was as high as US$390 per m³. The introduction of modern equipment, tight quality control, the rapid development of the adhesives industry and constant improvements in technology mean that Chinese plywood now meets international market quality standards.

Logs from where?

Future development of the wood-based panel industries in China will be very much dictated by log and other fibre (eg bamboo) supplies. The plywood industry is most productive when it uses large-diameter cylindrical logs, hence the past dependence on large-sized domestic logs and tropical logs from Southeast Asia, the Pacific Islands and Africa (okoumé from Gabon is favoured for its high yield of face veneer).

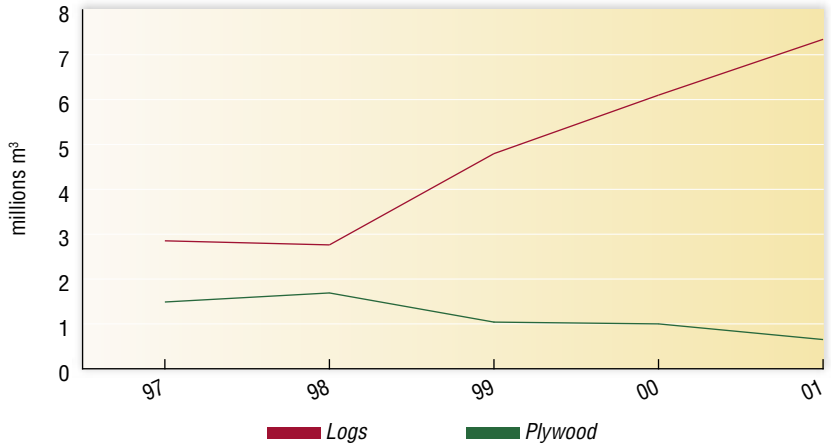
In 1997 China began a natural forest protection program (NFPP) that significantly altered the flow of mill logs. Commercial logging in natural forests has stopped in 13 provinces in the upper reaches of the Yangtze River and middle and upper reaches of the Yellow River; some 78 million hectares of mountain forests have been closed to logging and protected. In addition, the major forest regions in northeast China and the Inner-Mongolia Autonomous Region, for example, have reduced timber production from 18 million m³ to around 12 million m³. In total, Chinese authorities have invested a reported 20 billion yuan in its NFPP. To supplement domestic log supplies, around 1.2 million hectares of new tree plantations have been established.

The reduction in log harvest from the natural forest has had a big impact on the timber industry. Nearly a thousand wood-processing mills and 38 timber markets in Chongqing, the catchment of the upper reaches of Yangtze River, and the Three Gorges Reservoir region have closed because of reduced domestic log harvests. More positively, say domestic observers, illegal logging has been virtually eliminated as forest resources have been put under strict protection.

China's domestic log production in 2001 was about 51 million m³, up by 8% over 2000. This increase was due entirely to increasing timber production in plantations, which in 2001 amounted to around 31 million m³ or some 60% of the national planned production of timber. The indications are that production from plantations will be even higher this year. The successful cultivation of fast-grown plantations such as poplars is now providing substantial volumes of core raw material for the plywood and blockboard industries. This development, along with increased imports of Russian logs, will affect the trade flows

Logs lift off

Figure 2: Volume of Chinese tropical log and tropical plywood imports, 1997–2001



for logs in southern and eastern Asia. In the last few years, tropical log exporters have benefited from China's booming plywood industry, but this may not last. Particularly at risk from competition from low-cost logs are tropical suppliers of small-diameter logs and logs for core veneer production.

New tariffs increase competition

Yet another recent development could have a major impact on China's plywood industry. On 1 January 2002, China's import duties on plywood were cut from 15% to around 10% and those for veneer lowered from 8% to about 4%; import duties on logs remain at zero. Lower duties on imported plywood will force domestic manufacturers to become even more competitive and the lower duties on veneer will help them do so; the net result should be yet more exports.

In-depth studies need to be carried out into China's competitive advantages in plywood exports compared to tropical timber producer countries. This could improve understanding of the factors that must be taken into account if a country is to achieve success in plywood exports.

Business people in Shanghai believe that the skilled labour working in local plywood factories is playing an increasingly important role in promoting the Chinese industry. For example, Mr Yao Jiangang, Vice-president of Shanghai Xin Gao Chao Group Co Ltd, the second-largest plywood producer in Zhejiang Province, reckons that low-cost skilled labour "can compensate for the high costs of imported logs from Papua New Guinea and provide competitive prices for the exports of Chinese plywood".

With plywood exports running at around 1 million m³, China has become a serious competitor in the global plywood market, especially in East Asia. Notwithstanding the folly of making predictions in such a dynamic market, it seems inevitable that tropical plywood producers will see more of their traditional markets under attack, and under attack from plywood manufactured in part from imported tropical logs or tropical veneer.

ITTO adds to its project portfolio

The projects and pre-projects described below were financed at the 32nd session of the International Tropical Timber Council held in Bali, Indonesia in May 2002

Conservation and sustainable management of mangroves in the Kouilou Coastal Area with the participation of local communities established in the area—South Congo (Republic of Congo; PPD 40/02 Rev.1 (F)*)

Budget

ITTO:	US$71 232
Government of Congo:	US$15 830
Total	US$87 062

Implementing agencies Water & Forestry General Directorate (Direction Générale des Eaux et Forêts, DGEF) and Research Centre on Coastal Forests (Centre de Recherches Forestières du Littoral, CRFL)
Funding sources Japan, USA

This pre-project will analyse the situation for Congo's significant mangrove resources, study the socio-economic aspects of their management, and formulate a project proposal for their sustainable management.

Firefight Initiative: prevention rather than cure (Global; PPD 44/02 Rev.1 (F))

Budget

ITTO:	US$91 245
IUCN:	US$26 000
Total	US$117 245

Implementing agency IUCN – The World Conservation Union
Funding sources Japan, Switzerland

This pre-project derives from the ongoing work on forest fires by IUCN and the Worldwide Fund for Nature (WWF). It will develop a complete project proposal actively supported by one or two ITTO producer country governments from each of the three tropical regions.

Promotion of Clean Development Mechanism in the framework of sustainable forest management with local communities' involvement (Indonesia; PPD 47/02 (F))

Budget

ITTO:	US$53 000
Total	US$53 000

Implementing agency
The Association of Indonesian Forest Concession Holders (APHI)
Funding sources Switzerland, Japan

This pre-project will collect baseline data and information for the development of strategies and a project proposal to promote the Clean Development Mechanism in the framework of sustainable forest management involving local communities.

Integrated plan for the consolidation of the Bagre Highlands Biological Corridor, Province of Darien (Panama; PD 14/00 Rev.5 (F))

Budget

ITTO:	US$698 662
ANCON/ANAM:	US$454 670
Total	US$1 153 332

Implementing agency National Association for the Conservation of Nature (Asociacion nacional para la conservacion de la naturaleza, ANCON)
Funding sources Japan, USA

This project will secure the Bagre Highlands Biological Corridor as a permanent forest estate. An integrated management unit will be established for the sustainable harvesting of timber and non-timber forest products and the protection of water, soil and biodiversity. A rehabilitation and restoration plan will be developed for degraded lands and buffer areas in the biological corridor.

Sustainable collaborative forest management: meeting the challenges of decentralization in the Bulungan Model Forest (Indonesia; PD 39/00 Rev.3 (F))

Budget

ITTO:	US$892 559
Government of Indonesia:	US$417 000
CIFOR	US$572 984
IRD	US$410 000
DFID	US$53 780
Total	US$2 346 323

Implementing agencies Center for International Forestry Research (CIFOR) and Forestry Research and Development Agency (FORDA)
Funding sources Switzerland, USA, Bali Partnership Fund

This project constitutes the second phase of ITTO PROJECT PD 12/97 REV.1 (F). It will support the long-term goals of sustainable forestry in the Malinau District in East Kalimantan by improving the district-level (*kabupaten*) coordination of forest management in the model forest through improved stakeholder participation, conflict management, land-use planning and monitoring, and implementing sustainable forest management in the Inhutani II Malinau concession.

Implementation of a permanent network of stand dynamics monitoring plots for the gazetted forests of Côte d'Ivoire (Côte d'Ivoire; PD 53/00 Rev.3 (F))

Budget

ITTO:	US$342 795
Government of Côte d'Ivoire:	US$81 582
Total	US$424 377

Implementing agency Forest Development Corporation (Societe de developpement des forêts, SODEFOR)
Funding source Japan

This project will implement a network of 326 permanent monitoring plots to improve knowledge of the dynamics of typical natural forest stands in Côte d'Ivoire, with a view to establishing sustainable forest management practices adapted to the local socio-economic context.

Genetic resistance of iroko to *Phytolyma lata*—Phase II (Côte d'Ivoire, PD 54/00 Rev.4 (F))

Budget

ITTO:	US$378 584
Government of Côte d'Ivoire:	US$93 568
Total	US$472 152

Implementing agency Forest Development Corporation (SODEFOR)
Funding sources Japan, USA, Common Fund for Commodities

Iroko is a high-value timber species common throughout Central Africa. However, in plantations it is attacked by an insect (*Phytolyma lata*), which causes stunted growth and affects stem shape and size, seriously damaging the trees and reducing their commercial value. This project is a follow-up to ITTO PROJECT PD 3/95 REV. 2 (F), which focused on the genetic improvement of iroko species through the selection of resistant seeds and individuals. This project will broaden the genetic base of the available material for the collection of new provenances and establish experimental iroko plantations.

Assessment and management of mangrove forests in Egypt for sustainable utilisation and development (Egypt; PD 63/01 Rev.2 (F))

Budget

ITTO:	US$301 570
Government of Egypt:	US$138 175
Total	US$439 745

Implementing agency Ministry of Agriculture and Land Reclamation, Undersecretariat for Afforestation and Environment (MALR)
Funding source Japan

This project will secure the 465 hectares of Egyptian Red Sea mangrove ecosystem and ensure their conservation and sustainable management.

II Latin American Forestry Congress (Guatemala; PD 125/02 Rev.1 (F))

Budget

ITTO:	US$87 683
National sources:	US$298 406
Total	US$386 089

Implementing agency National Forest Institute (Instituto Nacional de Bosques, INAB)
Funding source Japan

This conference will strengthen the regional forum for exchanging proposals and building consensus regarding trends in and perspectives of the Latin American forestry sector.

Demonstration plantation of *Xantoxyllum rhetsa*, *Manilkara kauki*, *Alstonia scholaris* and *Wrightia pubescens* to promote sustainable Bali natural forest (PD 137/02 Rev.2 (F))

Budget

ITTO:	US$261 438
Government of Indonesia:	US$30 860
Total	US$292 298

Implementing agencies Bali Provincial Forestry Service (provincial government) and Regional Tree Seed Center (Ministry of Forestry)
Funding sources Japan, Australia, Republic of Korea

This project will promote the plantation of indigenous tree species in Bali to rehabilitate about 32 000 hectares of degraded land and to assure the continued supply of woody material for community-based, small-scale wood-carving industries.

Sustainable production of national forests under a regime of forest concessions (Brazil; PD 142/02 Rev.2 (F))

Budget

ITTO:	US$878 157
DIFLOR:	US$447 237
Total	US$1 325 394

Implementing agency National Forest Program Directorate (DIFLOR), Ministry of the Environment
Funding sources USA, Bali Partnership Fund

One of the goals of the Brazilian National Forest Program is to expand the management of native forests in public areas to at least 10 million hectares by 2003 through a regime of forest concessions. This project will conduct social and economic surveys, environmental studies and preliminary forest inventories in five Amazonian national forests to prepare them as future concession areas. Management plans for the sustainable production of timber from the five national forests will be developed, along with the rules and procedures to be followed by companies under the concession regime.

Development and implementation of the pilot project of the forestry statistics information system (FSIS) (Philippines; PD 41/99 Rev.4 (M))

Budget

ITTO:	US$261 081
Government of Philippines:	US$164 200
Total	US$425 281

Implementing agency Forest Management Bureau (FMB), Department of Environment and Natural Resources (DENR)
Funding source Japan, USA, Australia

This project will support the FMB in the collection, organisation and analysis of forestry data pertinent to the FMB's mandate, ensure the timely flow of information within the organisation to support policy decision-makers, and optimise the use of available people and technology within DENR.

Promotion of sustainable management of African forests (regional; PD 124/01 Rev.2 (M), Phase I, Stage 1)

Budget	ITTO:	US$634 983
	ATO:	US$172 750
	Total	US$807 733

Implementing agencies African Timber Organization (ATO) and ITTO
Funding source Bali Partnership Fund

This project will establish capacity to implement the ATO/ITTO Principles, Criteria and Indicators (PCI) for Sustainable Forest Management at the national level in the African ITTO member countries. It will train at least 60 forestry staff in each country in the implementation of the PCI, develop an auditing framework for African forests, and train at least 60 trainers in the procedures for conducting audits based on the PCI at the forest-management-unit level. The first stage of Phase I will establish a nine-country forum on sustainable forest management, develop national PCI/certification standards in four countries, collect data on PCI in six countries, improve national monitoring/auditing frameworks in five countries, develop a training program for implementing the harmonised PCI in two countries, and enhance ATO's advisory and dissemination capacity in relation to PCI.

Application of an experimental model for the economic appraisal of the utilization and management of Colombian flora case study: *Meliaceae* and *Anacardiaceae* (Colombia; PD 132/02 Rev.1 (M))

Budget	ITTO:	US$45 898
	Government of Colombia:	US$70 004
	Total	US$115 902

Implementing agency Economic Botany Program, Natural Sciences Institute, National University of Colombia
Funding source Japan

This project will study and apply an experimental model with a series of biological and socio-economic variables to give an 'economic value' to *Meliaceae* and *Anacardiaceae* species.

Development of criteria and indicators for sustainable management appropriate to Brazilian tropical forests (Brazil; PD 140/02 Rev.2 (M))

Budget	ITTO:	US$396 313
	ABIMCI/FORUM/SBS	US$166 100
	Total	US$563 663

Implementing agencies Brazilian Association of Mechanically Processed Timber (ABIMCI) in cooperation with the National Forum of Forest Organizations (FORUM), the Brazilian Society for Silviculture (SBS), and others
Funding sources Japan, USA

This project will develop a harmonised set of criteria and indicators (C&I) for the sustainable management of Brazilian tropical forests, taking into consideration the ITTO C&I and the Tarapoto regional initiative. It will also develop and field-test a manual for applying the Brazilian C&I and conduct training courses in its use.

Review of information on life cycle analysis of tropical timber products (global; PPD 48/02 (M))

Budget	ITTO:	US$ 37 740
	Total	US$ 37 740

Implementing agency ITTO Secretariat
Funding source Bali Partnership Fund

This pre-project will review and report on existing timber life-cycle-analysis research and studies.

Review of the Indian timber market (PPD 49/02 (M))

Budget	ITTO:	US$103 785
	Total	US$103 785

Implementing agency ITTO Secretariat
Funding sources Bali Partnership Fund

The pre-project will study the current supply and demand status of the Indian timber market and the market opportunities in India for other ITTO members.

Development of sustainable rattan production and utilization through participation of rattan small holders and industry in Indonesia (Indonesia; PD 108/01 Rev.3 (I))

Budget	ITTO:	US$434 839
	Government of Indonesia:	US$367 150
	Total	US$801 989

Implementing agency Directorate General of Land Rehabilitation and Social Forestry
Funding sources Japan, USA

This project will conduct research and development work on the properties of selected rattan species, appropriate rattan processing technologies (post-harvest, preservation, drying, bending, etc), a rattan grading system, rattan product development, and marketing, and establish four demonstration plots in West Java. It will also establish two small rattan industries in West Java for the extension of rattan processing technologies and conduct training to facilitate technology transfer.

Promoting sustainable utilization of bamboo through community participation in sustainable forest management (Myanmar; PD 146/02 Rev.1 (I))

Budget	ITTO:	US$453 616
	Government of Myanmar	US$29 100
	Total	US$482 716

Implementing agency Forest Department
Funding sources Japan, Republic of Korea

This project will establish two demonstration plots covering ten selected bamboo species in 100 hectares for research and extension. Using the results of the research the project will provide technical support to key stakeholders, including minority groups and women, through training courses and the provision of technical manuals on bamboo plantation management, harvesting and processing. The project will also establish two small bamboo cooperatives to generate income for local people.

International conference on quality timber products of teak from sustainable forest management (India; PD 151/02 (I))

Budget	ITTO:	US$108 544
	Kerala Forest Research Institute:	US$40 000
	Total	US$148 544

Implementing agency Kerala Forest Research Institute (KFRI)
Funding source Japan

This project will provide an international forum for the critical appraisal of the role of teak plantations in tropical timber development programs and its market situation.

Processing and utilization of logging residues through collaboration with local communities and forest industries summary (Ghana; PPD 39/02 Rev.2 (I))

Budget	ITTO:	US$55 650
	Government of Ghana:	75 million cedi
	Total	US$64 950 (approx.)

Implementing agency Forestry Research Institute of Ghana
Funding sources USA, Japan

This pre-project will investigate ways to increase the benefits accruing to local communities from forest operations through the collection and processing of logging residues. It will also formulate a project proposal to promote collaboration between forest industries and local communities in the collection and processing of logging residues.

**The prefix PD in the bracketed code denotes project and PPD denotes pre-project. The suffix F denotes Division of Reforestation and Forest Management, M the Division of Economic Information and Market Intelligence, and I the Division of Forest Industry. More-detailed summaries of the projects are available at http://www.itto.or.jp/inside/homepage_briefs.html*

Producers

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

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

Latin America
- Bolivia
- Brazil
- Colombia
- Ecuador
- Guatemala
- Guyana
- Honduras
- 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

Fellowship report

An ITTO fellowship has provided training in biotechnology techniques for improving trees and pest management

by Emmanuel Opuni-Frimpong

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Kumasi, Ghana

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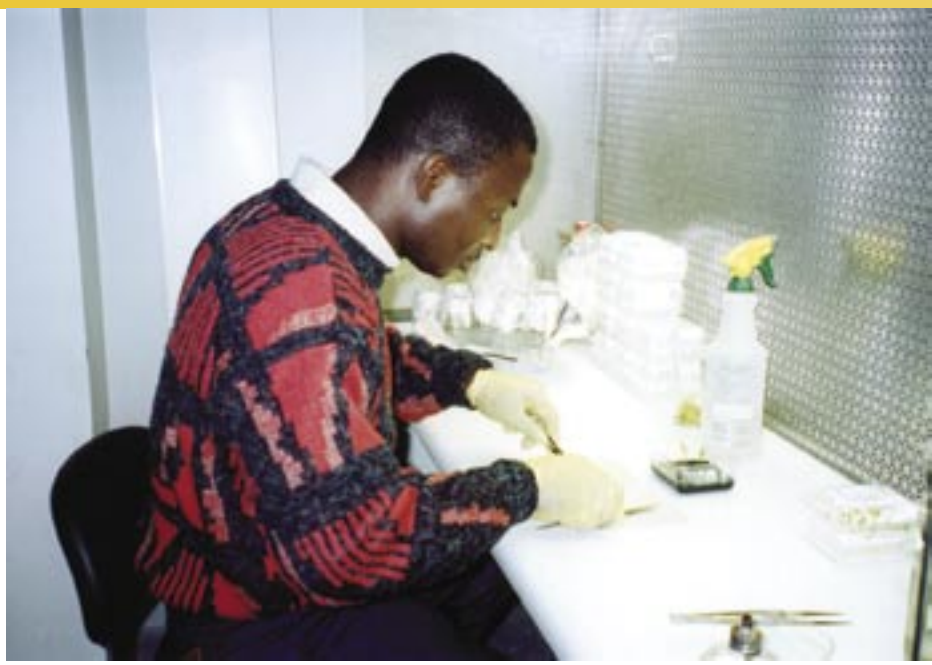
AS INTERNATIONAL demand grows for valuable timber species such as iroko and sapelli, their availability in the natural forest diminishes. Therefore, to both meet the demand and generate export revenue we need techniques for growing high-quality, pest-resistant trees of such species in plantations.

Increasingly, the traditional techniques of tree-breeding are being complemented by genetic engineering, tissue culture and molecular biological methods. To acquire skills and knowledge in these areas, I obtained an ITTO Fellowship to pursue training in biotechnology at the Michigan Technological University's School of Forestry and Wood Products.



Lab culture: The author places sterilised explants onto the tissue culture media. *Photos: D. Karnosky*

The training was oriented towards developing the skills necessary to micropropagate trees using Chinese elm (*Ulmus parvifolia*) as the host species. Methods to sterilise explants, prepare semi-solid media, and culture and subculture explants from initial planting through to rooting were shown and demonstrated. In addition, I was introduced to other research activities going on in the School's biotechnology laboratory. These included larch breeding and hybridisation, the genetic engineering of *Populus*, and the effect of elevated atmospheric concentration of two gases on tree growth. Activities of the pine shoot borer were also evaluated in the field.

Micropropagation

Micropropagation is used worldwide to propagate large numbers of a few genetically superior individuals. I was trained in all aspects of micropropagation, from the sterilisation of explants through media preparation, to the culture and subculture of explants. I learnt each step and participated fully using the autoclave, balances, laminar flow hoods and growth chamber.

Material preparation: excised young leaves and twigs were obtained from greenhouse-grown plants and surface-sterilised in 20% (v/v) bleach with a few drops of Tween-20 for ten minutes, followed by no fewer than five rinses in sterile water. The leaves and twigs were then cut and cultured onto the medium.

Larch breeding and hybridisation

I was shown several larch (*Larix* species and hybrids) breeding trials, including provenance trials, hybrid trials, and growth/yield plots and seed orchards. I was involved in cone collection and seed extraction, cleaning and de-winging in a European larch seed orchard. I also visited the largest commercial grower of larch in the USA—Mead Corporation in Escanaba, Michigan—and toured its greenhouse, seed-handling areas, seed orchards, and larch and red pine plantations. Mead Corporation and the Michigan Technological University are members of the Lake States Forest Research and Environmental Management Cooperative, an example of a cooperative research and development model involving universities, industry and government.

Genetic engineering of populars

It is now possible to insert single genes or a small number of genes into trees via *Agrobacterium*-mediated gene transfer. I was introduced to the process of culturing the *Agrobacterium* strains and inoculating aspen with *Agrobacterium* vectors carrying genes that control flowering. The potential for inserting insect-resistant genes into trees was noted. I was also introduced to the various steps involved in growing transgenic aspen plants, including shoot elongation, rooting and transfer to greenhouse.

Fellowship reports available

The following ITTO fellowship reports are available on request from the authors:

Forest mensuration manual: a practical guide

Contact: *Dr Sunil K. Nepal, 18 Manley Road, Pennington, NJ 08534, USA; snepal1@comcast.net*

A comparative study on understorey vegetation diversity of *Eucalyptus* plantation in Hainan Island

Contact: *Dr Yu Xeuebiao, Rubber Cultivation Institution, Chinese Academy of Tropical Agriculture, Hainan, China; rcri@public.dzptt.hi.cn*

Mapping of the forest types in Acre, Brazil, using remote sensing and canopy tree interpretation

Contact: *Ms Ana Margarida Castro Euler, Foreign Student House Room C-318, Yokohama National University, 2–31–1 O-oka, Minami-ku, Yokohama, 232–0061, Japan; anaeuler@hotmail.com*

Impact of CO_2 and O_3 on forest trees

The gases carbon dioxide (CO_2) and ozone (O_3) are increasing in the atmosphere and are expected to have significant impacts on the global environment. We need to know the effects that such impacts will have on the world's future forests. I spent three days at the Aspen FACE (Free-Air CO_2 and O_3 Enrichment) project at the US Forest Service laboratory in Rhinelander, Wisconsin. There, the impacts of elevated concentrations of these atmospheric gases on the growth, morphology and phenology of aspen seedlings are obvious.

Assessment of the pine soot borer

The major host plants of the pine soot borer are 4–10 year-old white, Scots and red pines. Larval feeding and tunnelling in the pith of new shoots causes damage to the plant. I observed this damage to be similar to that inflicted on African mahogany by the mahogany shoot borer, which I have been working on for the past seven years at the Forest Research Institute of Ghana (FORIG). The shoot borer attacks the leader and lateral shoots, resulting in weakened shoots that may drop or break. Environmental pressure such as adverse climatic conditions and parasites play an important role in reducing shoot borer populations. I also observed that white pines in the natural forest tolerate shoot borer attack and grow with good form. An integrated pest management strategy is recommended for the pine shoot borer.

Conclusion

This training has equipped me with skills and knowledge in biotechnology. I hope to use these to support tree improvement, pest management and reforestation programs in the tropics. The contact established between FORIG and the School of Forestry at the Michigan Technological University through my training is also worth mentioning. The School's professor, David F. Karnosky, officially visited FORIG in December 2001 and held discussions with the Director of FORIG on collaborative research on tropical trees, especially mahogany. It is my hope that what I learnt at the Michigan Technological University can be adapted to indigenous tropical timbers of Ghana, with the continued assistance of such institutions.

Acknowledgements

I am very grateful to Professor D. F. Karnosky and his secretary Janet. I also appreciate the support of the multinational graduate students in Karnosky's lab: Bixial, Michiko, Pooja, Daver and Anita.

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 the transparency of the tropical timber market;
- improving the marketing and distribution of tropical timber species from sustainably managed sources;
- improving market access for tropical timber exports from sustainably managed sources;
- securing the tropical timber resource base;
- improving the tropical timber resource base, including through the application of criteria and indicators for sustainable forest management;
- enhancing technical, financial and human capacities to manage the tropical timber resource base;
- promoting increased and further processing of tropical timber from sustainably managed sources;
- improving the marketing and standardisation of tropical timber exports; and
- improving the efficiency of tropical timber processing.

In any of the above, the following are relevant:

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

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
- reasonableness 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 **12 March 2003** for activities that will begin no sooner than July 2003. Applications are appraised in May and November each year.

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).

New forest institution created in Central Africa

2nd Conference of the Ministers in Charge of Forests in Central Africa

27–28 June 2002
Yaoundé, Cameroon

Report by Emmanuel Ze Meka

ITTO Secretariat

On 17 March 1999, the heads of state of six countries in Central Africa—Cameroon, Gabon, Equatorial Guinea, Central African Republic, Congo and Tchad—proclaimed their commitment to biodiversity conservation and the sustainable management of forest ecosystems in Central Africa in what was dubbed the Yaoundé Declaration. The Declaration included twelve strategic resolutions for action on various aspects of biodiversity conservation and forest management and assigned the Ministers in Charge of Forests to coordinate and ensure the implementation of the resolutions.

The first Conference of the Ministers in Charge of Forests in Central Africa (COMIFAC) took place in Yaoundé in December 2000. The second, in June 2002, started with the signing of the Yaoundé Declaration by Mr Salomon Banamuhere Baliene, Minister of Lands, Environment and Tourism, on behalf of the Democratic Republic of Congo (DRC). His signature filled a disturbing gap; the DRC contains about 60% of Central Africa's forest and its absence from the Yaoundé Declaration was glaring.

During its second meeting, COMIFAC established a Plan of Convergence, which is a framework of priority actions and programs identified by participating countries at the national and sub-regional levels to advance sustainable forest management. It also approved a Priority Plan of Action, which comprises those actions in the Plan of Convergence whose implementation in the period 2003–2005 is urgent. Excluding the Republic of Equatorial Guinea, participating countries agreed to contribute a total of about 15 billion CFA (US$22.3 million) to implement the priority plan. The ministers also appealed to partners in the international community to finance the management of existing protected areas, as well as alternative socio-economic and cultural activities for the benefit of local communities.

The ministers also decided some key administrative aspects of COMIFAC, establishing a Secretariat to be headed by Mr Mboussou Ngamani (DRC) and located in Yaoundé; Mr Mamfoumbi Kombia of Gabon was appointed Deputy Executive Secretary. Mr Henri Djombo, Minister of Forests of the Republic of Congo, was elected Chairman for two years.

During the meeting, Cameroon's Minister of Forests, Mr Syvestre Naah Ondoua, praised ITTO for being the first intergovernmental organisation to support the implementation of the Yaoundé Declaration.

"Being the first international organisation to provide material support to the Declaration, ITTO has played a vital role in initiating the process," he said.

ITTO's first initiative was to send an independent mission to the five ITTO Congo Basin nations. This mission reported to the 32nd Session of the International Tropical Timber Council, held in Bali in May 2002, and stimulated the financing of several new measures (see *TFU* 12/2 for a report of the agreed measures).

The next COMIFAC will be convened in Libreville in June 2004.

Smoking hazards

World Land & Forest Fire Hazards 2002

10–12 June 2002
Kuala Lumpur, Malaysia

Report by A. Sarre

This conference, which was attended by more than 500 people, coincided with the signing of the ASEAN (Association of South East Asian Nations) Agreement on Transboundary Haze Pollution by the environment ministers of the various ASEAN countries. This agreement calls on ASEAN members to set up early-warning systems and exchange information and technologies for minimising haze. During haze pollution events, the originating country should 'respond promptly' to requests for information from neighbours at risk of cross-border fallout. All signatories are also to facilitate the transit through their territories of personnel, equipment and materials for firefighting and search-and-rescue activities. The agreement also establishes an ASEAN Coordinating Centre for Transboundary Haze Pollution Control.

Much of the focus on the conference was on reducing haze pollution by improved fire management. In particular, the idea of 'zero open-burning' was widely canvassed as a way of reducing smoke haze. There appeared to be some confusion about the term: taken literally, it means that fire should not be used to remove crop of forest residues. However, several participants pointed out that it really meant that such burning should be done only at certain times and under carefully controlled conditions, while zero-burning technologies such as mulching should be used as much as possible. Most agreed that there was a need for more research into cost-effective alternatives to burning. Several delegates pointed out that peat fires produced a large proportion of the regional haze and therefore should be targeted by land-use planning and fire prevention programs.

On the second and third days of the conference, parallel sessions discussed mitigation, monitoring and prevention. Each made recommendations that were presented to a final plenary session; these included recommendations to implement awareness and education programs at all levels to reduce fire ignition sources, to undertake research into zero and controlled burning techniques through collaborative research, and to develop national and regional programs and guidelines to mitigate fire.

For more information contact: *Dalilah Haji Dali, Department of Environment, Level 3–7, Block C4, Federal Government Adminstrative Centre, 62502 Putrajaya, Malaysia; dhd@jas.sains.my*

EU looks at illegal trade

International Workshop on Forest Law Enforcement, Governance and Trade (FLEGT)

22–24 April 2002
Brussels, Belgium

This workshop was attended by experts in the field of forestry and wood products from the European Union (EU) member states, the governments of some of the main wood-producing and importing countries (China, Indonesia, the Philippines, Canada and Ghana), the forest industry, NGOs, and international organisations such as ITTO.

In its communication to the Council and the European Parliament of 13 February 2002 on a global partnership for sustainable development, the European Commission stated that the European Union would "develop an action plan by end 2002 on forest law enforcement, governance and trade and to strengthen international co-operation to address violations of forest law, and forest crime".

This workshop was designed to increase understanding in this field and to assist the preparation of the action plan. Four main issues were addressed: the identification of wood production and the verification of legal wood products; the development of collaboration between customs and other enforcement bodies in producing and importing countries; the improvement of standards relating to investment and loans for wood production and public procurement; and the position of and support from forest-based industries. There was also a session on trade policies and the World Trade Organization in this context.

Given the diversity of participants, discussion was intense. However, understanding was significantly advanced and recommendations made in all the topics under discussion. It was proposed that the EU should support the creation, as quickly as possible, of a mechanism for providing accredited verification in producer countries of the legality of wood products entering the EU, based on a phased approach. Measures would be required to deny access to EU markets of illegally sourced wood products while promoting legitimate business.

Proposals were made concerning the financing of illegal operations and the laundering of proceeds from forest crimes; requirements for due diligence by financing institutions; and the need for new legislation to make the importing, trading and financing of timber from illegal sources a criminal offence. Clauses on non-illegal origin should be included in public procurement contracts. Export credit agencies should publish relevant information on the projects they support or are considering, including environmental and social impact assessments; a Council regulation should be drafted in this respect.

The workshop determined that there was a need for modern, stable, effective, enforceable and simple legislation—complex legislation covers corruption. It was important to establish a level playing field, avoiding the creation of unfair competition or prejudicing companies that operate legally. Some companies are already applying best practices in this field on a voluntary basis. The establishment of producer groups should be encouraged, and a series of conciliatory in-depth discussions between all interested parties should be promoted. Cooperation programs, including in capacity-building and technical assistance, should be agreed with wood-producing countries to support the FLEGT process.

The Commission will now proceed to define the FLEGT action plan for the European Union, taking into account the conclusions and recommendations of the workshop, with a view to putting a communication to the Council and European Parliament by the end of the year.

Non-timber training

Second International Training Program on Sustainable NTFP Management for Rural Development

26 November–13 December 2001
Bhopal, Madhya Pradesh, India

International Center for Community Forestry
Indian Institute of Forest Management

This program was organised to enhance the knowledge and hone the skills of forestry and rural development practitioners from across the globe in generating livelihood opportunities for the poor through the sustainable management of non-timber forest products (NTFPs).

Fifteen participants from five countries attended the three-week training. Along with learning from the field experiences of the International Center for Community Forestry itself, the program incorporated the experience and expertise of three other premier research and training institutes of the country, including the Indian Institute of Technology in Kharagpur, the G. B. Pant Institute of Himalayan Environment and Development in Almora and the Dehradun-based Forest Research Institute.

The training involved situational analysis of the NTFP management and rural development scenario (both micro and macro) and an intensive coverage of contemporary issues related to NTFP production, processing and trade. The participants were also trained in various tools and techniques for NTFP resource assessment, enterprise feasibility assessment and NTFP-based livelihood generation. During the field visits interspersed throughout the course, participants were taken to nine project sites in India's temperate and tropical forests, where they had an opportunity to test their newly acquired knowledge and skills in field conditions.

For more information, contact: *Dr Prodyut Bhattacharya, Course Director, Indian Institute of Forest Management, Nehru Nagar, PO Box 357, Bhopal-462003, Madhya Pradesh, India; prodyut@iifm.org; www.iifm.org*

Recent editions

Edited by Alastair Sarre

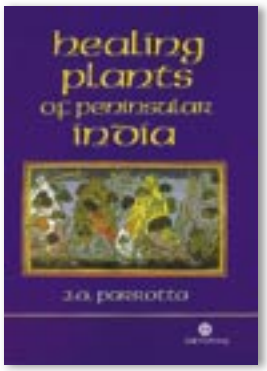
Thielges, B., Sastrapradja, S. & Rimbawanto, A. (eds) 2001.* In situ and ex situ conservation of commercial tropical trees. *Faculty of Forestry, Gadjah Mada University and ITTO. Yogyakarta, Indonesia. ISBN 979-96652-0-5.

Available from: *Department of Forest Science, Faculty of Forestry, Gadjah Mada University, Yogyakarta 55281, Indonesia.*

This substantial tome contains papers from an ITTO-sponsored conference on ex situ and in situ conservation of commercial tropical trees held in Yogyakarta in mid 2001. According to Bart Thielges in the foreword, genetic conservation within species, particularly keystone species such as major tree species, is important for both the long-term sustainability of natural ecosystems and the viability of commercial plantations.

Parotta, J. 2001.* Healing plants of peninsular India. *CABI Publishing, Wallingford, UK. ISBN 0-85199-501-2. US$140, hardback.

Available from: *CABI Publishing, CAB International, Wallingford, Oxon OX10 8DE, UK; Fax 44–(0)1–1491–833 508; cabi@cabi.org; www.cabi.org*

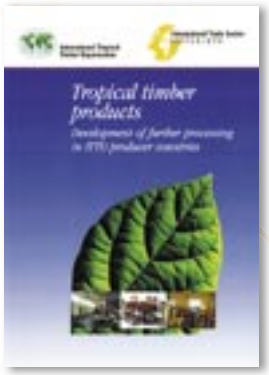


If the above book was substantial, this is monstrous—944 pages. It contains information (including on therapeutic uses) and photos on 545 species of trees, shrubs, climbers, herbs, grasses and ferns found in peninsular India and used in traditional Indian medicine. It also includes a nicely written introduction that canvasses the historical and cultural roots of traditional Indian medicine.

ITTO/ITC 2002.* Tropical timber products: development of further processing in ITTO producer countries. *International Tropical Timber Organization and International Trade Center, Geneva, Switzerland. ISBN 92-9137-204-8.

Available from: *Information Officer, ITTO, International Organizations Center – 5th Floor, Pacifico-Yokohama, 1–1–1, Minato-Mirai, Nishi-ku, Yokohama 220-0012, Japan; Tel 81–45–223 1110; Fax 81–45–223 1111; itto@itto.or.jp; www.itto.or.jp*

This report, prepared on behalf of ITTO by the International Trade Center, provides a theoretical framework for assessing the national competitiveness of tropical timber further-processing industries and provides key statistical



and market data. It includes regional overviews of further processing in the three tropical regions and separate chapters on: future global demand and outlook for ITTO producer countries; further processing technologies applied in producer countries; and tariff and non-tariff measures affecting the trade in further processed products, including certification. It makes wide-ranging recommendations for future action by ITTO, its producer member governments, and industry and trade associations in producer member countries.

Demmer, J. and Overman, H. 2001.* Indigenous people conserving the rain forest? The effect of wealth and markets on the economic behaviour of Tawahka Amerindians in Honduras. *Tropenbos Series 19. Tropenbos International, Wageningen, the Netherlands. ISBN 90-5113-053-8. €20.

Available from: *The Tropenbos Foundation, PO Box 232, NL-6700 AE Wageningen, the Netherlands; tropenbos@tropenbos.agro.nl; www.tropenbos.nl*

This very readable book reports the results of PhD research conducted by the authors during the mid 1990s. Of Dutch nationality, they lived for 30 months among the Tawahka Amerindians in the Mosquitia region of Honduras: "The fieldwork conditions were basic, it rained a lot, mud was mixed with dung, the food was monotonous and always cold; in sum, we had fun and life was good". The goal of the research was to build up a picture of the economic behaviour of Tawahka households to provide insight into how economic development influences the role of the forest in income-generation, increases or reduces pressure on various species, and influences the rate of forest conversion. The authors concluded: "the value that the rest of the nation or the world attaches to the forest overshadows the value that local people derive from the forest". Thus, "payment by the outside world to enable local people to conserve the forest could be a promising long-term management strategy for indigenous reserves, because it covers the direct interests of the stakeholders; avoidance of national/global damage costs; improvement of local living standards; and rain forest conservation". The book is published in English, with Spanish and Dutch summaries.

Tropical and topical

Edited by Alastair Sarre

Brazil unveils its own Agenda 21 ...

Brazil's President Mr Fernando Henrique Cardoso and the Minister of Environment, Mr José C. Carvalho, launched 'Brazilian Agenda 21' last July. This agenda, formulated after wide consultations across Brazilian society coordinated by the Ministry of Environment, is a program of action based on a new model of development combining methods of environmental protection, social justice and economic efficiency. It sets out 21 priority actions for achieving sustainable development in Brazil.

... creates new parks ...

In July President Cardoso also signed a decree creating a new national park in the country's northeast. The park, to be called *Nascentes do Rio Parnaiba*, is about 729 000 hectares in size and is located on the boundary of the states of Piaui, Maranhão, Bahia and Tocantins. The major purpose of the park is to protect the upper watersheds of the Parnaiba River, the second most important river in northeastern Brazil and the most important in Piaui state. In August President Cardoso also announced the creation of a new national park in Amapá State on the border with French Guyana. This park will cover 3.9 million hectares of Amazonian rainforest and has been hailed as the world's largest rainforest national park.

... and establishes a new Amazon observation system

A busy President Cardoso also inaugurated the new System for the Protection and Surveillance of Amazonia (SIVAM, also dubbed the Amazon Vigilance System) in July. The system comprises a network of 25 ground stations, 63 mobile radar units, 19 fixed radar sensors and 25 aeroplanes for surveillance and enforcement. According to the government, about 80% of SIVAM's outputs will be for environmental purposes and will include the production of maps and environmental reports; it will also be used to combat illegal logging and the illegal transport of timber. The main agencies to use the system will be the Ministry of Defence, IBAMA, and the state secretaries of environment; information generated by the system will also be made available to countries party to the Treaty of Amazonia Cooperation.

Reported by Mauro Reis

Europe ratifies Kyoto Protocol

The 15 member countries of the European Union ratified the Kyoto Protocol of the Framework Convention on Climate Change last June. The protocol requires industrialised countries to reduce their emissions of co_2 from 1990 levels by an average of about 5% during the period 2008–2012. In September 2002, the number of states party to the protocol was 93, satisfying one of the two conditions necessary for it to enter into force. The protocol needs to be ratified by 55 countries accounting for at least 55% of co_2 emissions by the developed world in 1990. Countries now ratified account for more than 37% of emissions. Brazil and Malaysia, although not categorised as developed countries, also recently ratified the protocol.

Peru forest certification standards established

Last June the Peruvian Committee of Voluntary Forest Certification of Peru (CP-CFV) announced standards for the certification of the Peruvian Amazon forests based on a standards-setting process commenced in 1998. An agreement between CP-CFV and the National Institute of natural Resources (INRENA) was signed in order to implement a national training and dissemination plan for the standards. According to *TFU* correspondent Mauro Rios, the Forest Stewardship Council's Executive Director Heiko Leideker said that the Peruvian standards met pre-conditions for their recognition by the Council.

Illegal crops in the Andean countries

Recent data show how the area of (illegal) coca plantations is maintaining an average size at the regional level in South America; over the last decade the area planted to coca—the source material for cocaine—has declined in Peru and Bolivia but expanded dramatically in Colombia *(Table 1)*. This situation has implications for Colombian forests, because the crops are invariably established by clearing forest.

Reported by Antonio Villa Lopera.

Colombian forest plantation census

A comprehensive census of Colombia's commercial forest plantation estate is being carried out as a joint initiative of the Ministry of Agriculture and Rural Development, the National Statistics Department, the Institutions of the National Environmental System, local authorities and private owners. It is estimated that Colombia has about 160 000 hectares of plantations intended for timber production. The census will provide a reliable set of figures not only on timber volumes but also on aspects such as employment, income and markets, and is expected to be completed by the end of the year. For more information contact ecosistemas@ideam.gov.co

Coca quota

Table 1: Dynamics of illegal crops in three Andean countries during the last decade

Note the reasonably constant total area in the righthand column

Year	Area of illegal crops by country and year *(hectares)*			
	Bolivia	Peru	Colombia	Total
1990	50300	121300	40100	211700
1991	47900	120800	37500	206200
1992	45500	129100	37100	211700
1993	47200	108800	39700	195700
1994	48100	108600	45000	201700
1995	48600	115300	50900	214800
1996	48100	94400	67200	209700
1997	45800	68800	79500	194100
1998	38000	51000	101800	190800
1999	21800	38700	122500	183000
2000	14600	34100	136200	184900

Source: Bureau for International Narcotics and Law Enforcement Affairs, seen in IDEAM (in press): Approach to an environmental profile of Colombia. For more information contact pmartinez@ideam.gov.co

Letters

Bolivian data queried

Sir

In a recent edition of this newsletter (*TFU* 12/1), Wynet Smith of the World Resources Institute (WRI) presented a table in which it is claimed that 80% of the timber harvested in Bolivia is harvested illegally. This figure has caused confusion and concern both in the country and elsewhere, because the Government of Bolivia and many private and public organisations, including ITTO, are contributing to the development of an effective forestry model in the country. Recently, the World Wide Fund for Nature awarded the Bolivian Chamber of Forestry a 'Gift to the Earth' for achieving 1 million hectares of natural tropical forest under Forest Stewardship Council certification. Additionally, over 6 million hectares of Bolivian forests are being managed under management plans approved by the Forest Superintendency.

Naturally, the new model of sustainable forest management in Bolivia is in a gradual process of adoption in an imperfect world. Certainly, there is a significant percentage of illegal activity, but no one knows just what this percentage is. The Bolivian Sustainable Forest Management Project (Proyecto de Manejo Forestal Sostenible, BOLFOR) is in the process of initiating a study on this subject in cooperation with a project financed by ITTO—Sistema de Información Forestal de Bolivia (SIFORBOL).

In the meantime, we should be circumspect in quoting numbers. The source cited by Dr Smith in the *TFU* article is a World Bank consultancy by A. Contreras-Hermosilla. We have just reviewed that report and found a reference to *forest clearing* being 80% illegal; Dr Smith has apparently confused illegal forest clearing with illegal timber extraction. Please be aware that little timber is derived from illegal forest clearing in Bolivia. Instead, the forest debris is normally burnt when land is converted from forest to pasture or crops. The majority of timber extracted for sale in local and international markets comes from selective logging in standing forests, mostly under sustainable management and some also from unauthorised extraction. The article obviously intended to refer to this illegal extraction in standing forests, not to areas where land is being cleared for conversion to other uses. A re-examination of the Contreras-Hermosilla document will clarify this issue.

We hope that WRI and ITTO will take the necessary steps to correct this error for their readers; it would be unfortunate if such readers were misinformed about the forest model that we have all worked so hard to create.

Dr Preston S. Pattie
BOLFOR Project
Casilla # 6204 Santa Cruz, Bolivia
bolfor@bibosi.scz.entelnet.bo
21 June 2002

The author responds:

I thank Dr Pattie of BOLFOR for his letter and request for clarification. This and other responses to my article highlight how important the issue of illegal forest-related activities has become.

I am sure Dr Pattie and his colleagues will understand that the article was a very condensed version of what is in the full WRI report. In the full report, Bolivia's past problems, forest policy reforms and progress are mentioned in the main body of the text, as well as in an appendix that summarises known information on illegal logging activities. The table in the article only sought to highlight examples of illegal logging numbers. The article made a point of clarifying that many of these numbers are dated, are collected by various means, and are of variable quality. Additionally, the definition of illegal logging outlined in the article and the report, although highlighting logging activities, does refer to the broader suite of illegal forest activities (such as wildlife poaching and forest encroachment) that can and do occur.

As noted by Dr Pattie in his letter, the implementation of the new model of forest management in Bolivia is a gradual process and there appears to be a significant ongoing problem with illegal forestry activities, despite the laudable progress. However, the point of the article was not to undermine progress being made in general or in any particular place. The intent was to highlight how significant the problem is, some of the challenges faced in combating the problem, and some specific recommendations for improving monitoring to help reduce illegal logging and associated trade.

I would suggest that Dr Pattie and other interested readers obtain a copy of the full report (the publication of which has been delayed until September 2002), which provides much more detail on this complex topic and on the efforts being made and methods available for combating the problem. It will be available on the WRI website (www.wri.org) in September. I will also be happy to forward the full report to anyone who requests it.

Wynet Smith
Forest Programme
World Resources Institute
10 G St. NE, Suite 800
Washington, DC 20002, USA
wynet@wri.org; www.wri.org
18 July 2002

Asking less

Sir

I thought the editorial in *TFU* 12/2 was particularly on target. Those of us in the 'developed' nations need to give more and ask less.

Mark Willhite
24 July 2002

Transboundary conservation workshop announced

ITTO and IUCN are convening an international workshop on transboundary conservation areas (TBCAs) in tropical forests, with the aims of:

- raising the profile of the TBCA concept and highlighting major issues and challenges as an input to the World Parks Congress, which will be held in September 2003;
- evaluating international trends in the political and institutional arrangements for the development of TBCAs, including bottlenecks to political support;
- identifying the political, managerial and technical issues in transboundary management at the landscape level with a view to integrating TBCAs into the broader landscape to ensure they are planned and managed in context;
- making recommendations for improving the formulation and management of ITTO TBCA projects on the basis of the IUCN good-practice guidelines for transboundary cooperation between protected areas; and
- increasing networking between ITTO-supported TBCA project staff, IUCN's World Commission on Protected Areas, and other experts and practitioners.

The workshop will bring together practitioners involved in the implementation of ITTO's TBCA program, and experts from IUCN and other interested organisations. It will be held 17–21 February 2003 in Ubon Ratchathani, Thailand.

For more information contact: *Eva Mueller or Alastair Sarre, ITTO Secretariat; Tel 81–45–223 1110; Fax 81–45–223 1111; rfm@itto.or.jp or editor@itto.or.jp, or Stewart Maginnis, IUCN; Tel 44–22–999 0001; stewart.maginnis@iucn.org*

Making contact

I would like to make contact with researchers in bamboo cultivation and/or utilisation worldwide.

Abraham A. A. Allotey

BSc (Hons) Agriculture, MSc Wood Technology and Management

PO Box GP 3752
Accra, Ghana, West Africa

aaaallotey@yahoo.co.uk

Preferred language: English

I am interested in making contact with researchers dedicated to the study of the management, conservation and protection of forest watersheds.

Ing Yohán Suaréz

Toledo, Calle Marañón
San Andrés, La Palma
Pinar del Rio, CP 24310
Cuba

Preferred language: Spanish

Obituary: Léo Scherman

by Odile Bertin-Faull and Yvonne Cunnington

The unexpected death of Léo Scherman, in London on 20 June 2002, was a shock to all his fellow ITTO interpreters and translators, and also to all members of the Secretariat and the International Tropical Timber Council, who will remember seeing him, his usual self and in top form, in Bali at the time of the last Council session.

Léo Scherman had ensured the coordination of the teams of interpreters and translators at ITTO's sessions since 1990, effectively and with discretion and humour.

Born in France of Russian parents, he began his career in journalism in London at the French section of the BBC before launching out into interpretation to become one of its most brilliant exponents. With a remarkable mastery of the French language and a deep knowledge of English, he could interpret speeches in all their richness and subtleties, all their nuances and colours. With his immensely cultured background and his insatiable intellectual curiosity, he was interested in everything, adored travelling and discovery, and was a travel companion and fellow worker full of humour and kindness.

He greatly enjoyed the friendly and cordial atmosphere at ITTO's sessions and nothing in the world would have prevented him from attending them. Léo had no family or relatives left but he will be greatly missed by his many friends throughout the world.

Call for research grant applications

The International Foundation for Science (IFS) provides support to young scientists of merit in developing countries by awarding research grants and providing grantees with additional services such as travel grants and purchasing assistance.

The IFS supports research related to the renewable utilisation of biological resources in areas such as crop and animal production, forestry, food science, natural products and fisheries, as well as research on the sustainable utilisation and conservation of natural ecosystems, including themes such as water and biodiversity. Proposals for projects may address biological, chemical or physical processes as well as social and economic relationships important in the conservation, production and renewable utilisation of the biological resource base.

Research grants are awarded up to a maximum value of US$12 000 for a period of one to three years and may be renewed twice. They are intended for the purchase of equipment, expendable supplies, and literature. Applicants must be citizens of, and carry out the research in, a developing country. They should be attached to a university or national research institution in a developing country. As well as being under the age of 40 (under 30 for applicants from China) and at the start of their research career, candidates must possess a higher academic degree, which should be at least an MSc or equivalent.

Applications are made on the application form, in English or French, which is available from the IFS Secretariat or can be downloaded from the website. For more information contact: IFS, Grev Turegatan 19, S-114 38, Stockholm, Sweden; Fax 46–8–5458 1801; info@ifs.se; www.ifs.se

Meetings

7–10 October 2002. **Conference on Bringing Back the Forests: Policies and Practices for Degraded Lands and Forests.** Kuala Lumpur, Malaysia. ***Contact:*** *Alias Abdul Jalil, Forest Research Institute Malaysia (FRIM); Tel 60–3–6272 2516; Fax 60–3–6277 3249; foreconf@apafri.upm.edu.my; www.apafri.upm.edu.my/mod/abc.html*

14–18 October 2002. **Interpraevent 2002 in the Pacific Rim: Protection of Habitat against Floods, Debris Flows and Avalanches caused by Heavy Rainfall, Typhoon, Earthquake and Volcanic Activity.** Matsumoto, Japan. ***Contact:*** *Japan Society of Erosion Control Engineering, Sabo Kaikan, 2–7–5 Hirakawa-cho, Chiyoda-ku, Tokyo, 102-0093 Japan; Tel 81–3–3263 6701; Fax 81–3–3263 7997; IPR2002@ics-inc.co.jp; www.sabopc.or.jp/IPR2002*

27–31 October 2002. **International Seminar on Strategies to Develop Sustainable Bioenergy Production Systems.** Belo Horizonte, Brazil. ***Contact:*** *Prof. Laércio Couto; Tel 55–31–3899 1185; sifdc@mail.ufv.br*

29 October–1 November 2002. **Global Mountain Summit.** Bishkek, Kyrgyzstan. ***Contact:*** *Andrei Iatsenia; Tel 41–22–917 8273; Fax 41–22–917 8036; iatsenia@unep.ch; www.globalmountainsummit.org*

3–4 November 2002. **Future Forests 2002.** Melbourne, Australia. ***Contact:*** *Margaret Blackwell, Future Forests 2002, Abacus Management Pty Ltd, PO Box 77 Pymble NSW 2073 Australia; Fax 61–2–9983 9307; abacus@abacusconf.com*

3–15 November 2002. **12th Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora.** Santiago, Chile. ***Contact:*** *CITES Secretariat, International Environment House, Chemin des Anémones, CH-1219 Châtelaine, Geneva, Switzerland; Tel 41–22–917 8139; Fax 41–22–797 3417; cites@unep.ch; www.cites.org*

4–9 November 2002. **33rd Session of the International Tropical Timber Council.** Yokohama, Japan. ***Contact:*** *Collins Ahadome; Tel 81–45–223 1110; Fax 81–45–223 1111; itto@itto.or.jp; www.itto.or.jp*

5–7 November 2002. **MADETEC 2002: Technologies and Uses of Wood Reforestation.** Belo Horizonte, Brazil. ***Contact:*** *Prof. Laércio Couto; Tel 55–31–3899 1185; sifdc@mail.ufv.br*

10–15 November 2002. **EucProd: International Conference on Eucalypt Productivity.** Hobart, Tasmania. ***Contact:*** *Penny Archer, Conference Design Pty Ltd, PO Box 342, Sandy Bay, Tasmania 7006, Australia; Tel 61–3–6224 3773; Fax 61–3–6224 3774; mail@cdesign.com.au; www.cdesign.com.au/eucprod*

11–17 November 2002. **Collaboration and Partnerships in Forestry.** Santiago, Chile. IUFRO 6.00.00. ***Contact:*** *Susanna Benedetti, Instituto Forestal, Casilla 3085, Santiago, Chile; Tel 56–2–693 0722; Fax 56–2–638 1286; sbenedet@infor.cl*

15–17 November 2002. **17th Session of the Global Biodiversity Forum.** Valencia, Spain. ***Contact:*** *Caroline Martinet, IUCN; Tel 41–22–999 0216; Fax 41–22–999 0025; caroline.martinet@iucn.org; www.gbf.ch*

27–28 November 2002. **Asia Timber and Forestry Conference.** Kuala Lumpur, Malaysia. Endorsed by ITTO. ***Contact:*** *The Asia Business Forum, 3 Raffles Place #06-01, Singapore 048617; Tel 65–6536 8676; Fax 65–6536 4350; info@abf.com.sg; www.abf-asia.com*

3–7 February 2003. **FAO/ITTO/INAB International Conference on Criteria and Indicators for Sustainable Forest Management** (rescheduled from July 2002). Guatemala City, Guatemala. ***Contact:*** *Eva Mueller or Steven Johnson, ITTO Secretariat; Tel 81–45–223 1110; Fax 81–45–223 1111; rfm@itto.or.jp or eimi@itto.or.jp*

17–21 February 2003. **ITTO/IUCN Workshop on Increasing the Effectiveness of Transboundary Conservation Areas in Tropical Forests.** Ubon Ratchathani, Thailand. ***Contact:*** *Eva Mueller or Alastair Sarre, ITTO Secretariat; Tel 81–45–223 1110; Fax 81–45–223 1111; rfm@itto.or.jp or editor@itto.or.jp,* ***or*** *Stewart Maginnis at Stewart.Maginnis@iucn.org*

11–15 March 2003. **Properties and Utilization of Tropical Woods.** IUFRO 5.03.00 and 5.06.00. ***Contact:*** *Gan Kee SENG, Forest Research Institute Malaysia, 52190 Kuala Lumpur Kepong, Malaysia; Fax 60–3–636 7753; ganks@frim.gov.my*

16–23 March 2003. **3rd World Water Forum.** Kyoto, Japan. ***Contact:*** *Forum Secretariat, Tokyo; Tel 81–3–5212 1645; office@water-forum3.com; www.worldwaterforum.org*

24–30 March 2003. **The Role of Planted Forests in Sustainable Forest Management.** Wellington, New Zealand. ***Contact:*** *ECPF Secretariat, c/- International Policy, Ministry of Agriculture and Forestry, PO Box 2526, Wellington, New Zealand; Fax 64–4–498 9891; plantedforestrymeeting@maf.govt.nz; www.maf.govt.nz/unff-plantedforestry-meeting*

6–12 April 2003. **World Perspective on Short Rotation Forestry for Industrial and Rural Development.** Nauni, Solan, India. ***Contact:*** *Kartar S. Verma, Tel 91–1792–52270; Fax 91–1792–52242; khuranasolan@yahoo.com*

6–11 April 2003. **International Workshop on *Gmelina arborea*.** Samarinda, East Kalimantan, Indonesia. ***Contact:*** *Bill Dvorak, Box 7626, Grinnells Lab. NCSU, Raleigh, NC 27695 USA; info@CAMCORE.org; www.CAMCORE.org*

12–17 May 2003. **34th Session of the International Tropical Timber Council.** Panama City, Panama. ***Contact:*** *Collins Ahadome; Tel 81–45–223 1110; Fax 81–45–223 1111; itto@itto.or.jp; www.itto.or.jp*

22–24 May 2003. **Economics of Sustainable Forest Management.** Toronto, Canada. ***Contact:*** *Conference Secretariat, Tel 1–416–9786196; Fax 1–416–9783834; lcsfm@larva.forestry.utoronto.ca*

26 May–6 June 2003. **3rd Session of the United Nations Forum on Forests.** Geneva, Switzerland. ***Contact:*** *Mia Soderlund, UNFF Secretariat; Tel 1–212–963 3262; Fax 1–212–963 4260; unff@un.org; www.un.org/esa/sustdev/forests.htm*

8–17 September 2003. **V World Parks Congress.** Durban, South Africa. ***Contact:*** *Peter Shadie, Executive Officer, 2003 World Parks Congress, IUCN Programme on Protected Areas, Rue Mauverney 28, 1196 Gland, Switzerland; Tel 41–22–999 0159; Fax 41–22–999 0025; pds@iucn.org; http://wcpa.iucn.org/wpc/wpc.html*

21–28 September 2003. **XII World Forestry Congress.** Quebec City, Canada. ***Contact:*** *XII World Forestry Congress, PO Box 7275, Charlesbourg, Quebec G1G 5E5, Canada; www.wfc2003.org*

19–31 October 2003. **6th Conference of the Parties to the Convention to Combat Desertification.** Bonn, Germany. ***Contact:*** *CCD Secretariat; Tel 49–228–815 2800; Fax 49–228–815 2898/99; secretariat@unccd.int; www.unccd.int*

3–8 November 2003. **35th Session of the International Tropical Timber Council.** Yokohama, Japan. ***Contact:*** *Collins Ahadome; Tel 81–45–223 1110; Fax 81–45–223 1111; itto@itto.or.jp; www.itto.or.jp*

1 April 2004. **Management of Tropical Dry Forest Woodlands and Savannas: Assessment, Silviculture, Scenarios.** Brasilia, Brazil. ***Contact:*** *Prof. Dr. Jose Imana Encinas; Tel 55–61–2736026; Fax 55–61–3470631; imana@guarany.cdp.unb.br*

8–13 August 2005. **XXII IUFRO World Congress.** Brisbane, Australia. ***Contact:*** *Dr Russell Haines, Queensland Forestry Research Institute, PO Box 631, Indooroopilly 4068, Australia; Tel 61–7–3896 9714; Fax 61–7–3896 9628; hainesr@qfri1.se2.dpi.qld.gov.au; http://iufro.boku.ac.at*

development is to have any meaning, we have to provide an investment environment to preserve the competitiveness of companies that operate within the law.

Another area of forest management in which Brazil has made significant progress relates to fire control. Brazil has one of the best forest fire monitoring programs in the tropics and we have recently increased operational capacity for fire prevention and combat in the Amazon and in conservation units throughout the country; in the last two years we have reduced the incidence of forest fire in conservation units by 86%. Our firefighting capacity is coordinated nationally by IBAMA and supported by the armed forces and a taskforce using air transport. We can now move 500 bombeiros (firemen based in Brasilia) to any point in Brazil within 48 hours. Simultaneously we are building local-level networks of firefighters to prevent and combat fires.

Economic alternatives

Such institutional reforms are important, but they are not enough: it is essential to create economic alternatives for the sustainable use of resources. We want to change the classical model of development in the Amazon; for this reason the federal government abolished SUDAN, the entity traditionally charged with promoting development in the Amazon. In its place we are creating another body called the Agency for the Amazon, with the purpose of fostering sustainable development using new economic models. This agency will be responsible for a fund of regional development and has the purpose of reorienting public investment to stimulate economic activities such as ecotourism and sustainable forest management based on the sustainable use of natural resources. There is a huge potential to generate employment without deforestation. For example, the Brazilian government recently established a centre for biotechnology research and development in the Amazon. This centre, which opened this year in the Amazonian city of Manaus, is the largest of its kind in Latin America and will search for and help develop forest biodiversity products in the pharmaceutical, cosmetics and food industries. Ecotourism is also being promoted through a US$200 million project supported by the InterAmerican Development Bank. And we are investing in ecological and economic zoning in order to organise the agricultural frontier.

Fair and equitable

The fair and equitable sharing of benefits arising from the use of genetic resources and traditional knowledge is a critical issue for the national government. A new national law aims to resolve it. The main component of this Act is a regulation relating to the sharing of benefits from the use of genetic resources and traditional knowledge associated with the letter and spirit of Article 8J of the Convention on Biological Diversity. We have formed a commission to oversee its implementation.

International cooperation

I hope I have adequately conveyed the idea that the Brazilian government, in cooperation with many civil-society actors, is working hard to bring about sustainable development in the Amazon. But it is clear to me that international cooperation is essential to complement these national efforts, especially in the development of remunerative sustainable forest management regimes. ITTO is one organisation capable of backing up its words with action, but it can and should do more to support sustainable forest management and certification and to combat illegal logging and illegal trade. Through the pages of this journal, I hereby launch an appeal for these fundamental forest issues to be placed at the top of the Organization's agenda and for more resources to be put at its disposal.

I find the rhetoric of many developed countries about 'poverty alleviation' in developing countries somewhat strange.

Hazy view from World Summit

The World Summit on Sustainable Development ended on 4 September to mixed reactions. While UN officials called it a success, many non-governmental organisations labelled it a failure.

The main outcome of the Summit was a Plan of Implementation, a 27 000-word document agreed by most participating governments to guide future efforts towards sustainable development.

The main commitment contained in this document is to halve the number of people without access to sanitation and safe drinking water by 2015. Countries also committed themselves to establish a 'world solidarity fund' to eradicate poverty and promote social and human development in developing countries. However, contributions to this fund will be voluntary.

On certification, countries agreed to develop and adopt, where appropriate, on a voluntary basis, effective, transparent, verifiable, non-misleading and non-discriminatory consumer information tools to provide information relating to sustainable consumption and production. This agreement contains the proviso that such tools "should not be used as disguised trade barriers".

Among the forest-related initiatives announced during the Summit was the Congo Basin Forest Initiative, in which ITTO is a partner. The goal of the partnership is to promote economic development, poverty alleviation, improved governance and natural resource conservation in the region through support for a network of national parks and protected areas, well-managed forestry concessions, and assistance to communities. The US government pledged US$53 million over the period 2002–2005 to help implement the partnership. An Asia Forest Partnership was also announced. ITTO hosted a side-event at the Summit to highlight some of the progress that has been made towards sustainable forest management through its project program. Details of this side-event can be found at www.itto.or.jp/inside/current_news/aug27_2002_success.html

The contentious issue of agricultural subsidies was discussed but not resolved at the Summit.

Claiming a successful outcome, Summit Secretary-General Ntini Desai said in a press release that: "It's impossible to know just how many resources the Summit has mobilised, but we know they are substantial. Furthermore, many of the new resources will attract additional resources that will greatly enhance our efforts to take sustainable development to the next level …"

In contrast, a press release from the World Wide Fund for Nature reported that: "the Plan of Implementation will not provide significant movement forwards from commitments made in Rio and since. … The meagre outcome of the meeting is also a consequence of some countries' conscious efforts to prevent the Summit from agreeing new targets and timetables."

Report by A. Sarre

Innovative approaches to sustainable development are being pursued in the Brazilian Amazon, but some fundamental economic questions remain

by Dr José Carlos Carvalho

Minister of Environment
Brazil

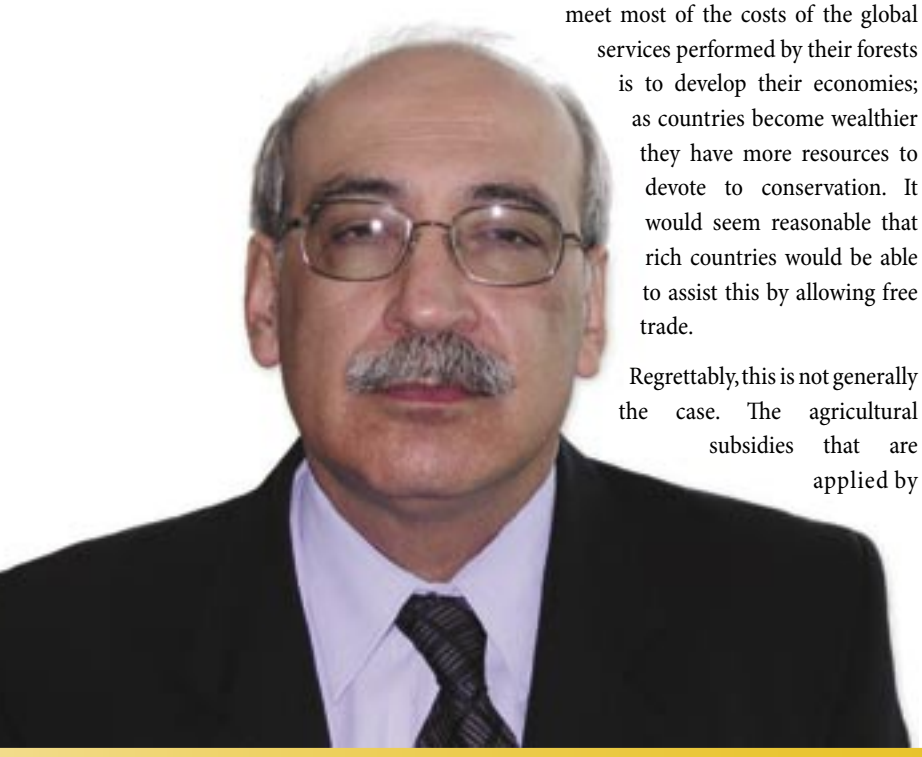
DEFORESTATION continues in the Amazon. As Minister of Environment, this is not something I'm pleased about, but it's the reality. As the agricultural frontier expands, the forest retreats and the Amazonian economy grows. This is the development model being employed in the Amazon; until realistic new models can be devised, this process will continue inevitably.

What are the options? Let's look at the 'demand' in many developed countries for tropical forest conservation. Several concerns lie behind this, including the loss of biological diversity and worries that deforestation releases carbon into the atmosphere and thereby contributes to global warming. Thus, the tropical forests of Brazil and many other tropical countries perform services that are valuable to the global community, particularly carbon storage and biodiversity conservation but also the maintenance of water quality and many other services.

Unfortunately, the only apparent way for such countries to receive remuneration for their forest resources is through predatory use …

These services are not being remunerated. For now, at least, global markets for biodiversity conservation or carbon storage are small or non-existent. Few tropical countries can afford on their own to meet the costs of the global services performed by their forests. Unfortunately, the only apparent way for such countries to receive remuneration for their forest resources is through predatory use—logging in an unsustainable way, clearing it for agriculture, or both.

One way that tropical countries may eventually be able to meet most of the costs of the global services performed by their forests is to develop their economies; as countries become wealthier they have more resources to devote to conservation. It would seem reasonable that rich countries would be able to assist this by allowing free trade.



Regrettably, this is not generally the case. The agricultural subsidies that are applied by many wealthy countries, especially the European Union, Japan and the United States, damage the ability of developing tropical countries to earn export revenue from their agricultural products. Recently it was estimated that the USA and the EU together subsidise their agricultural sectors to the tune of about US$300 billion per year. Due to this, the prices that developing countries can obtain from agricultural exports are half what they were 20 years ago; logically, if you only get half the price you need to farm double the area of land—so another incentive for deforestation arises. That's why I find the rhetoric of many developed countries about 'poverty alleviation' in developing countries somewhat strange. International trade is dominated by the largest economies and often acts in contradiction to the anti-poverty rhetoric. It is increasingly obvious that without some fundamental changes in the economic order, the term 'sustainable development' is simply an empty slogan.

What's being done

Nevertheless, it's not all doom and gloom. In Brazil we are doing our best to bring about sustainable development in the Amazon. I am the first forestry professional to head up the Ministry of Environment in Brazil, which has a broad mandate for environmental and forest policy in Brazil. In the previous three years I was Executive Secretary (Vice-minister) and in that capacity I coordinated forestry issues.

We have seen some significant advances. In 2000 we created the Brazilian National Forest Program (NFP) after a broad consultation involving civil society, the private sector and academia. At the institutional level, we created the position of Secretary for Forests and Biodiversity and a directorate within IBAMA (the Brazilian Institute for Environment and Natural Resources) to oversee the implementation of NFP policies at the federal level.

Activities are starting now that will have a major impact at the field level. For example, the Ministry of Planning recently approved a proposal made by the Ministry of Environment to create a US$200 million credit line with the World Bank to encourage improved land management practices such as agroforestry in small- and medium-scale family agriculture in close partnership with the private sector. This loan is now being discussed with the World Bank.

We are also strengthening law enforcement. For example, twenty states now have their own forest police responsible for enforcing forest laws. In the last few months we have apprehended 30 000 m^3 of illegally harvested mahogany from indigenous lands in the Amazon. These efforts are important to validate those logging companies that are operating legally; honest enterprises should not be penalised by the existence of illegal operations. If sustainable

Continued on page 31