

ITTO Tropical Forest UPDATE

A newsletter from the International Tropical Timber Organization to promote the conservation and sustainable development of tropical forests



Forest crime: the mist clears

FOREST crime has been making some arresting headlines lately. In September last year, a ministerial-level international forum in Bali (reported in *TFU* 11/4) condemned illegal logging and pledged to stamp it out. Soon after, the Indonesian navy seized three cargo ships allegedly illegally transporting timber from the Indonesian province of Central Kalimantan.

Then, in October, the Brazilian authorities cancelled all harvesting, transportation and trade permits for mahogany logs and mahogany timber products amidst allegations of illegality (see *TFU* 11/4 and p 15 this edition). In November, the International Tropical Timber Council made a

decision to increase its efforts in forest law enforcement. And last January, an international workshop convened by FAO in Rome discussed the policy options for improving the forestry sector's compliance with the law (p 26). Add to these developments the findings of the ITTO mission to Indonesia (p 10), and the critiques of non-governmental organisations such as the World Resources Institute (see, for example, p 3) and the Environmental Investigation Agency (p 32), and it is likely that the issue of forest crime has never had a higher international profile. ▶

Inside ▶ *combating forest crime* ▶ *towards transparency* ▶ *monitoring mahogany* ▶ *more ...*



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Cover image Photo: A. Sarre

Although reliable information on the magnitude and effects of illegal logging and illegal timber trade is hard to come by (as several authors in this edition point out), it is clear that they are significant threats to sustainable forest management and sustainable development in many countries and must be confronted. The attention now focused on the problems and the new willingness to discuss them opens the way for a greatly increased and coordinated effort against them.

The Council's November decision was an important step on this path. It provided resources whereby producer countries could obtain assistance from the Organization to devise ways for improving forest law enforcement. It also encouraged members to submit projects to Council that address unsustainable timber harvesting, forest law enforcement and illegal trade in tropical timber, with a view to attracting increased funding to address these areas. And it authorised a study to investigate the trade statistics reporting systems in selected countries with the aim of identifying problems in such systems and recommending actions to strengthen them; to date, ten countries have expressed interest in participating in this study (see *TFU* 11/4 for the terms of reference). As Johnson (p 6) demonstrates, improved trade statistics are urgently needed as an aid to identifying and reducing illegal timber trade.

The ITTO decision illustrates what international organisations can and can't do to combat forest crimes. Forest law enforcement is the responsibility of domestic authorities and addressing it at an international level is fraught with issues of national sovereignty. Nevertheless, ITTO members agreed that "all countries and the ITTO have a role and responsibility in combating activities that undermine sustainable forest management" and showed, through the decision, that ITTO's role should be to assist national efforts and to provide more transparency to the international trade.

Illegal timber trade has been documented in many countries, tropical and non-tropical. The obvious motive is money: Adams and Ze Meka (p 18) detail some of the techniques used by unethical traders to inflate their profits. But they also argue that traders are often tempted to cheat the system because they see so little encouragement for fair-

trading in current government policies. Improving such policies to stimulate industrial development would, therefore, help to both reduce illegal trade and increase the timber industry's contribution to national economies.

Many different actors log forests illegally. Undercover investigations by NGOs have exposed several large companies that have been logging in national parks or otherwise outside their concessions, or have been mis-declaring their timber shipments. The Cameroonian government has recently caught more than 60 companies, including multi-nationals, illegally logging forest (see report p 29). But illegal logging is also carried out at a local scale, often driven as much by poverty as by greed; law enforcement in such circumstances will only increase the misery of the impoverished, and achieve nothing for forest conservation, if it is conducted in the absence of rewarding, sustainable and *legal* livelihood alternatives.

We should also be mindful that illegal logging is only one of the elements acting against sustainable forest management and, in many countries, it isn't the most crucial of these. Uncontrolled forest fire, land invasion and the illegal clearing of forest for industrial crops also threaten the security of the resource. While illegal logging is currently attracting the most attention, we should not be diverted from simultaneously addressing other issues that threaten forest sustainability.

The international community has seemed reluctant in the past to deal decisively with forest law enforcement and it has largely been the work of NGOs that has brought it to the forefront of the international agenda. At the Rome meeting in January, several of these NGOs expressed a willingness to work with governments, intergovernmental bodies and the timber industry to control forest crime. In its decision last November, the International Tropical Timber Council also signalled that it was ready to tackle the problem. The opportunity is there for a concerted effort against forest criminals. We should seize it.

Alastair Sarre

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The global problem of illegal logging

Illegal logging is widespread in both the tropical and temperate zones. Coordinated action by all stakeholders at the international and national levels is needed, and NGOs should play a prominent role

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Collecting evidence A. Ruwindrijarto of Telapak Indonesia uses a video camera to help record data during a field investigation into illegal logging. Photo: © Forest Watch Indonesia

THE issue of illegal logging has received considerable attention in the last few years. Major international fora have discussed the issue and developed action plans and recommendations for research. For example, the 1998 G8 Action Plan on Forests contains recommendations for both producer and consumer countries. The International

... on-the-ground assessments of illegal logging are essential to document the scale of the problem, to track progress in addressing the issue, and to highlight where enforcement is still needed. An integrated approach that uses information obtained using a variety of tools and methodologies will be most effective.

Tropical Timber Council passed Decision 6 at its 31st session in November 2001 that calls for and initiates action to promote transparency in the tropical timber trade. Also in November 2001, the Convention on Biological Diversity's Subsidiary Body on Scientific, Technical and Technological Advice completed its final report on forest biodiversity. This report, which will be considered at the April 2002 Conference of the Parties, includes recommendations

for actions on illegal logging and trade. But what exactly is this illegal logging problem and why is everyone suddenly paying attention?

Defining illegal logging

The term illegal logging is used to refer to timber harvesting-related activities

that are inconsistent with national (or sub-national) laws. Illegal and corrupt activities in the forest sector can span the entire industry from wood harvesting and transport, to industrial processing and trade. Illegal cutting includes logging inside protected areas or outside concession areas. Logging within allocated concessions can be illegal if it does not conform to the law. For example, cutting restricted species, or over the allowable limit, or before the concession or licence is active, constitutes an illegal act. Other types of illegal activities include under-reporting the amount cut, false reporting of the species harvested to avoid higher taxes, the illegal transport of timber, and the poaching of wildlife in areas opened up by timber-cutting. Corruption can occur at many levels, from the issuance of licences and concessions to local law enforcement.

A global problem

Illegal logging appears to account for a major—but as yet unknown—portion of wood products sold on domestic and international markets worldwide. Existing studies, while incomplete, highlight the potential extent of the problem. Table 1 summarises available estimates for some key ITTO producer countries of the percentage of wood that is being harvested illegally. These range from 90% in Cambodia to 34% in Ghana.

Illegal logging is not just a problem in tropical countries. For example, the Royal Canadian Mounted Police estimates that in British Columbia alone 200–320 million us dollars are lost annually from outright timber theft and fraud (Weatherbe 1998). In Russia, it has been estimated that at least 20% (and perhaps up to 50% in certain portions of the Russian Far East) of harvested wood is obtained illegally (Newell & Lebedev 2000).

Selected recommendations for fighting illegal logging

1. Develop and implement effective monitoring systems that include the use of log-tracking, remote sensing and field investigations.
2. Provide capacity building and training to communities, non-government groups and law enforcement agencies in various monitoring approaches and tools.
3. Develop regional data sharing programs to help identify problem areas that need to be targeted for enforcement.
4. Support and undertake research on the nature, extent, causes and impacts of illegal logging and on potential solutions.

Numbering numbers

Table 1: Summary of existing estimates for some ITTO producer countries

Country	Estimated percentage of wood harvested illegally	Source
Bolivia	80	Contreras-Hermosilla (2001)
Brazil (Amazon)	85	Greenpeace (2001)
Cambodia	90	World Rainforest Movement and Forest Monitor (1998)
Cameroon	50	Global Forest Watch Cameroon (2000)
Colombia	42	Contreras-Hermosilla (2001)
Ghana	34	Glastra (1995)
Indonesia	51*	Scotland (2000)
Myanmar	80	Brunner (1998)

*Other estimates for Indonesia are higher

Unfortunately, the figures given here were derived in various ways by various organisations and can only be considered very general assessments and, in some instances, 'best guesses'. Moreover, some figures—most notably that for Ghana—are dated. Much more research is required to identify the true extent of the problem and to develop methods to adequately detect illegal logging activities.

Using investigative, often undercover techniques, non-government organisations such as the Environmental Investigation Agency, Friends of the Earth, Global Forest Watch, Global Witness, Greenpeace, Telapak and TRAFFIC have played an important and useful role both in detecting illegal logging activities and in raising awareness of the issue.

The lack of reliable data is due partly to the fact that corrupt and illegal activities are conducted in secret and often in remote regions and are therefore inherently difficult to quantify. The range of illegal activities that can take place is great, making detection and monitoring difficult and placing a heavy burden on law enforcement agencies, which often lack the necessary capacity. Moreover, the political will to take action is sometimes absent; current efforts to combat the problem of forest crime are inadequate in the face of the apparent scope and scale of the problem.

The impacts of illegal logging

Illegal timber harvesting is a major threat to global forest resources and has serious negative economic, environmental and social impacts. No hard numbers exist but the various illegal and corrupt activities and their accompanying tax evasion are estimated to cost billions of dollars in foregone government revenues and market value each year (World Bank 2001). In the case of Indonesia, the loss of US\$600 million per year in unpaid taxes and royalties is four times what the government spends on the forest sector and twice what it spent in 2001 on subsidised food programs (Baird 2001). Other impacts include environmental degradation and socio-economic effects such as large-scale job losses and reduced access to materials that provide food and income for people living in the vicinity of the forest (Contreras-Hermosilla 2001). The availability of illegally

harvested wood also decreases the profitability of legally harvested timber and the industries that depend upon it.

What can be done to solve the problem?

International cooperation

Inter-ministerial meetings in Indonesia (September 2001) and Central Africa (slated for early 2003), as well as the international initiatives mentioned earlier, provide opportunities to combat the problem by highlighting it and, perhaps, by helping to create the political will to bring about change. Reforms to policy and legislation can be undertaken to help streamline forestry management and to reduce subsidies that may perversely encourage illegal or corrupt practices (see article p 10). However, on-the-ground assessments of illegal logging are also essential to document the scale of the problem, to track progress in addressing the issue, and to highlight where enforcement is still needed. An integrated approach that uses information obtained using a variety of tools and methodologies will be most effective.

Monitoring approaches

A core part of any illegal logging detection and monitoring program must be field investigations. Investigators require some basic baseline information, including on active concession allocations and pre-existing road networks. Field investigations are relatively inexpensive but are not comprehensive geographically or temporally.

Remote-sensing tools such as aerial over-flights, aerial photographs, and various types of satellite imagery can help detect a range of illegal logging activities. Use of these tools is usually much cheaper than ground surveys and has the advantage of greater spatial coverage, including in remote areas that may be difficult to inspect in the field. Access to other geo-referenced information is essential to help identify areas in which activities are not authorised.

The use of log-tracking systems offers an opportunity to tackle the problem on a more comprehensive basis. These allow the tracking of timber from its point of harvest through to its final destination. Different systems and tools are available to do this. Some non-government organisations have used low technology alternatives, such as ultraviolet

paint, to mark and track logs. High-tech systems usually involve a combination of databases, the physical tagging of logs, and some form of spot-checking to ensure the system is being implemented properly.

Audits of licences and concessions to ensure they have been issued in accordance with a country's legislation and regulations can help identify illegal and corrupt activities in the bureaucracies. For example, Global Forest Watch Cameroon (2000) conducted various assessments and found that over 50% of older timber concessions were operating illegally and that the legality of a majority of newly issued concessions could also be questioned. These types of approaches may help to identify where corruption is taking place but will not detect on-the-ground infractions.

Production and consumption statistics in a specific region or country can also be usefully deployed. One study of Indonesian data, for example, compared the 1997 and 1998 known legal supplies of wood (domestic legal production plus imports) with consumption (domestic use plus exports) and found that consumption exceeded the legally available supply by 32.6 million m³—over half the total domestic production of wood (Scotland 2000). This approach is best for detecting irregularities and imbalances in supply and demand and can help provide a sense of the overall extent of illegal logging in a given country. It is also possible to analyse trade data to obtain a general sense of where there may be an illegal logging problem (see article p 6).

The role of non-government organisations

Many organisations have a role to play in combating illegal logging. Donors, communities, governments and industry can work together and individually to create change. Using investigative, often undercover techniques, non-government organisations (NGOs) such as the Environmental Investigation Agency, Friends of the Earth, Global Forest Watch, Global Witness, Greenpeace, Telapak and TRAFFIC have played an important and useful role both in detecting illegal logging activities and in raising awareness of the issue (see 'Point of view' on p 32). NGOs such as these are able to act as watchdogs because they are generally independent of government and industry and have credibility with the public. They could also play an important role in training and building capacity in communities and forest law enforcement agencies because they have tremendous experience in the detection of illegal practices and often have invaluable links with local communities and organisations.

Concluding remarks

Illegal logging is a problem that must be addressed. Actions are required at both the national and international levels and must be coordinated to the greatest degree possible. Various sectors, from government to civil society, need to be involved in the monitoring and detection of illegal logging activities; some key recommendations are highlighted in

the box. The sharing of information between stakeholders and training in monitoring methods and technologies are both key steps. But solving illegal logging alone will not ensure the long-term sustainability of the forests or the forest industry. Any attempt to address illegal logging must be done within the context of overall sustainable forest management.

This article is a summary of key portions of a forthcoming report on illegal logging to be published by the World Resources Institute in May 2002. Contact the author for further details.

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ITTO tracks timber trade and production discrepancies and is embarking on a new global study of them

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ONE of the prime reasons for ITTO's establishment in the early 1980s was a desire to bring more transparency to the trade in tropical timber products. This was reiterated in the renegotiated International Tropical Timber Agreement of 1994 and strengthened to include a requirement for ITTO to monitor and report on 'undocumented trade' in tropical timber.

This paper briefly describes how the ITTO Secretariat has analysed the statistics provided to it by members and other sources over the past decade to attempt to monitor and report on undocumented trade in forest products. Since undocumented trade is often linked to undocumented production, techniques used to identify possible instances of the latter are also described. Finally, recent developments showing a new willingness by ITTO members to discuss (and, in some cases, attempt to deal with) these issues internationally are summarised.

Comparing data between trade partners

The main tool used by ITTO for detecting potentially undocumented trade has been the comparison of trade flow volumes as reported by trading partners. However, analyses of all timber products using customs statistics contained in the UN Comtrade database (eg Durst et al. 1986; Kishor et al. 1995) have shown that problems in statistical reporting together with legitimate reasons for discrepancies between trading partner reports may reduce the utility of such analyses for identifying potentially illegal trade flows.

ITTO members also have many problems reporting reliable statistics (see, for example, ITTO 2001). Various 'legitimate' reasons for discrepancies, such as carelessness or the inadequate training of reporting officials or correspondents, inconsistency in the use of weight/area conversion factors and/or product definitions, different scaling or measurement systems, non-corresponding reporting or shipping periods, and so on, have been found to exist in ITTO member countries. Nonetheless, ITTO has found that trade flow statistics, when analysed over a period of several years and trading partners, can be useful indicators of illegal or otherwise undocumented trade. Specifically, when discrepancies are consistent in direction across a range of trading partners and/or across a range of years for one or more trading partners, this can provide a strong indication of the need for further investigation.

Table 1 shows the result of such an analysis for a selected group of major exporters and importers of various tropical timber products. Industrial roundwood (logs) is the most straightforward product to analyse, since the product definition is least subject to confusion. Sawnwood, plywood and other further processed wood products are more difficult to analyse due to the more heterogeneous nature of the products and the confusion this can generate (for example, some countries mistakenly combine trade in mouldings and other further processed sawnwood with rough sawnwood figures).

Cameroon and Gabon

In the case of Cameroon, industrial roundwood trade figures for 1998 and earlier show some major discrepancies with trading partner reports, with most of the import reports exceeding Cameroon's export reports (Japan was the only major importer of Cameroon's logs in 1998 that reported receiving significantly fewer logs than Cameroon reported sending there). These discrepancies dropped significantly in 1999 when Cameroon implemented log export restrictions to promote domestic processing. The log export restrictions and associated domestic processing requirements were implemented more widely in 2000, with total exports dropping to 635 000 m³ from 1 million m³ in 1999 and 1.6 million m³ in 1998. Despite the reduction in log exports in 2000, large discrepancies with France and especially China were observed.

Interestingly, the rise in Cameroon's exports of sawnwood (from 353 000 m³ in 1998 to 1 million m³ in 2000) was not associated with a surge in discrepancies between reported sawnwood trade flows except for France, where 2000 imports were one-fifth of Cameroon's reported exports of 481 000 m³. While lower export reports can be an indication of illegal or undocumented trade, export reports far in excess of import reports are more difficult to interpret. One possibility is that timber is being re-exported by the importing country and the timber intended for re-export is mistakenly not recorded as imported. Another is that export reports are being inflated to take advantage of export subsidies.

Gabon's log export figures are more closely aligned to those of major importers with the exception of China, where export figures were significantly lower than reported imports in 1998 and 2000. Industrial roundwood is the only significant timber product exported by Gabon.

Indonesia

In Indonesia, the problems of illegal logging and illegal trade in forest products have been widely noted and commented on (see, for example, the article p 10). Table 1 shows the extent of the problems for trade in logs and sawnwood, as well as the relatively better situation for plywood trade, which has traditionally been more tightly regulated in Indonesia. Log export volumes reported by Indonesia were a remarkable 103 times lower than China's reported imports in 2000 from that country, with similar discrepancies observed in Malaysia's reported imports. Table 1 shows that Indonesia's log export figures have consistently understated trading partner import figures since it began exporting significant quantities of logs again in 1999 and that the problem has worsened over the past two years. Partly in response to what it has called rampant illegal log trade, Indonesia has pushed strongly for international assistance through ITTO and implemented its log export ban in late 2001.

Spot the differences

Table 1: Major exporter (ER) and importer (IR) trade reports ('000 m³) and difference (%), 1998–2000

Export country/ Product	Import country	1998			1999			2000		
		ER	IR	% Diff.	ER	IR	% Diff.	ER	IR	% Diff.
Cameroon/ Industrial roundwood	Italy	214	261	22	188	182	-3	0	0	-
	Japan	205	33	-84	21	22	5	0	9	-
	China	192	240	25	171	216	26	0	220	-
	France	179	246	37	152	154	1	117	60	-49
	Spain	112	183	63	86	109	27	33	67	103
Gabon/ Industrial roundwood	China	479	609	27	924	895	-3	932	1176	26
	France	436	453	4	521	442	-15	349	484	39
	Portugal	114	103	-10	99	119	20	1	0	-100
	Italy	83	74	-11	63	69	10	0	0	-
	Spain	39	40	3	22	25	14	11	23	109
Indonesia/ Industrial roundwood	China	28	35	25	88	382	334	6	618	10200
	Philippines	16	13	-19	0	0	-	0	42	-
	Japan	12	30	150	15	56	273	0	46	-
	Thailand	2	2	0	0	6	-	0	56	-
	Malaysia	0	0	-	8	578	7125	0	623	-
Indonesia/ Sawnwood	Japan	148	336	127	109	261	139	35	271	674
	Taiwan POC	87	31	-64	81	79	-2	6	6	0
	China	52	317	510	77	580	653	20	931	4555
	Korea	42	98	133	49	100	104	0	0	-
	Malaysia	4	335	8275	7	289	4029	7	450	6329
Indonesia/ Plywood	Japan	1886	2341	24	2729	2748	1	2374	2752	16
	China	873	1000	15	452	558	23	439	595	36
	USA	797	961	21	993	819	-18	527	661	25
	Taiwan POC	345	324	-6	260	36	-86	345	345	0
	Belgium	304	250	-18	256	150	-41	198	228	15
Malaysia/ Industrial roundwood	Japan	2225	2224	0	2284	2236	-2	2177	2162	-1
	China	1131	1083	-4	1671	1856	11	1394	1749	25
	Taiwan POC	970	900	-7	919	793	-14	901	840	-7
	Korea	235	227	-3	394	350	-11	300	320	7
	Thailand	96	137	43	98	136	39	101	149	48
Malaysia/ Sawnwood	Thailand	360	687	91	490	870	78	334	638	91
	Taiwan POC	277	292	5	212	317	50	223	260	17
	Netherlands	268	204	-24	271	186	-31	277	208	-25
	China	265	399	51	140	552	294	116	495	327
	Japan	237	339	43	260	316	22	207	338	63
Myanmar/ Industrial roundwood	Thailand	99	78	-21	132	124	-6	89	152	71
	China	40	186	365	24	335	1296	20	558	2690
	Japan	2	2	0	2	3	50	1	2	100
	Malaysia	0	0	-	12	18	50	7	12	71
	Hong Kong	0	0	-	0	0	-	22	0	-100

Source: ITTO (2000–2002)

Malaysia

Malaysia's forest statistical system is widely recognised to be excellent and the figures in Table 1 largely bear out this perception. The regular correspondence between its figures for log exports and Japan's figures for log imports from Malaysia has been remarkable (Japan was Malaysia's largest log customer until 2001 when China took over). However, the gap

between Malaysia's reported log exports and China's reported log imports widened in 1999–2000 and should be assessed. Note that India is reported as a major log export destination by Malaysia, but since no data have ever been provided to ITTO by India and since no supplementary sources are available, it is not included in Table 1. Malaysia's sawnwood export figures do

Misdirected?

Table 2: Direction of trade of secondary processed wood products for main partners, 1998 (US\$'000)

Exporter	Malaysia	Indonesia	Thailand	Brazil	ITTO Producers
Importer					
European Union	216 888	836 702	147 858	252 918	1 642 383
	194 812	198 000	120 780	232 690	841 483
ITTO consumers	932 988	1 707 349	735 754	379 953	4 390 247
	893 581	661 890	658 890	352 950	3 022 567

Source: ITTO (2001)

not match importer reports so closely, with significant and consistent discrepancies for Thailand, China and Japan. Part of this could be due to different definitions of sawnwood, although queries to Japan and Thailand indicate that further processed sawnwood is not included in their import figures. Malaysia's plywood export figures correspond quite closely with importer reports and are not included in Table 1.

Myanmar

The final example in Table 1 is Myanmar, primarily a log exporter. India, Myanmar's main reported log customer (accounting for over two-thirds of 2000 exports of almost 1 million m³) is not included in Table 1 for the reason given above. However, Myanmar's log exports to its two other major trading partners (Thailand and China) have consistently been reported as lower than import reports from these countries. This may be partly due to unregulated trade in the border regions between these countries, which the government of Myanmar is trying to bring under control.

Pricing irregularities

ITTO's analysis of trade flows is based on volume figures, since value figures by trading partners are not regularly reported. Exchange-rate fluctuations and different reporting standards (exporters usually report the cost of the product delivered to the export port—FOB—while importers' figures usually include insurance and freight costs—CIF) further complicate value comparisons. Nonetheless, the aggregate value figures that are reported to ITTO can highlight problems when there are few major trading partners. The biweekly *Tropical timber market information service* reports published by ITTO can also provide insights into practices like transfer pricing (see p 18), especially when both export and import prices are quoted for the same product. This has been associated in one or two instances with currency devaluations in exporting countries, with export prices continuing to be reported at the pre-devaluation local currency level and importers paying the same foreign currency price, which after the devaluation is worth more of the export currency.

Further processed products

As noted already and as can be seen from the limited data in Table 1, trade flow discrepancies are generally less severe in processed products than in roundwood. This has also been found to hold in ITTO's analysis of secondary processed (or value-added) wood products (SPWP) like furniture, joinery

and so on. Table 2 shows data for trade in such products between major ITTO tropical exporters and major groupings of importers (ITTO 'consumers' are the non-tropical, mostly developed members of the Organization). Statistics on SPWP are only available in value terms and are obtained from the Comtrade database of customs statistics submitted to the United Nations by most countries' customs authorities, so they are subject to the above caveats. Nonetheless, Table 2 shows that the problems identified for Indonesian logs and sawnwood also hold for SPWP, with, for example, a greater than fourfold discrepancy with EU import figures and a nearly threefold discrepancy with ITTO consumers' import figures. While exchange-rate fluctuations and shipping/insurance charges can largely explain the discrepancies for the other tropical SPWP exporters, it appears that undocumented and possibly illegal trade in SPWP has also been a problem in Indonesia.

CITES

ITTO collaborates with CITES to assist in monitoring the trade of timber species listed in the appendices of that treaty. To date this has involved monitoring mahogany (*Swietenia macrophylla*) trade by member countries. Ramin (*Gonystylus* spp), which has been proposed for inclusion in Appendix III of CITES, may prove even more difficult to monitor than mahogany (see article p 15) as this species (unlike mahogany) is not currently identified explicitly in many countries' customs classification systems. ITTO requests all countries to provide data on trade of tropical timber species, with responses to date from tropical (ITTO producer) countries much better than those from consumer countries. The effectiveness of CITES to monitor trade in endangered timber species is directly linked to the ability of countries to report accurate species-level trade data.

Undocumented production

Timber production figures are traditionally less reliable than trade figures. Although their effectiveness varies, almost all countries have a customs department to collect trade statistics. Many countries, however, have no regular industrial survey procedure to establish accurate production figures for forest products and therefore must rely on estimates. ITTO has used indirect procedures to identify problems in production statistics that may indicate undocumented or illegal production, but the imprecision of much of the data often makes conclusions difficult.

ITTO compares industrial roundwood availability (production plus imports minus exports) with production of final products in roundwood equivalent (RWE) volume to determine a log balance for each country. Calculating RWE volume involves multiplying each processed product by a factor representing the volume of roundwood required for each unit volume of final product. Since processing efficiencies vary widely between countries, and since most countries don't provide RWE conversion factors, the use of standard factors (eg 1.82 for non-coniferous sawnwood, 1.9 for veneer, 2.3 for plywood) can lead to large apparent log imbalances for more or less efficient processors. The analysis presented here therefore only highlights for further investigation very large imbalances that are not easily explained by differences in processing efficiency.

Table 3 shows some examples of the kinds of imbalances identified for selected countries where the imbalances in 2000 were significant in absolute magnitude or in relation to roundwood availability. Log deficits indicate that there was insufficient log availability to produce the quantity of final products reported. In the case of Cameroon, Panama and Peru, either production figures (mostly sawnwood in all three cases) are too high or the extra logs required came from undocumented sources. All of the other countries in Table 3 had significant log surpluses in 2000. Since none of these countries has a significant timber industry beyond log and sawnwood production, it is unclear where the excess industrial roundwood is being utilised. Undocumented sawnwood or other processing mills may be using some of this material, while some may leave the country as undocumented/illegal exports.

It should be noted that statistical anomalies similar to those identified in producer countries also arise in importing countries. For example, several tropical timber-importing countries regularly report exports of tropical products in excess of their imports. This can be due to stock accumulation and depletion cycles, but when the quantities involved are substantial and the problem appears regularly, there is cause for concern; it could indicate, for example, that tropical timber is being smuggled into the country for processing and export. Questions should also be asked when the production of tropical sawnwood, plywood and other products regularly exceeds the availability of imported tropical logs.

Recent developments

The results of all the analyses presented here as well as others are communicated by the ITTO Secretariat to members and comments/corrections are sought prior to the approval of ITTO's annual statistical review. Important problems are also highlighted during presentation of the completed review at the sessions of the International Tropical Timber Council. In the past this process has rarely led to substantial revision of statistics or bilateral discussions to resolve discrepancies, but this may be changing. Indonesia is now implementing an ITTO-funded project to combat illegal logging/trade and is implementing with other partners various initiatives with related objectives. At the most recent Council session in November 2001, Indonesia informed ITTO members of its recently imposed log export ban and requested assistance from importing countries to immediately report any illegally incoming Indonesian logs to its Ministry of Forestry. This established an important precedent in ITTO, being the first time that importers were asked by an

exporting country to, in effect, police the sources of their raw materials. While the main responsibility of ensuring sustainable supplies continues to lie with exporters, importers will have to play a much larger role in this regard if illegal trade in timber products is to be curbed.

Council decision

Another important development at ITTO's last Council session was the adoption of a decision by all members calling for studies promoting forest law enforcement to be undertaken on request from individual countries, more project work on curbing illegal logging and trade in timber (with an implicit commitment for additional financing for such projects), and a global study on these problems in collaboration with other organisations. These and other activities called for in the decision have the potential to greatly expand ITTO's work on forest law enforcement in cooperation with member countries. The full text of Decision 6 (xxx1) can be found at www.itto.or.jp

Given the nature of the problems addressed in this article, one of the potentially most promising aspects of this groundbreaking Council decision is the provision for voluntary case-studies to examine the reasons for the types of statistical discrepancies identified here. The terms of reference for these case-studies, in which a number of ITTO members have already expressed interest to participate, were published in *TFU* 11/4 (p 18). Such studies will serve two objectives: shedding light on undocumented trade, and improving statistical reporting on timber in both ITTO producer and consumer countries. It will be a major achievement for the Organization if these objectives are achieved in even a handful of member countries. ITTO will continue to work in these important areas together with its member countries and its partners in the international community in an attempt to achieve its goal of a sustainable global trade in tropical timber.

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Round about

Table 3: Log deficits/surpluses ('000 m³) for selected countries, 2000

Country	Log availability	Roundwood equivalent of products	Log deficit/surplus
Cameroon	1259	2314	-1055
Central African Republic	450	180	270
Congo, Republic of	483	191	292
Gabon	1131	572	559
Myanmar	2647	686	1961
Liberia	297	20	277
Panama	59	96	-37
Peru	927	1177	-250
Suriname	134	74	60

Source: ITTO (2002)

Achieving sustainable forest management in Indonesia

An ITTO mission to Indonesia identified corruption, illegal logging and illegal trade as major impediments to sustainable forest management and made sweeping recommendations for the reform of the Indonesian forestry sector

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AN ITTO technical mission visited Indonesia between March and September 2001 to identify ways in which ITTO could support the formulation of plans to achieve sustainable forest management. The terms of reference of the Mission placed particular emphasis on actions to curb illegal logging and to address related issues, including the restructuring of the forest industries, improved forest plantations for resource creation, recalculation of timber values, and decentralisation in the forestry sector. This article summarises the main findings of the Mission, which were presented to the International Tropical Timber Council at its 31st session in November 2001.

Curbing illegal activities

By definition, illegal activities are those carried out against the existing legal system. Legal systems involve a hierarchy of laws, rules, codes, regulations, decisions and so on, and function in tandem with institutional and judicial systems.

The existence of laws by itself is, of course, no guarantee that illegal activities will be prevented. Indeed, wrong actions are often carried out under the cover of spurious rules and regulations and fake documents. All actions against the principles enshrined in a country's constitution should, therefore, be considered illegal. The prevalence of illegal activities is generally an indication of weak governance.

Among the illegal practices in Indonesian forestry, the most serious and conspicuous is illegal logging. In Indonesia this takes the form of cutting outside the prescribed intensity and size classes and outside forest concession boundaries; unlicensed logging by small-scale operators; under-declaration of harvest volumes and value; transfer pricing; and other means of avoiding the payment of charges. Illegal logging takes place not only in production forests but has spread to protected areas and national parks. Most often it takes place with the collusion of law enforcement personnel.

The strict enforcement of law including deterrent punishment, in tandem with a program to address corruption within enforcement agencies, is essential and urgent if illegal logging is to be controlled.

Reports indicate that illegal logging in Indonesia far exceeds the legal production. In 1998, illegal log production amounted to an estimated 57 million m³ compared to the



Big tree to climb: a fine specimen of *Shorea leprosula*, a high-value but increasingly scarce species in Indonesia's forests. Can the country reform its forest sector and bring about sustainable forest management?

Photo: © Gadjah Mada University

annual allowable cut of 20–22 million m³ (Scotland et al. 1999; Dudley 2000). Estimates place the total annual economic loss to the country from illegal logging at about US\$3.5 billion (EIA 2001; World Bank 2001).

Causes of illegal logging

The causes of illegal logging in Indonesia include:

- **unmet demand (and availability of ready market) for logs:** the unregulated expansion of wood processing capacity, established legally and illegally, far exceeds the capacity of the forest to produce wood raw material in a sustainable manner;
- **the high profitability and low risk of illegal operations:** the situation is made worse by, among other things, ambiguities in the laws, insufficient staff for crime detection, dereliction of duty and conflict of interest on the part of enforcement staff, inadequate cooperation among law enforcement agencies, and delays in judicial action; and
- **human greed promoted by skewed socio-political values:** investors are often prompted by greed to

embark on lucrative illegal activities and, in the process, to influence unscrupulous elements in the relevant government agencies through bribery.

Other contributory factors include: deficiencies in forest concession management; inefficiencies in wood processing; rural poverty and unemployment; tenurial anomalies; conflicting land-use policies; inadequate attention to the welfare of local communities; and distortionary incentives and a lack of involvement on the part of civil society.

Implications

While some of the worst cases of illegal logging (including illegal clearing for conversion to other land uses such as oil palm plantation) result in a complete loss of forest cover, at the very least it is associated with accelerated forest degradation. An estimated 38% of national parks and conservation areas, 46% of protection forests and 30% of production forests in Indonesia have already been degraded (WFC 1997). The ecological fallout of illegal logging is reflected in the erosion of biodiversity and other environmental values. The financial cost to governments in foregone revenue is enormous.

Measures to curb illegal logging

The strict enforcement of law including deterrent punishment, in tandem with a program to address corruption within enforcement agencies, is essential and urgent if illegal logging is to be controlled. The strategies needed include the establishment of an anti-illegal logging taskforce answerable directly to a high authority, the strengthening of institutions for handling forest offences, and measures to increase the level of surveillance and deterrence.

These strategies should be complemented with reforms to the existing systems of logging concessions, industrial licensing and subsidies; in addition, a temporary ban on log exports (already initiated in October 2001 in response to the Mission's preliminary findings) would facilitate short-term measures to control illegal logging. Once the situation is brought under reasonable control, it would then be possible to promote lawful behaviour through a system of timber certification and log auditing, an increased role for the Indonesian Ecolabelling Institute (LEI, an independent national certification body—see *TFU* 11/4, p 12), and the introduction of a system of performance bonds for concessionaires.

Additional measures required to curb illegal logging include: involving civil society and establishing a system of rewards; reducing demand for wood by improving processing efficiency; closing down illegal processing units and enforcing transparent timber accounting; controlling the conversion of natural forests (which serves as a cover for illegal logging); invoking international conventions to control log exports; arranging agreements on handling illegal log trade with receiving countries; strictly protecting conservation areas; and promoting alternative sources of

wood through people's participation in tree-planting and agroforestry (see the box for a summary of recommended measures).

The prime issue to be addressed in effectively controlling illegal logging is corruption, which in turn requires absolute political will. In addition, other longer-term reforms aimed at promoting a healthy and vigorous forestry sector will also assist in reducing illegal timber harvesting and trading. For example, a strong and sustainable forestry sector that helps reduce poverty and under-development—two insidious promoters of illegal forest activities—will also help combat forest crimes. Moreover, forest sector reforms will help to build a stronger institutional capacity to control forestry activities. Some of the reforms recommended by the Mission are described below.

... a strong and sustainable forestry sector that helps reduce poverty and under-development—two insidious promoters of illegal forest activities—will also help combat forest crimes. Moreover, forest sector reforms will help to build a stronger institutional capacity to control forestry activities.

Restructuring the forest industries

For 35 years Indonesia has witnessed phenomenal growth in wood production, processing and export. Industrial wood use increased from about 3.2 million m³ in 1967 to over 70 million m³ in 2000. Wood is obtained mainly (some 96% in 1998) from natural forests.

An ideally structured industry will be highly efficient. The structure of forest industries in Indonesia, however, exhibits weaknesses such as a predominance of primary processing, over-capacity and low capacity utilisation, a raw material supply deficit, unsustainable forest exploitation, low efficiency, high rates of raw material wastage, a large number of illegal processing units and increasing use of illegal logs, over-capitalisation, indebtedness due to financial mismanagement, a lack of coordination among related government agencies, social conflicts, and a lack of reliable and consistent information. Low administered charges on raw material along with other flaws in the logging concession system are fuelling these problems.

The situation is likely to prevail and assume larger

Mission recommendations on illegal logging

Illegal logging and other related illegal activities in forestry should be addressed by appropriately invoking the provisions of laws and regulations supported and complemented by policy interventions and balanced incentives. Specific recommendations are to:

- impose a temporary ban on log exports, not exceeding three years;
- implement timber certification and log auditing;
- undertake measures to increase the level of deterrence;
- introduce/implement a system of performance bonds in forest concessions;
- establish an anti-illegal logging taskforce answerable directly to a high authority, either the President or Vice-president;
- attend to the socio-economic welfare of the local community and involve them as partners in fighting illegal logging;
- modify and restructure the HPH (forest concession rights) system; and
- introduce special measures to protect conservation areas.

proportions unless drastic action is taken immediately to restructure the sector. Inaction will have implications on raw material security, employment, income, government revenue, trade, operational efficiency, community welfare and conservation.

Measures for structural improvement of forest industries

Any measures to improve the situation must include reforming the structure and functioning of forest industries, limiting processing capacity to the sustainable raw material supply, and removing perverse subsidies that encourage malpractice and financial improprieties. Such reforms should be based on a well-designed master plan. This master plan would specify the processing units that are to be closed or replaced, repaired and retooled, and downsized and streamlined. It would also identify diversification options and the need or otherwise to establish new units for such diversification. It would contain proposals for improving and increasing industrial forest plantations and for promoting small-scale forest-based enterprises, downstream value-added production, wood waste reduction and waste utilisation, product research, and extension and incentives.

Low rent capture not only means a loss of government revenue. ... It can also lead to other distortionary impacts caused by windfall gains through corruption, illegal activities and inappropriate resource allocation.

An important incentive needed for increased efficiency in wood industries is higher log royalties and methods of pricing designed to apply scarcity value to raw material. This can be achieved by reducing log output to sustainable levels. In an open economy, price would equate demand with available supply. In Indonesia, a long history of government subsidies has muted market forces; hence there is a need for appropriate intervention.

Recalculating timber value

Timber value, expressed as royalty or stumpage, is the value of timber standing uncut as trees in the forest, and that is what the purchaser or concessionaire should pay the forest owner. Often, instead of collecting the amount as one fee it is divided into several. Indonesia's forest revenue system recognises 13 different fees on timber, of which timber royalty and a reforestation fee account for almost 96%.

Charges on the forest resource can be a powerful tool for ensuring proper management. The rent capture coefficient is an indication of the efficiency of logging concession management. In that regard, the calculation of the real value of timber assumes significance.

An ITTO-commissioned study (Haeruman 2001) shows that in 1997–98 the rent capture in Indonesian logging concessions was only about 30%, leaving a large windfall to the concessionaries. In contrast, Malaysia captures about 85% of the difference between FOB (free-on-board) price of logs and operating costs.

Causes of low rent capture

The causes leading to the present situation include the following:

- a lack of forest resource accounting and a system of estimating forest values;
- the pressure of vested interests and inefficiencies in public administration leading to under-valuation of the resource;
- a lack of competition in awarding logging concessions;
- log export bans of the past, which have prevented the flow of information on log prices in international markets to help estimate potential rent;
- ignorance on the part of the public and a lack of community participation in the social auditing of forestry activities;
- the multiplicity of charges and complicated collection procedures; and
- a lack of mandatory provision to periodically review royalties and charges.

Impacts

Low rent capture not only means a loss of government revenue. It perpetuates a concealed subsidy, negatively affects investment in forestry development and blocks the entry of potentially more efficient operators. It can also lead to other distortionary impacts caused by windfall gains through corruption, illegal activities and inappropriate resource allocation. Low rent capture encourages concessionaires to hold large tracts of forests and acts to prevent the needed paradigm shift in forestry—away from poorly controlled timber extraction and towards sustainable ecosystem management and from profit maximisation towards a greater emphasis on social welfare. The impact of low rent capture is exacerbated by losses through illegal and wasteful logging, since no rent accrues on these.

Measures to improve rent capture

It is important to streamline the valuation of natural forest products with a view to improving the capture of economic rent, removing concealed subsidies, limiting windfall profits and inducing efficiency in forest resource use. This would involve linking the charges on forest products to the estimated economic rent of the forest resource.

There is scope to immediately increase rent capture. Charges on logs need to be differentiated by species, location and quality to prevent the tendency for high-grading. It is necessary to introduce an element of competition in deciding royalties for timber and other forest products and to establish an improved framework for the forest revenue system. Also, a system of natural forest resource accounting, linked to the system of national accounts, needs to be introduced to instil improved accountability in the sector.

Decentralising the forestry sector

The new spirit of decentralisation in Indonesia is captured in laws 22/1999 (on authority and accountability) and 25/1999 (on fiscal balance between centre and regions). The laws stipulate that districts (*kabupaten*) will be the main functional level of decentralised government; under the new laws, *kabupaten* are provided with wide-ranging authority on all matters except in certain, specified areas such as defence and security affairs, foreign affairs, fiscal and monetary affairs, justice, religion, strategic technologies, conservation and national standardisation. The decentralisation process in Indonesia, being hastily undertaken, did not adequately build capacity at the decentralised level, with subsequent implications for, among other things, forest management.

According to the decentralisation laws, only national parks and nature reserves are to be managed directly by the central government. All other forestry activities are to be under the supervision of the local government. Presently, however, the district governments are unprepared for and inexperienced in forest management.

Problems

While laws 22/1999 and 25/1999 provide the legislative means for implementing decentralisation, the scenario is made ambiguous by a series of confusing and contradictory regulations, without clear indication as to which supersedes which. The Basic Forestry Law (41/1999) has not helped the situation, either. There are a number of areas where the existing vagueness could lead to serious problems, including in the following:

- redeployment of staff and the sharing of assets, roles and responsibilities;
- contracts, concessions and other activities spreading over several districts or more than one province;
- investment in forest plantations in districts devoid of, or deficient in, forests;
- the settling of land claims and tenurial disputes; and
- responsibility for curtailing illegal activities in forests.

The agonies of decentralisation often originate from misperceptions and unrealistic expectations on the part of stakeholders. Issues such as the lack of financial discipline, anomalies in revenue sharing, lack of resource security, the non-homogenous nature of decentralised units, institutional inadequacies and the lack of a clear decentralisation plan add to the pain and confusion. The task involved in preparing some 400 districts to implement decentralisation and leading them through the process of transition is of such a magnitude that it cannot be achieved effectively in the short term.

Impacts

These problems lead to several negative impacts in forest-related areas. For example, they have exacerbated illegal logging, led to the degradation of conservation areas and unsustainable forest management and created conflicts and antagonism among different governance levels and players. Moreover, the confusion has meant that a large number of land claims and land disputes have not been able to be settled.

Measures for decentralising the forestry sector

The forestry sector needs to be decentralised within the broad provisions of the decentralisation laws, appropriate to the sectoral needs and based on a well thought-out decentralisation plan. Such a plan should involve:



Banned: Indonesia has temporarily banned the export of logs at the recommendation of the ITTO mission. Photo: A. Sarre

stakeholder participation; the division and transfer of powers and responsibilities; the formulation of regulations for implementing the decentralisation laws in forestry; the design and installation of institutions with the required capability at the different levels; an agreed system of revenue allocation; coordination mechanisms to avoid misinterpretations; and a system of monitoring and control.

At this stage, decentralisation should be extended to the provincial rather than the district level, with the central government providing policy support, guidance and coordination. This can be done by invoking the decentralisation laws and would further call for several related actions, including to:

- articulate and decide on a decentralisation plan for forestry, through a high-powered consultative body;
- prepare and implement a clear framework and sequenced strategy for decentralisation in forestry;
- restructure the Ministry of Forestry, strengthen forestry institutions at the provincial and district levels and define the roles, responsibilities and powers of all institutional components;
- settle land disputes and ensure tenure security for indigenous communities;
- enforce financial discipline through the involvement of civil society;
- carry out macro spatial planning in forestry at the provincial level, with the central government facilitating synchronisation of the provincial plans; and
- make sustainable forest management compulsory by law, with the central government determining relevant criteria and indicators and monitoring their implementation through multi-stakeholder processes.

Need for reforming and strengthening institutions

All the issues discussed here are affected by institutional factors, which provide the context in which to implement sustainable forest management. These include policy and strategy, planning and programming under the umbrella of the National Forest Program, and institutional reforms. The last is a prerequisite for solving the problems facing the forestry sector, as decentralisation has made many of the previous institutions inadequate.

Conclusions

Indonesian forestry is now at a critical crossroad and has two clear choices: continue on a path of forest depletion leading to a precipitous decline in the sector's contribution to socio-economic and environmental contributions, or shift towards sustainable contributions over the longer term. There can be no doubt that the costs of the former option are greater than those of the latter. The rational choice is therefore obvious.

Indonesian forestry ... has two clear choices: continue on a path of forest depletion leading to a precipitous decline in the sector's contribution to socio-economic and environmental contributions, or shift towards sustainable contributions over the longer term.

Sustainable forestry development can be achieved and the rule of law enforced if guided by appropriate policies and supported by pragmatic strategies to rid the sector of the scourge of illegal and corrupt activities. Immediate steps to be taken in that direction, as proposed by the ITTO Mission, are to:

- establish a National Forestry Council, with the Ministry of Forestry providing the secretariat for it (and for the taskforces linked to it), to function as a policy-guiding, consultative and supervisory body. This Council would serve as the lead agency for formulating the National Forest Program;
- strengthen policy and law enforcement to curtail illegal logging;
- develop and implement a strategic plan for restructuring the forest industries;
- develop and implement a sequenced strategic plan for decentralising the forestry sector involving well thought-out institutional measures and avoiding over-regulation;
- rationalise and streamline the industrial timber estate program with special emphasis on joint-ventures; and
- prepare and implement project(s) for demonstrating models of sustainable, decentralised and multi-stakeholder forest management in selected districts of Indonesia.

These initial steps can serve to promote long-term sustainable forestry development in Indonesia.

The Mission also made a series of recommendations on development of the forest plantation sector. For a full copy of the Mission's report go to www.itto.or.jp/inside/report.html or contact the ITTO Secretariat (address details p 2). After considering the report last November, the International Tropical Timber Council decided to provide funds to the Government of Indonesia to help promulgate the Mission's findings to national, provincial and district-level officials of relevant ministries and departments. It also encouraged Indonesia to submit project proposals to ITTO with a view to implementing the Mission's recommendations.

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Monitoring mahogany

The tracking of mahogany from forest to consumer is critical if the current over-exploitation of the species is to be controlled

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Made with mahogany: This Honduran artisan earns his living by working mahogany, but his livelihood will be threatened if the resource is over-exploited. *Photo: J. Leigh*

CONCERN over the exploitation of mahogany (*Swietenia* spp; Meliaceae) in Latin America has led to trade bans, boycotts and regulation under one of the strictest international environmental agreements, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This history is driven by the high value of mahogany, which is currently worth more than US\$1300 per m³ for sawnwood or US\$3.50 per board foot (ITTO 2002).

Economic realities (discount rates, opportunity costs, investment insecurity), silvicultural challenges and continued access to mature stocks in natural forests (both legal and illegal) have limited the adoption of sustainable forestry techniques (Rice et al. 1997; Gullison et al. 2000). As a result, the vast majority of internationally traded mahogany sawnwood still comes from unmanaged natural forests (CITES 1997, 2001). In these forests, a pattern of local depletion, which necessitates a shift in supply, makes the exploitation of mahogany closer to mining than sustainable harvesting (Verissimo et al. 1995; Verissimo & Grogan 1998). Moreover, much of this logging is conducted illegally in national parks, forest preserves and indigenous lands (CITES 2001).

An examination of the international community's response to this unsustainable exploitation indicates that reform remains elusive. Perhaps the most compelling option toward sustainability is to require an independently certified chain of custody, thereby maintaining the sovereign rights of exporting countries to use their own resources, satisfying the ethical and legal obligations of importers, and using international support through CITES procedures to the fullest extent to prevent illegal practices.

The case of Brazil

In October 2001, Greenpeace claimed that more than 80% of mahogany was obtained illegally from parks and indigenous reserves and from forests with fraudulent or non-existent management plans (Greenpeace 2001). The immediate response of the Brazilian Institute of Environment and Natural Renewable Resources (IBAMA) was to temporarily shut down the entire industry.

None of this is new. In 1996 (Hering & Tanner 1998) and again in 1999 (Government of Brazil 2000), IBAMA temporarily suspended mahogany operations following similar investigations. For about half a decade IBAMA has refused to license any new mahogany operations (TRAFFIC 2001). In 1992, the Brazilian Secretary of the Environment wrote asking the international community not to buy mahogany because illegal logging was out of control and endangering the lives of indigenous people (Lutzenberg 1992).

The situation in the early 1990s prompted Friends of the Earth UK to launch a boycott of mahogany, principally aimed at retail suppliers (Hering & Tanner 1998). In their campaign 'Mahogany is murder' they reported that Amerindians were being killed by loggers—either murdered to get access to mahogany or, indirectly, from communicable diseases introduced by loggers. A compromise between the UK industry and environmental groups was for mahogany imports to be accompanied by chain-of-custody documents. Ultimately, this standard could not be met by exporters in Brazil—a situation that continues (Bruford 2001). The campaign achieved a large part of its aim in that it succeeded in reducing imports to the UK by more than 70%; nevertheless, it was unsuccessful

in its ultimate aim because the mahogany was simply redirected to an expanded market in the United States (Robbins 2000).

The role of CITES

The formal, multilateral response during the 1990s was to regulate mahogany through CITES. Countries that are party to CITES are obliged to monitor and report the international trade in all CITES-listed species and they must ensure that shipments have the appropriate CITES documents. Listing in CITES Appendix I constitutes a ban on international commercial trade. For Appendix II species, the exporting country must issue an export permit that verifies that each shipment was obtained legally and that its harvest was not detrimental to the survival of the species. The listing of a species in Appendix I or Appendix II requires a two-thirds majority vote at the regular CITES Conference of the Parties.

Any range state can list species on Appendix III provided that they have domestic laws to protect the species. They are then obliged to issue an export permit that verifies that each shipment was obtained legally (although a scientific non-detriment finding is not required). Other CITES parties support this effort through the issuance of certificates stating the origin of each shipment and by monitoring imports.

Although commercially extinct, the mahogany species of the Caribbean (*S. mahagoni*) and Pacific coast of Central America (*S. humilis*) are listed in CITES Appendix II. In 1992, Costa Rica and the USA proposed listing big-leaf mahogany (*S. macrophylla*)—the only mahogany species still commonly traded—in Appendix II. Prior to voting, Costa Rica withdrew its proposal in deference to the proposal by the USA, which was then also withdrawn. Subsequently, Costa Rica listed big-leaf mahogany in Appendix III. There have been two more proposals to list big-leaf mahogany in Appendix II; neither was successful. In 1997, the most recent proposal fell eight votes short of the necessary two-thirds' majority in a secret vote in committee. Following this proposal, five more countries (Brazil, Bolivia, Peru, Mexico and Colombia) have listed their populations in Appendix III.

According to the most recent CITES data, Brazil is a major exporter of big-leaf mahogany (about 40% of the approximately 100 000 m³ of declared international trade), as was Bolivia until the late 1990s when trade declined due to a lack of supply. Peru has increased exports to meet the demand, and its trade in 1999 was approximately equal to that of Brazil. The USA is the largest importer of mahogany (about 65% of declared trade), most of the remainder of declared trade going to the Dominican Republic and the European Union.

Data limitations

Despite CITES regulations, which should make mahogany one of the best-tracked timber species, tropical or otherwise, the exact volume in trade is difficult to estimate

due to reporting irregularities (Blundell & Rodan 2001). In 1999, for example, US Customs recorded about 20% more mahogany imports from Latin America than were reported by US CITES authorities. However, most such discrepancies can be resolved by cross-checking permits for typographical errors or for changes in volume made after the shipment had obtained the CITES permits. On careful analysis, we have shown that more than 90% of shipments listed as mahogany by US Customs most likely had CITES documentation (Blundell & Rodan 2001).

Although the vast majority of imports to the USA appear to be in compliance with CITES, such an analysis cannot track shipments of mahogany that were mislabelled or smuggled across borders. In an analysis by Canada Customs of its 1999 trade data, approximately 60% of mahogany imports, mainly re-exported from the USA, were improperly declared as 'general tropical timber' instead of 'mahogany' (Gerson 2000).

Poor compliance

In other respects, compliance with CITES procedures is relatively poor. In 1999, the USA reported three times more mahogany in trade than was reported by exporting CITES authorities. This is principally due to under-reporting by exporting countries, or to countries, such as Peru, that did not report any data during that year. In addition, the wildlife trade monitoring organisation, TRAFFIC North America, reported that about 30% of the permits received by the US in 1998 were invalid because they had not been signed by the appropriate exporting CITES authority (Robbins 2000). Therefore, the true volume of legally exported mahogany remains unclear.

The most problematic compliance issue, however, is reconciling the issuance of export permits, which are meant to verify that the timber was obtained legally, with the compelling evidence of widespread illegal logging throughout the range of mahogany (CITES 1997, 2001; PROARCA/CAPAS 1999; Greenpeace 2001). It is likely that a considerable amount of illegal mahogany is inappropriately receiving export permits, then entering international trade; in other words, CITES may be providing a veneer of legality to what is otherwise illegal wood.

All major producing countries have existing regulations and laws that require the sustainable management of mahogany (TRAFFIC 2001). However, without enforcement these regulations have little effect on the on-the-ground management of mahogany.

Solutions

In a December 2001 decree, IBAMA aimed to reduce illegal logging in Brazil by requiring that all shipments be 'certified', although it is not yet clear how 'certified' will be defined. In addition to the Forest Stewardship Council (FSC), numerous other certification schemes have been created worldwide for the purpose of providing evidence to

consumers about the sustainability of forestry operations. Many observers, including some non-government organisations (NGOs), have expressed reservations about the Brazilian government relying on an NGO such as the FSC for enforcement of forestry regulations. At present, there are no FSC-certified mahogany operations in South America (FSC pers. comm. 2001).

Chain of custody: given the lack of certified supply and the overwhelming evidence of illegal logging, buyers are faced with an ethical dilemma and, in Brazil, a temporary cessation of supply. A viable solution may be to insist on the tracking of wood from harvest through milling to export, so that the buyer can be assured that the purchased timber was obtained legally. Pursuit of this option must be mindful of historical precedents, including the shortcomings of previous efforts to encourage or mandate sustainability (eg see Burniske 1994, Gullison 1995), and the technical, economic and political impediments to sustainability (Rice et al. 1997), particularly the reality that sustainability will result in reduced trade volumes, at least in the short term. Large, independent inspection services exist and can provide such chain-of-custody tracking for approximately \$1–2/m³ when sufficient volumes are trucked (de la Rochefordiere (SGS) pers. comm. 2002).

Improved compliance and monitoring: regardless of buyer behaviour, better compliance with domestic laws and CITES procedures within exporting countries could vastly improve the legality of the mahogany harvest and the ability of CITES to track trade. For instance, all countries should report trade, including reporting permit numbers, so that importers can determine which export permits have been falsified. International trade monitoring can also be improved if customs agencies assign individual harmonised tariff schedule (HTS) codes to CITES-listed species.

International cooperation: if countries restrict export permits to only those shipments where legality can be demonstrated, import procedures and officials can then serve as an additional enforcement mechanism to assist producer countries. In the USA, trade in mahogany appears essentially limited to those shipments with CITES documents. If these documents become meaningful, then illegal mahogany would be barred from US markets. Buyers would rapidly insist that their primary suppliers operate legally. This would be an important first step in rationalising the use of what has proven to be one of Latin America's most valuable resources.

Disclaimer: the views expressed in this publication are those of the authors and do not necessarily constitute United States government policy. Mention of trade names should not be construed as endorsement.

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Policy failure: the accomplice of illegal trade

Illegal timber trade is driven as much by national economic and policy failures as it is by the deeds of a much-maligned trade

by Mike Adams and Emmanuel Ze Meka

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THIS article starts by examining some of the more common ways that illegal trade can be perpetrated. But its purpose is more ambitious than that: it sets out some of the underlying policy issues—many outside the forestry sector—that help create the conditions in which an illegal trade can flourish and argues that reforming these is equally important to strengthening forest policy and law enforcement.

Under-invoicing

Under-invoicing is a common way of increasing profit—illegally—in international trade. It may take the form of under-declared prices, under-declared volumes, mis-declared grades, or a combination of these. The overriding purpose is to avoid the high tax regimes in the exporting country and any restrictive foreign exchange regulations that may apply (in general, traders prefer to be paid in hard, convertible currencies such as US dollars, pounds sterling, euro or yen).

... for the unscrupulous trader, the opportunities for deliberate under-grading—on the understanding that the buyer will re-grade and pay on the results—are numerous.

The seller and buyer will have previously agreed the price differential and/or to a re-measurement or re-grading of the product at the final destination. The difference between the true value of the contract and the value declared in the supply country can be shared—tax-free—outside the country.

Under-declared volumes

At first glance it might seem that timber would be a particularly difficult commodity to trade illegally, purely because of its size. In fact, the size and bulk of logs and other timber products often facilitates illegal practices because it is impractical for customs officials to check measurements and grades effectively.

The task of customs officials is further complicated by the inexactness of log volume measurement. Many log volume measurement systems are in use around the world and often even within the same country and the same log measured by different systems will give different volumes. For example, mid-girth measurement systems give consistently higher estimates of log volume compared to systems based on end-diameter.

... while many are pointing fingers, few have come up with useful suggestions about what to do. The international community cannot hope to change the business ethics of rogue timber-men but it can help address the problem by tackling some key policy issues.

Another source of variation in log volumes derives from the so-called 'call-down' in girth, diameter and length. To facilitate the use of log volume tables it is common practice to call down the length (this could be to the nearest four, six or ten centimetres or even the nearest six inches) and to round down the diameter. The difference between the

real and recorded log volume due to the rounding down of diameter alone can be as much 6–7% on an 85-cm diameter log. If the variation caused by the length call-down and the occasional sap allowance for some heavy sap species is added to this then the real volume and the legal declared volume could vary by as much as 35%. And this is before any under-declaration.

Similar difficulties are encountered with sawnwood measurement. Abuse by shippers of length, width and thickness over-measure or cutting tolerances offers an opportunity to under-declare sawnwood volumes.

Mis-declared grades/species

Price differences for different species or grades of the same product can be significant and this can be exploited in the under-invoicing of logs, sawnwood, veneer and plywood. For example, the difference in price between grade A and grade B mouldings is as much as US\$150 per m³. Since it is impossible for timber inspectors or customs officials to inspect all export shipments, under-declaring the grade of a packaged parcel of mouldings (for example) by an exporter is likely to go undetected. With the collusion of such officials, under-declaration or mis-declaration of grades or species is even easier.

Grade is even more subjective for logs than it is for processed timber products. Log grading rules have been established in many countries and there are well-respected international log grading rules but, for the unscrupulous trader, the opportunities for deliberate under-grading—on the understanding that the buyer will re-grade and pay on the results—are numerous. There is little risk in recording grade A logs as grade B because it is rarely feasible for inspectors to undertake a full re-grading exercise in a company log yard, log pond or at the export port. Additionally, it is possible for the unscrupulous trader to alter the composition of a log parcel. For example, the normal 40% grade A, 40% grade B and 20% grade C mix of logs that go into a FAQ parcel can be 'adjusted' and it would be very difficult for an inspector to spot the change.

Under-declared prices

Under-declaring price is a means by which additional payments can be received by exporters outside the country from which goods are exported to compensate for an artificially low price being declared on export documents. In this case the contract price between the buyer and seller is false and is below the real agreed price. The two parties share the difference in price outside the country of export after the goods arrive. This method of transferring value is most common in exporting countries where foreign exchange regulations are strict and taxes are high (see also 'transfer pricing' below).

Transfer pricing and costing

Transfer pricing is a profit-transfer and tax-avoiding practice commonly but not exclusively associated with

multinational companies. A company in a country with high taxation, tough foreign exchange regulations and/or tough profit repatriation regulations, for example, sells a product to a subsidiary in a second country with a lower tax structure and records an artificially low price for the sale. By this means, revenues that should have been declared in the supply country are transferred to the subsidiary company and result in higher profits to the subsidiary.

Transfer costing is the loading of off-shore operational costs or management fees onto subsidiary companies in countries with high tax regimes or onto companies in producer countries which benefit from tax breaks offered by governments to encourage investment. This practice helps reduce apparent profit (or increase apparent loss) and therefore to maximise off-shore profits.

The question is, is transfer pricing or costing a legal (but ethically questionable) avoidance of laws in the supply country, or an illegal evasion of those laws? The answer can only be determined on a case-by-case basis after review of the laws in the respective countries.

Smuggling

Smuggling is a very old profession. In the timber sector it involves the secret export and/or import of wood products without notification to any authority in the exporting or importing country, without any legal documentation and without payment of any taxes or duties.

One might imagine that trying to smuggle a bulky product such as timber would be nearly impossible, but the loading and shipment of vessels with logs, sawnwood or plywood in remote parts of a country is perfectly feasible. Another form of smuggling occurs when species banned from export or those requiring special documentation such as CITES certification are included in bundles of otherwise legally produced and exported timber. Such banned or restricted species are often sufficiently valuable that smugglers are prepared to risk arrest to ship them out of the country. Smuggling involves an exporter, a shipping company to supply the vessel—or it can be done across land borders on trucks—and a buyer in the importing country. Often, it may also require the collusion, secured through bribes, of customs and other officials.

Of course, smuggling (or other forms of illegal trade) is not confined to the timber sector. For example, in July 1999 the Italian authorities were informed about a large quantity of Ecuadorean bananas that were being smuggled into the European Community through the Italian port of Catania. A customs team first searched and then seized a vessel carrying 4000 tons of bananas; later investigations revealed that some 160 000 tons of Ecuadorian bananas had been fraudulently imported into the Community.

A common thread

The illegal trade of timber is undoubtedly a significant impediment to sustainable forest management. However, while many are pointing fingers, few have come up with

useful suggestions about what to do. The international community cannot hope to change the business ethics of rogue timber-men but it can help address the problem by tackling some key policy issues.

Many countries in which the illegal timber trade is thought to exist to the extent that achieving sustainable forest management is threatened appear to have some features in common that favour this trade. It's a long list (*see box*).

What is important about this list is the implication that addressing fiscal, economic and institutional issues as part of a progressive industrial development policy can have a significant effect on reducing illegal trade. Traders in some countries currently see so little encouragement for fair-trading in government policies that they are tempted to cheat the system. By creating a fiscal and macroeconomic environment conducive to investment, the timber sector will be more confident that investments made in processing and forest management infrastructure and capacity will pay off. As investments are made, the trade gains a greater long-term stake both in ensuring access to the resource and in its sustainability. 'Weeding out' rogues and illegal practice then becomes a prerequisite for the sector's development.

Fiscal reform, therefore, is essential. At the same time, the basic groundwork to strengthen the institutions responsible for forest law enforcement and monitoring must still be done.

Ghana: a model

Ghana is one country in which economic and fiscal reforms have removed many of the conditions conducive to the illegal timber trade. Since 1983 the government's economic program has focused on the development of the private sector, which historically has been weak. Privatisation of state-owned enterprises continues, with about two-thirds of 300 enterprises sold to private owners.

... the implication [is] that addressing fiscal, economic and institutional issues as part of a progressive industrial development policy can have a significant effect on reducing illegal trade.

Other reforms adopted under the government's structural adjustment program include the elimination of exchange

Conditions favouring illegal trade

Fiscal

- inconsistent and/or frequently changing fiscal regulations;
- high export taxes/royalties etc;
- tough exchange controls;
- non-convertible currency;
- restrictive profit repatriation rules;
- high corporate tax levels;
- limited domestic credit sources;
- restrictive rules on the ability of banks to service international trade;
- high import duties on essential goods and services; and
- inappropriate policies on foreign exchange allocations.

Institutional

- weak marketing support, including a lack of grading rules etc;
- insufficient and under-trained forestry professionals;
- inadequate resources provided to the forestry administration;
- low wage levels for those monitoring the sector;
- lack of attention to institutional strengthening;
- inattention to production and trade statistics and market transparency; and
- lack of transparency in the sector (especially regards concession policy).

Political and economic immaturity

- an economy heavily dependent on timber exports;
- highly politicised forestry sector;
- politicians with timber business interests;
- corruption in high places; and
- corruption un-prosecuted or weakly punished.

rate controls and the lifting of virtually all restrictions on imports. The establishment of an interbank foreign exchange market has greatly expanded access to foreign exchange. The elimination of most local production subsidies is further indication of the government's intention to move toward a market-based economy. Over the years, Ghana's investment code has been changed to guarantee free transferability of dividends, loan repayments, licensing fees and the repatriation of capital; provide guarantees against expropriation or forced sale; and delineate dispute arbitration processes. At the same time, local banking and financial institutions have been encouraged by changes in industrial policy to be more supportive of trade development and access to foreign exchange and credit has improved. In addition, there has been an attendant emphasis on transparency in the forestry sector and, with ITTO and other assistance, the country has strengthened its ability to monitor and report on its timber trade.

As investments are made, the trade gains a greater long-term stake both in ensuring access to the resource and in its sustainability. 'Weeding out' rogues and illegal practice then becomes a prerequisite for the sector's development.

Trade needed

Trade is widely acknowledged as a vital engine for poverty-reducing growth. Evidence suggests that those countries that have strengthened links with the global economy through trade and investment have tended to grow faster. Unfortunately, in the last decade many low-income countries have lagged behind in trade growth and in the policies and institutions conducive to benefiting from the growth in global trade.

If sustainable and legal, the timber trade can make a significant contribution to local and national development objectives, so it should be fostered. As well as supporting institutional strengthening and law enforcement, the international community should therefore increase its support for national efforts to create the economic, fiscal and institutional environments needed for the trade to flourish. Given the right business environment, the trade will be in a better position to marginalise its rogues and to take steps to eradicate fraudulent practices.

Timber trends

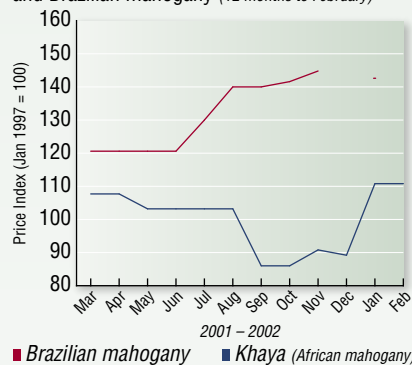
Saw point

Tropical sawnwood FOB price trends for Southeast Asian meranti (12 months to February)



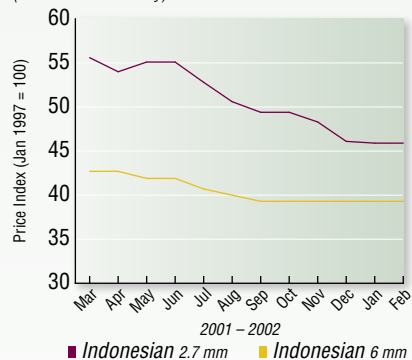
Mahogany moratorium

Tropical sawnwood FOB price trends for African and Brazilian mahogany (12 months to February)



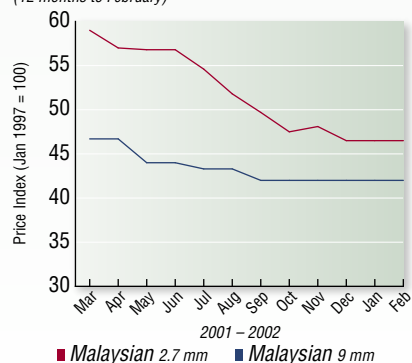
Flat as a board 1

Price trends for Indonesian plywood (12 months to February)



Flat as a board 2

Price trends for Malaysian plywood (12 months to February)



Source: ITTO Market Information Service; itto-mis@itto.or.jp

Ecuador's new approach to enforcing forest law

The Ministry of Environment is introducing several innovative measures to bring transparency to forest administration and monitoring through outsourcing

IN 1999, after a nationwide participatory process, Ecuador's Ministry of Environment developed a new public forest policy that promotes the use of the forest's environmental goods and services—including timber—at levels of intervention that will permit natural regeneration. Sustainable forest management and transparency are the keystones of this policy.

Reforms to the legal framework

In order to implement the new forest policy as soon as possible, the President of Ecuador issued Executive Decree No. 346 in April 2000, introducing substantial changes to the regulations for applying the pre-existing Law on Forestry and Conservation of Protected Areas and Wildlife. An especially important and innovative aspect of these reforms was to incorporate the following basic criteria for sustainable forest management into the legal framework for Ecuador's forestry sector:

- sustainability of production;
- maintenance of forest coverage;
- conservation of biodiversity;
- co-responsibility for management; and
- reduction of negative environmental and social impacts.

Under these criteria, the Ministry of Environment issued the Standards for Sustainable Forest Management in Ecuador through a Ministerial resolution in June 2000. These enable the forest authority to monitor logging activities in the forest on the basis of verifiable indicators regarding each criterion.

Thus, Ecuador now has a modern, coherent legal framework for forestry, geared toward making forest management transparent, clear, simple and predictable. It therefore has a sound basis for encouraging the sustainable management of natural forests and preventing illegal or destructive logging.

Promotion of private participation

Two significant steps in implementing this policy have been taken in order to establish Ecuador's Outsourced Forestry Supervision System. Under the leadership of the Ministry of Environment, the armed forces and police, together with five non-governmental environmental organisations, *Vigilancia Verde* ('Green Surveillance') was founded. This is a supervision body made up of both private and public institutions responsible for controlling the transport of roundwood and timber between the forest and marketing and processing locations. Funded by a trust that receives 50% of the value of all illegal timber that is detected, seized and auctioned, *Vigilancia Verde* has established seven checkpoints on roads throughout the country. It has already demonstrated its effectiveness: in its first year of existence, it seized five times the volume of timber seized by the government during the previous year.

Another fundamental element of the system is *Regencia Forestal*, or Forest Steward program. Forest stewards are

independent foresters working under the State's authorisation and supervision with responsibility for ensuring that the timber-harvesting activities authorised by the government's forestry administration abide fully by the provisions of standards, logging permits and management plans.

Contracting administration and supervision

To complete its supervision system, the Ministry of Environment will shortly contract out a major portion of its forestry administration and supervision responsibilities to a private, independent supervisory organisation. This organisation must have broad experience in monitoring and evaluation activities and acknowledged international prestige. Its duties will include:

- giving out forest logging licences;
- granting timber transportation permits;
- overseeing forest utilisation (and the performance of forest stewards);
- supervising the mobilisation of forest products (in direct support to *Vigilancia Verde*);
- systematising and disclosing information and data yielded by providing the above services; and
- collecting stumpage tax and transferring it to the government.

To perform these activities, the supervisory agency will have to establish about 30 administrative units at strategic locations throughout the country, implement a monitoring system (with fixed checkpoints and mobile verifying teams on roadways and in the forests) and operate a real-time information system. It will work complementarily with *Vigilancia Verde* and *Regencia Forestal*.

The purpose of the outsourcing is to improve forestry administration services and make them transparent, so that corrupt and illegal practices can be combatted effectively. For its part, the Ministry of Environment will then concentrate its human resources and capacities on law enforcement, the promotion of sustainable land uses, and other strategic activities.

The supervisory agency will provide its services throughout Ecuador's continental territory on an exclusive basis for the contract period of about ten years. The Ministry of Environment will invite international firms specialising and interested in providing such services to bid for the contract. The tender package will be available at the Undersecretariat of Natural Capital of the Environment Ministry in Quito, Ecuador once the tender process has been officially announced (in March 2002).

For more information, please contact: Mr Hans Thiel, Under-Secretary of Natural Capital, Environment Ministry of Ecuador, Amazonas Ave & Eloy Alfaro Ave (corner), MAG Building, 8th Floor, Quito, Ecuador; Tel 593-22-563816; Fax 593-22-564037; tercerizacion_forestal@ambiente.gov.ec

Briefing on ITTO's project work

The projects and pre-projects described below were financed at the 31st session of the International Tropical Timber Council held in Yokohama in November 2001

Participatory rural appraisal in the planning and establishment of a sustainable, community-based forest management model (Indonesia; PPD 20/01 Rev.2 (F))

Budget	ITTO:	US\$51 081
	Government of Indonesia:	US\$9 210
	Total	US\$60 291

Implementing agency Faculty of Forestry, Bogor Agricultural University (IPB)
Funding countries Republic of Korea, Australia

This pre-project will, through participatory rural appraisal, establish baseline data on local communities living in the area surrounding the Dusun Aro-Jambi natural forest to assist in the formulation of a model of sustainable community-based forest management (CBFM) and to develop a full project proposal to promote CBFM in the area.

Tropical forest fire monitoring and management system based on satellite remote sensing data in China (China; PPD 22/01 (F))

Budget	ITTO:	US\$49 100
	Government of China:	US\$32 520
	Total	US\$81 620

Implementing agency Research Institute of Forest Resources Information Techniques of the Chinese Academy of Forestry
Funding country Japan

This pre-project will assist the establishment of a fast, accurate and practical integrated satellite remote-sensing system for early warning, monitoring and evaluation of forest fires in tropical China.

Development of criteria and indicators for sustainable forest management in the Philippines (Philippines; PPD 29/01 Rev.1 (F))

Budget	ITTO:	US\$88 646
	DENR (in kind):	US\$43 940
	Total	US\$132 586

Implementing agency Department of Environment and Natural Resources (DENR)
Funding countries Japan, USA

This pre-project will assist the Philippines to promote the sustainable management of its forest resources in accordance with ITTO's Objective 2000 by formulating criteria and indicators for sustainable forest management and developing manuals and an action program for their field application.

Study and demonstration of the management of secondary forests in tropical regions for the purpose of enhancing economic and ecological benefits (China; PPD 30/01 Rev.1 (F))

Budget	ITTO:	US\$81 031
	Government of China:	US\$35 720
	Total	US\$116 751

Implementing agency Guangdong Academy of Forestry, Chinese Academy of Forestry
Funding countries Japan, USA

This pre-project will survey and classify the types, distribution and management of China's tropical secondary forests; design management models; select demonstration areas for management; and develop a full project proposal.

Support for the development of a project for the participatory follow-up and evaluation of the forestry, protected areas and wildlife policy in Honduras (Honduras; PPD 33/01 (F))

Budget	ITTO:	US\$29 998
	Government of Honduras:	US\$8750
	Total	US\$38 748

Implementing agency National Forest Administration (AFE/COHDEFOR)
Funding country USA

The objective of this pre-project is to evaluate the progress made on policy and legislative and National Forestry Plan issues related to forest conservation areas in Honduras and, on the basis of this evaluation, develop a project proposal for a participatory follow-up to these forestry sector planning instruments.

Model forest management area (MFMA)—Phase III (Malaysia; PD 12/99 Rev.4 (F))

Budget	ITTO:	US\$966 700
	Government of Malaysia:	US\$1 734 500
	Timber companies:	US\$186 000
	Total	US\$2 887 200

Implementing agency Sarawak Forest Department
Funding countries Japan, Switzerland

This project, which follows earlier ITTO projects conducted in the same model forest, will train forestry workers in the planning and implementation of sustainable forest management, demonstrate new methodologies and techniques, prepare comprehensive management plans, and monitor management performance in the model area.

National forest inventory and forest resources monitoring program in Bolivia (PD 17/99 Rev.3 (F))

Budget	ITTO:	US\$397 777
	Government of Bolivia:	US\$151 724
	Total	US\$549 501

Implementing agency Vice-Ministry of Agriculture and Fisheries, Ministry of Agriculture and Rural Development
Funding country Japan

This project will develop and implement a program for inventory, re-inventory and monitoring the forest resource. It will also establish the Forest Information and Evaluation Centre, the institution that will be responsible for forest resource monitoring.

Study on the behaviour of native timber species of commercial value in the tropical moist forests of Honduras—Phase II (PD 22/99 Rev.1 (F))

Budget	ITTO:	US\$327 050
	ESNACIFOR:	US\$75 000
	Total	US\$402 050

Implementing agency National Forestry Science School (ESNACIFOR)
Funding country Japan

This project will continue the studies on the silviculture of 29 native tropical broad-leaved timber species initiated under ITTO PROJECT PD 8/92 REV.2 (F) and will add an additional eleven native species. It will also establish a fully operational germplasm bank management and seed supply program for the 40 species; consolidate technical and scientific information at the phenological, nursery and plantation levels; and disseminate the information gathered.

Model development to establish commercial plantation of dipterocarps (Indonesia; PD 41/00 Rev.3 (F,M))

Budget	ITTO:	US\$461 212
	Government of Indonesia:	US\$338 592
	Total	US\$799 804

Implementing agency Fakultas Kehutanan, Gadjah Mada University
Funding country Japan

This project aims to develop technologies for producing good-quality seedlings of suitable dipterocarp species in large quantities through the development of appropriate technologies for vegetative propagation. It will also evaluate the financial and economic efficiency of commercial forest plantations under the proposed development model.

Establishment of the Mengamé-Minkébé Transboundary Gorilla Sanctuary at the Cameroon-Gabon border (Cameroon; PD 66/01 Rev.1 (F))

Budget	ITTO:	US\$770 751
	Government of Cameroon:	US\$197 340
	Total	US\$968 091

Implementing agency Directorate of Fauna and Protected Areas, Ministry of Environment and Forestry
Funding countries Japan, Switzerland, USA

This project will put in place a collaborative management process for the gorilla sanctuary to ensure its protection and initiate a process of cooperation between Cameroon and Gabon for the joint management of the sanctuary. Activities will include the collection of reliable data for sanctuary management, raising the awareness of local communities, and controlling poaching.

Dissemination of forest development and research results obtained during the implementation of the Technical Project for Forest Conservation—CEMARE (Panama; PD 67/01 Rev.1 (F))

Budget	ITTO:	US\$147 173
	ANAM:	US\$109 815
	Total	US\$256 988

Implementing agency National Environmental Authority (ANAM)
Funding country Japan

This project will establish and implement a program to disseminate the results of twelve technical studies carried out by ANAM with the support of the Japan International Cooperation Agency.

Increasing genetic diversity of *Shorea leprosula* and *Lophopetalum multinervium* for breeding and genetic improvement (Indonesia; PD 106/01 Rev.1 (F))

Budget	ITTO:	US\$427 535
	Govt. of Indonesia, 5 state-owned forest companies and 1 private company:	US\$143 750
	Total	US\$571 285

Implementing agency Fakultas Kehutanan, Gadjah Mada University
Funding country Japan

The project is a follow-up to ITTO PROJECT PD 16/96 REV.4 (F). It will continue to broaden the genetic base for the breeding and genetic improvement of *Shorea leprosula* and will

produce improved clones of *Shorea leprosula* and improved seeds of *Lophopetalum multinervium* using the genetic material available from natural populations. The project will also help to create a centre of excellence for ex situ conservation.

Support for the establishment of a cuttings propagation unit for the production of samba and other local species (Togo; PD 122/01 Rev.1 (F))

Budget	ITTO:	US\$217 056
	Government of Togo:	US\$105 114
	Total	US\$322 170

Implementing agency Department for the Control and Protection of Flora Utilization
Funding country Japan

This project will assist the government of Togo to develop a sustainable plantation estate by establishing a cuttings propagation unit for the production of samba and other local species.

Pre-feasibility study for the industrial utilization of rubberwood (*Hevea brasiliensis*) including the formulation of a pilot case study for implementation in a specific area of Colombia (PD 46/99 Rev.3 (I))

Budget	ITTO:	US\$137 684
	Government of Colombia:	US\$41 300
	Total	US\$178 984

Implementing agency Centro Para la Inversion de Sistemas Sostenibles de Produccion Agropecuaria
Funding country Japan

This project will analyse and assess the feasibility of a rubberwood processing industry in Colombia and formulate and establish a pilot study for the production of guidelines to assist investors and communities in developing such an industry.

Increasing the efficiency in the tropical timber conversion and utilization of residues from sustainable sources (Brazil; PD 61/99 Rev.4 (I))

Budget	ITTO:	US\$299 980
	FUNPAR:	US\$60 000
	Total	US\$359 980

Implementing agency Foundation of the Federal University of Paraná
Funding country Japan

The objective of the project is to investigate whether conventional timber industries in conjunction with the power generation industry can make sustainable forest industry a viable option in two major wood industry-centred cities in the western Amazon.

Training in reduced impact logging in Guyana (PD 68/01 Rev.2 (I))

Budget	ITTO:	US\$427 710
	Government of Guyana:	US\$395 650
	Forest industry:	US\$182 000
	TFF:	US\$158 150
	Total	US\$1 163 510

Implementing agency Guyana Forestry Commission in cooperation with the Tropical Forest Foundation (TFF)
Funding countries Japan, USA

This project will develop a national reduced impact logging (RIL) training program that includes demonstration models of good RIL practices, a training facility, the training of trainers and other personnel in RIL, and a long-term plan to sustain the program.

Strategies for the development of sustainable wood-based industries in Indonesia (PD 85/01 Rev.2 (I))

Budget	ITTO:	US\$479 603
	Government of Indonesia:	US\$127 630
	Total	US\$607 233

Implementing agency Center for Social and Economic Research on Forestry and Estate Crops, Forestry Research and Development Agency, Indonesian Ministry of Forestry
Funding countries Japan, Australia

This project will assist the Government of Indonesia to ensure the sustainability of its wood-based industries through downsizing and restructuring.

Sustainable management of non-timber forest produce (NTFP) in Maharashtra State, India (PPD 5/00 Rev.1 (I))

Budget	ITTO:	US\$64 522
	Government of India:	US\$18 150
	Total	US\$82 672

Implementing agency Maharashtra State Forest Department
Funding country Japan

This pre-project will assess the present status of the management of NTFPs in selected areas of Maharashtra State of India and provide information on that policy gaps that must be bridged as a pre-condition for their sustainable management.

Feasibility study for the production of sawnwood from tropical forests using appropriate technologies (PPD 7/00 (I,F))

Budget	ITTO:	US\$57 986
	Government of Ecuador:	US\$16 200
	Total	US\$74 186

Implementing agency Corporacion de Desarrollo Forestal y Maderero del Ecuador (CORMADERA)
Funding country Japan

This pre-project will examine the feasibility of producing high-quality sawnwood using appropriate technologies for the harvesting of timber from sustainably managed sources by groups of farmers in tropical moist forests.

Review of international wooden furniture markets (global; PPD 25/01 (I,M))

Budget	ITTO:	US\$169 065
	Total	US\$169 065

Implementing agency ITTO Secretariat
Funding country Japan

This pre-project will assess the outlook for wooden furniture, including bamboo and rattan, into the 21st century and provide a view of those products and markets where tropical timber producers are likely to be competitive.

Assessment of the multiple benefits of downstream processing of tropical timber in producer countries (PPD 35/01 (I))

Budget	ITTO:	US\$130 980
	Total	US\$130 980

Implementing agency ITTO Secretariat
Funding source Bali Partnership Fund

This pre-project will quantify the contribution that wood processing industries makes to national economic growth.

ITTO information network, phases 1&2 (additional funding) (global; PD 13/99 Rev. 2 (M,F,I))

Budget	ITTO:	US\$531 912
	Total	US\$531 912

Implementing agency ITTO Secretariat
Funding source Bali Partnership Fund

These additional funds will support the production of ITTO's newsletter, the *Tropical Forest Update*.

Enhancement of the Forest Statistics Information and Management System (STATFOR) through the integration of two computer modules: 1) compilation of management inventory data; 2) management of export log lumberyards (Gabon; PD 56/00 Rev. 3 (M))

Budget	ITTO:	US\$261 608
	Government of Gabon:	US\$406 940
	Total	US\$668 548

Implementing agency Directorate of Forest Inventory, Management Operation and Regeneration
Funding countries Switzerland, USA, Japan

This project will develop two computer modules to be integrated into Gabon's Forest Statistics Information & Management System (STATFOR).

Assessing the feasibility of and support for a tropical timber promotional campaign (global; PPD 26/01 (M))

Budget	ITTO:	US\$47 600
	Total	US\$47 600

Implementing agency ITTO Secretariat
Funding source Bali Partnership Fund

This pre-project will examine the feasibility of a marketing campaign that aims to change perceptions about wood, encourage its use and foster good practice in the industry.

Study to identify measures to bring increased transparency to tropical hardwood plywood trade and analyse the causes of market fluctuations and price instability (global; PPD 34/01 (M))

Budget	ITTO:	US\$99 678
	Total	US\$99 678

Implementing agency ITTO Secretariat
Funding source Bali Partnership Fund

The main aim of this pre-project is to recommend measures that could bring increased transparency to the international hardwood plywood trade and manage risks associated with market fluctuations.

Market information service for tropical timber and timber products (MIS)—Phase IV, 2002 (global; PD 16/93 Rev.4 (M))

Budget	ITTO:	US\$300 000
	Total	US\$300 000

Implementing agency ITTO Secretariat
Funding countries USA, Sweden, Bali Partnership Fund

This project continues and further develops the market information service for tropical timbers, which provides regular reports on prices, trade and economic news. It contributes to transparency in the tropical timber trade as well as strengthening ITTO's data collection network.

Fellowship report

A study on the milling and strength properties of branchwood suggests that logging residues could be used to help meet the timber demands of the downstream processing sector

by Dr Reynolds Okai

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Economizing: the horizontal mobile bandmill known as the woodmizer was used for the primary breakdown of branchwood into lumber. Photo: © R. Okai

TIMBER from the natural forest in Ghana is dwindling at a rapid rate, posing a threat to the raw material base of the timber industry. In order to ensure that timber harvesting in Ghana's natural forest is sustainable, the annual allowable cut (AAC) has been set at one million m³ of round logs (Foli et al. 1997). However, the demand for wood is increasing at such an alarming rate that this AAC is insufficient. The current annual extraction of logs by the mills is estimated to be nearer 3 million m³ (Birikorang et al. 2001).

One way of meeting the supply demands of industry is through the reduction of waste in timber processing. In this regard, the whole-tree concept, which utilises stem, branches, stump, buttress log and so on, may be useful. In Ghana, it is estimated that for every tree felled, nearly 50% of the tree volume is left in the forest in the form of branches, crownwood and stumps (Adam et al. 1993).

Objective and methodology

The study reported here was conducted in Ghana under an ITTO fellowship to determine the suitability of branchwood

as a raw material for downstream processing. Under the study, the moisture content, specific gravity, sawing characteristics and strength properties of the branchwood of *Terminalia ivorensis* (idigbo) and *Aningeria robusta* (asanfona) were assessed.

Samples of branchwood and stemwood of these two species were extracted from the moist semi-deciduous and dry semi-deciduous forest zones in Ghana; the diameters of the branches were in the range 10–25 cm. The strength properties at moisture content *w* were converted to strength properties at 12% moisture content for comprehensive analysis of the experimental results. The machine used for log breakdown was a horizontal mobile bandmill known as a woodmizer (see photo). The saw blade (spring-set) had the following dimensions: tooth pitch 22 mm, width 30 mm, kerf 1.6 mm, gullet depth 5 mm. The logs were grouped into four diameter classes and sawn into boards of dimensions 2.5 cm × 7.5 cm × 200 cm using live and cant sawing methods. The surfaces of the sawn lumber were examined for defects such as woolly or fuzzy grain, knots, pinworm holes and washboard.

Show of strength

Table 1: Specific gravity and strength properties of *Terminalia ivorensis* and *Aningeria robusta* at 12% moisture content

Species	Wood type	Specific gravity	Bending		Compression parallel to grain (N/mm ²)	Shear parallel to grain (N/mm ²)
			Modulus of elasticity (N/mm ²)	Modulus of rupture (N/mm ²)		
<i>T. ivorensis</i>	Branchwood	0.459 (0.020)	9200 (1068)	82.42 (3.24)	49.58 (2.54)	12.81 (2.13)
	Stemwood	0.433 (0.055)	9443 (1237)	85.31 (2.17)	45.22 (4.68)	11.95 (1.75)
<i>A. robusta</i>	Branchwood	0.562 (0.022)	12450 (896)	88.64 (2.41)	63.04 (3.96)	18.13 (5.39)
	Stemwood	0.502 (0.015)	12783 (904)	90.48 (4.20)	56.55 (3.91)	14.94 (3.00)

Note: Values in brackets are the standard deviations.

Results

Moisture content and specific gravity: the branchwood of *T. ivorensis* and *A. robusta* contained more moisture than their corresponding stemwood, with the branchwood of *T. ivorensis* exhibiting the highest amount of moisture. The specific gravity of the branchwood of the two species was also higher than that of the corresponding stemwood. In the branchwood of both, the heartwood had a higher specific gravity than the sapwood. The reverse was found in the stemwood of both species: that is, the sapwood had a higher specific gravity than the heartwood.

Sawing characteristics: all other things being equal, large-diameter logs generate a higher yield than small-diameter logs. Since branchwood is usually of a relatively small diameter, the lumber yield of branch logs is expected to be low. Thus, any investigation of the role of branchwood in downstream processing should include both volume and value yields.

In this study, the mean lumber value yields for first and second (FAS) grade boards of *A. robusta* and *T. ivorensis* branches were 25% and 20% respectively, while the mean lumber volume yield was 40% and 32% respectively. A high proportion of sapwood and the occurrence of washboard in *T. ivorensis* contributed to that species' relatively low lumber value and volume yield. The sawing technique used had no significant effect on yields.

Strength properties: Table 1 presents data showing the strength properties of *T. ivorensis* and *A. robusta* at 12% moisture content for both branchwood and stemwood. It can be seen that under static bending, the modulus of rupture and modulus of elasticity of the branchwood of *A. robusta* and *T. ivorensis* are lower than that of their corresponding stemwood. However, the shear strength parallel to the grain and the compression strength parallel to the grain of the branchwood of *T. ivorensis* and *A. robusta* were higher than that of their corresponding stemwood.

Conclusion

Judging from the results presented here, it is clear that the branchwood of *A. robusta* and *T. ivorensis* has considerable potential for use in downstream processing. A seminar held recently at the Forestry Research Institute of Ghana presented the results of this research and, already, some timber companies have accepted the challenge to process branchwood. However, national and regional workshops and other extension activities are needed to further increase awareness about the need to utilise branchwood and the potential of such wood to contribute to timber supplies. Further studies on branchwood are also warranted, particularly into drying (especially kiln drying) and anatomical properties, the development of prototype products (eg furniture, floorings) and the economics of lumber and charcoal production from logging residues.

References

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- Gene Birikorang, G., Okai, R., Asenso-Okyere, K., Afrane, S. & Robinson, G. (2001). *Ghana wood industry and log export ban study*. Report to the Ministry of Lands and Forestry, Accra, Ghana.
- Foli, E., Adade, K. & Agyeman, V. 1997. Collaborative forest management systems for off-reserve areas in southern Ghana. *Proceedings of ITTO/ED seminar on sustainable timber production from outside forest reserves*. FORIG, Kumasi, Ghana.

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 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 monographs; 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 **4 September 2002** for activities that will begin no sooner than December 2002. 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; itto@itto.or.jp (see p 2 for ITTO's postal address).

Acting on illegal acts

Policy options for improving forest law compliance

14–16 January 2002

FAO, Rome

Ways and means of combating illegal forest practices were the main theme of discussions among international experts who met at the Rome headquarters of the Food and Agriculture Organization of the United Nations (FAO) to consider policy options for improving compliance with the law in the forestry sector.

Some 30 participants identified a long list of forest crimes, ranging from corrupt allocation of timber concessions to illegal worldwide processing and trade of forest products. Attendees included experts from the World Bank and the International Tropical Timber Organization; leading NGOs involved in promoting sustainable forestry worldwide and combating illegal activities, such as Global Witness, the Environmental Investigation Agency, Fern, Forest Integrity Network/Transparency International, Greenpeace, and the World Wide Fund for Nature; the World Resources Institute and Forest Trends; and the private-sector forest industry. The meeting was the first in which such a spectrum of experts from governmental, non-governmental and private sectors has informally come together to discuss the impact of and possible ways to control forest crime.

Over the three-day meeting, the participants analysed policy alternatives that offer the greatest chance of success in combating illegal forestry practices and explored the roles of different actors in promoting their implementation. They considered the linkages between consumer and producer countries and concluded that the responsibility for illegal activities does not reside exclusively with producing countries. The experts also concluded that various international initiatives, including log-tracking technologies, could make a tangible contribution to the objective of fighting forest crime—particularly if they could be harmonised in commonly agreed schemes involving a number of key committed parties. Bilateral and regional

schemes may prove more successful in the short term, building up towards a future global arrangement in the long term.

Finally, the experts emphasised the importance of transparency and heightened efforts to disseminate information and increase involvement of civil society against illegal forest practices in order to generate support for the difficult policy reforms that may be needed.

Adapted from FAO press release (www.fao.org). For more information contact Manuel Paveri, Forest Policy and Institutions Branch, Forest Policy and Planning Division, FAO; Tel 39-06-5705 2196.

Further discussion of further processing

Workshop on further processing of tropical timber in the Asia-Pacific Region

28 August–1 September 2001

Seoul, Korea

by Ma Hwan OK

ITTO Secretariat

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This ITTO-sponsored workshop, attended by representatives of nine countries in the Asia-Pacific region, noted that all the nine countries had national policies for the development of tropical timber further processing to add more value to their forest products. Exports of value-added forest products such as furniture and joinery from producer countries have also been widely emphasised in strategies designed to generate greater value, income and benefits. This is consistent with the objectives of ITTO and in particular with ITTO's Objective 2000, which aims to achieve exports of tropical timber and timber products from sustainably managed sources.

There exist, however, significant differences among the countries. Some countries have already developed their wood-processing industries based on well-established strategies, while others are almost starting

from scratch. Workshop participants acknowledged that the development of capacity for the further processing of tropical timbers is not simply a matter of buying equipment and getting down to production. A number of important factors, including stable government policies and a sustainable supply of raw materials, have to be properly addressed before any degree of success can be attained. The workshop also recognised that further processing could yield significant and important socio-economic benefits.

In order to realise such benefits, however, a number of pre-requisites and supporting mechanisms must be put in place by governments, the private sector, research and development agencies, training institutions and other stakeholders. Also, mutual cooperation is essential to facilitate the exchange of information and ideas between and among the countries of the Asia-Pacific region and elsewhere on the sustainable development of further processing industries.

In view of the foregoing, the workshop recommended that governments, in partnership with the private sector and other stakeholders, formulate and implement appropriate policies, strategies and effective measures in support of the development of further processing of tropical timber products, including, but not necessarily limited to, the following:

- address the supply-and-demand situation with respect to raw material supplies to the industries engaged in wood processing to facilitate the formulation or reformulation of strategies for the development of sustainable wood processing industries;
- encourage the establishment of forest plantations through greater participation of the private sector. Criteria for the selection of plantation species should include the potential of specific end uses for planted species;
- promote research and development to facilitate the efficient and diversified utilisation of plantation timbers (eg *Acacia*, *Eucalyptus*, rubberwood and teak), lesser-used timber species, non-wood forest products (e.g. bamboo,



rattan) and other fibre sources (eg oil palm stems);

- conduct comprehensive and carefully constructed training programs at all levels, from management and supervisory down to operator level to improve the productivity of the wood processing industry. There is an urgent need to conduct training in reduced impact logging and training for designers of wooden, rattan and bamboo furniture;
- identify and implement research and development activities to be targeted at the needs of the industry towards improving the competitiveness of the wood processing industry;
- adopt appropriate and environmentally acceptable technology and techniques to ensure that the further processing of tropical timbers contributes to improving the health and safety of workers and does not pollute the environment; and
- develop a market research methodology for value-added wood products. Marketing and market promotion measures should be strengthened to enhance the probability of success of the further processing industries and to promote the development of sustainable wood processing industries.

For more information contact Dr. Jung-Hwan Park, Republic of Korea; Tel 82-2-96 2565; Fax 82-2-961 2570; fripark@umitel.co.kr

Forest certification leaders meet

2nd Certification Watch Conference

31 January–1 February 2002
Montreal, Canada

The theme of this event, which was attended by 170 delegates from ten countries, was forest certification and corporate responsibility. Delegates heard from leading corporations such as Home Depot, MeadWestvaco, IKEA, Canfor and

Centex Homes, as well as from high-level representatives of certification programs and influential experts in forest certification.

Two special guest speakers addressed the conference. The Minister of Natural Resources for the Province of Ontario, John Snobelen, spoke about the challenge of certifying publicly owned forestlands.

“There is a thin line between right and righteous, there is a thin line between rigorous and rigid,” he told delegates. “If we are going to enroll the necessary people in certification, we are going to have to be on the good side of that line. ... At the end of the day, the people in Ontario will not hold [Canadian Standards Association] CSA, [Forest Stewardship Council] FSC or anyone who seeks to certify responsible for the proper management of their forest, they will hold the government and the Ministry of Natural Resources to account. We cannot abdicate that responsibility, we cannot transfer it, we are compelled to it by law and are compelled to it morally.”

In all, the conference featured 18 speakers. Panel presentations and discussions took place in four main areas: corporate responsibility, comparing certification systems, developments in certification schemes, and forest products procurement policies.

Also during the conference, the report *Forest Certification: 2001 Year in Review* was released. This analyses key developments in forest certification that are shaping the practice of forest certification in North America, Europe and worldwide and can be ordered at www.CertificationWatch.org. More information on the conference can be found at www.CertificationWatchConference.org.

Contact: Stewart Fast, Certification Watch, PO Box 48122, Montreal, QC, Canada H2V 4S8; Tel 1-514-273 5777; Fax 1-514-277 4448; sfcw@sfcw.org; www.CertificationWatch.org

Adapted from Certification Watch press release.

Plying for change

V International Plywood and Tropical Timber Congress

20 to 24 November 2001

Belém, Brazil

Participants of this congress comprised representatives of Brazil's productive forest sector and public sector and other segments of organised civil society, including international organisations such as ITTO. It recommended that cooperation among interested parties—governments, private sectors and the organised civil society—be intensified with the purpose of developing efforts aimed at facilitating the practice of sustainable management. Such efforts would include:

- revision of regulatory instruments with a view to simplifying them and making them more efficient in order to encourage investment in sustainable forest industries;
- guaranteeing access to a timber supply from a sustainable base through the development of operational models of production from public and private forests and safeguarding the integrity of private forests; and
- creation, based on existing experiences, of appropriate mechanisms of support and the provision of incentives for the development of a value-added timber industry.

Participants also reiterated the recommendation of the previous congress to create in Brazil an agency with responsibility for developing an economically, socially and environmentally sustainable industry based on public and private forest resources.

Making contact

I would like to make contact with researchers involved in the field of forest fire studies and poverty alleviation through natural resource management.

Shesh Kanta Kafle

Sub-Regional Manager

PDDP, Western Development Region-II

GPO Box 8365

Kathmandu, Nepal

skkafle2000@yahoo.com

Preferred language: English

Peru allocates forests to sustainable management

In accordance with the Forestry and Wildlife Law, the Peruvian Ministry of Agriculture has allocated 21.5 million hectares of Amazonian tropical forests located in the departments of Ucayali (4.2 million hectares), Loreto (14.8 million hectares) and Madre de Dios (2.5 hectares), as permanent production forests; this area will increase to about 25 million hectares when allocations are finalised in the departments of Cuzco, Trujillo and Piura.

Permanent production forests will be further divided into concessions granted to micro, small, medium and large forest companies for a minimum of 40 years. They are to be harvested sustainably under approved management plans according to internationally accepted norms of sustainability. Concessions will range in size from 5000 to 40 000 hectares and will be allocated by auction or public competition. For areas of 10 000–40 000 hectares, concessionaires must deposit an amount equivalent to 15% of the resource value in a bank to be held in trust as a guarantee of performance in environmental management and community relations, among other things.

Peru's 67.5 million hectares of forests are now divided as follows:

- permanent production forests: 25 million hectares (37%);
- totally protected areas: 17 million hectares (25%);
- wetlands: 10 million hectares (15%);
- indigenous communities: 6 million hectares (9%); and
- secondary coastal, montane and Amazonian forests: 9.5 million hectares (14%).

Reported by Mauro Rios

Cameroon government acts against illegal loggers

The Government of Cameroon has pledged to take the following actions aimed at reducing illegal logging:

- to publicise in the media the names of the companies practicing illegal logging;
- to oblige them to pay fines; and
- to suspend or cancel their licences.

Late last year, the Minister of Environment and Forests requested an audit of existing concession agreements. In January 2002 it was announced that 40

logging companies were violating the forestry legislation with the intention of maximising profit and minimising payments to government from forest operations. The transgressions included: harvesting endangered tree species; opening up roads within concessions without authorisation; harvesting illegally outside the limits of their concessions; and felling trees below the minimum diameter limit. Some companies were logging inside wildlife sanctuaries without authorisation.

These companies have been required to pay fines totally 600 million CFA francs (about US\$820 000) and their agreements are likely to be suspended or cancelled. According to an audit conducted by the chartered accountant Bureau Bursinski, the losses to the Cameroon government due to the frauds committed by these companies amounted to more than 85 billion CFA.

A further four multinational companies were found to have exported sawn timber of assamela (*Pericopsis elata*), a species listed in Appendix II of the Convention on International Trade in Endangered Species (CITES), without the necessary permits or with faked documents. The companies were fined a total of 20 million CFA and were banned from exporting assamela for between six months and a year.

Previously, some 18 companies had their agreements suspended by ministerial decision No. 0227/D/MINEF/CAB for violating the terms of concession agreements in March 2001. Thus, in ten months, action had been taken against 62 companies found guilty of illegal forest exploitation in Cameroon. The hope is that these kinds of actions, if maintained and strengthened, will help to reduce illegal forestry activities in Cameroon.

Reported by MIMBIMI ESONO, TFC correspondent in Cameroon and President, National Working Group on Sustainable Forest Management and Certification in Cameroon; Tel 237-343 69 94 or 237-994 79 84; akung34@hotmail.com

New community forestry grants program

The European Commission is funding a new Small Grants Program for Operations to Promote Tropical Forests (SGP PTF). Grants will be in the range €20 000–200 000 and will be offered initially to civil society organisations in Pakistan, the Philippines, Vietnam and Thailand. For more information contact: Mark Sandiford, Regional Program Coordinator, EC/UNDP SGP PTF, SEARCA, UPLB, Laguna 4031, Philippines; Fax 63-49-536 7097; mark.sandiford@undp.org

Deforestation in the Amazon

A recent study published by the Smithsonian Tropical Research Institute and Brazil's Amazonia National Research Institute estimates that the average rate of deforestation in the Brazilian Amazon between 1995 and 2000 was 1.9 million hectares. According to the Brazilian Ministry of Environment, 1 million hectares of this was done legally under Brazil's Forestry Code.

Reported in O Estado de São Paulo, 17 January 2002.

Useful sites on the internet



Colombian environmental news

The first site provides the reader with information on and links to Colombian environmental issues. It includes short articles and relevant extracts from the print media. The second site is the website of the Network for Sustainable Development, providing news on a wide range of environmental issues relevant to Colombia.

www.prensaverde.com.co

www.rds.org.co/noticias.htm

Brazilian environmental news

This site provides daily news on all important activities and actions of the Brazilian Ministry of Environment.

<http://www.gov.br/port/ascom/imprensa/jaforamnoticias.cfm>

Participatory approaches in forestry and natural resources development projects

22 October–2 December 2002 21 October–1 December 2003
Cost: US\$3780

This course will enable participants to appreciate the need for participation of local communities in natural resource development projects; acquire the necessary knowledge and skills to apply participatory principles and techniques in all aspects of the project cycle; and formulate an action plan that integrates the participatory concepts, strategies and techniques in their own work situation.

3rd International Training Program on Sustainable NTFP Management for Rural Development

12–27 November 2002 Madhya Pradesh, India
Cost: about US\$2000

This program, which includes extensive field visits, has been designed to enhance the knowledge and hone the skills of forestry and rural development practitioners and researchers in the areas of non-timber forest products-based livelihood generation.

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

The Smithsonian Environmental Leadership Course

8–20 September 2002 7–19 September 2003
Cost: US\$2750

This course provides specific tools to improve personal and team relationships, instill self-confidence, conduct successful negotiations, initiate strategic planning and create effective communication in and across organisational cultures.

Contact: MAB Program, Smithsonian Institution, 1100 Jefferson Drive, SW, Suite 3123, Washington, DC 20560-0705, USA; Tel 1-202-357 4793; Fax 1-202-786 2557; simab@ic.si.edu / www.si.edu/simab

Forest products marketing

4 June–15 July 2002 3 June–14 July 2003
Cost: US\$3780

This course equips participants with knowledge on environment/green and global marketing issues, market research, developing marketing information systems and preparing marketing plans.

Agroforestry for sustainable development

4 June–15 July 2002 3 June–14 July 2003
Cost: US\$3780

This course, designed for agroforestry officers, social foresters, and extension and rural and upland development workers, demonstrates approaches to the design, implementation, monitoring and evaluation of agroforestry projects; and addresses the issues of food security, woodfuel productivity, livelihood, and the rehabilitation of degraded lands.

Geomatics for natural resource management

9 July–19 August 2002 8 July–18 August 2003
Cost: US\$3780

This course covers topics on data acquisition and management; mapping technologies; advances in surveying and mapping using global positioning systems; field surveying exercises, and data input and GIS mapping. It aims to enable the participants to integrate geomatics technology into the daily operations of an organisation.

Production technology of seeds and seedlings for environmental restoration

6–26 August 2002 5–25 August 2003
Cost: US\$2100

This course provides foresters and forest managers with knowledge and skills in technologies for sustaining the production of quality seeds and seedlings for environmental restoration.

Policy planning and programming on natural resources and agriculture

13 August–9 September 2002 12 August–8 September 2003
Cost: US\$2625

Leadership, organisational change and interactive planning for adaptive forest management

23 September–4 October 2002
Cost: €1600

This course will examine leadership and organisational performance in interactive planning for collaborative adaptive forest management and look at actors' perspectives of gender, equity and access to resources. It concludes with participatory technology development and innovation as a joint learning process.

Design, management and evaluation of collaborative forestry programs

7–8 October 2002
Cost: €1600

This course examines program cycle management and practice 'goal-oriented project planning' procedures. Subjects will include problem-solving, planning and management as a learning process, logical framework, indicators, information flow and participatory evaluation.

Sustainable forest management and biodiversity conservation

28 October–8 November 2002
Cost: €1600

The central theme of this course is how to develop adaptive forest management plans in different organisational and physical settings, taking account of international and national policy frameworks. Issues include certification, the Convention on Biological Diversity, and the decentralisation and democratisation processes.

All courses will be based at Wageningen, the Netherlands.

Contact: IAC, PO Box 88, 6700 AB Wageningen, the Netherlands; Tel 31-317-495 495; Fax 31-317-495 395; training@iac.agro.nl; www.iac.wageningen-ur.nl

This course provides executives, foresters and researchers with the necessary knowledge and skills for natural resource and agricultural policy planning and programming.

Sustainable forest resources management and project planning

27 August–7 October 2002 26 August–6 October 2003
Cost: US\$3780

This course will provide mid-level resource planners, project managers and technical experts with the capability to handle sustainable forest resources management planning.

Social forestry for sustainable rural development

10 September–21 October 2002 9 September–20 October 2003
Cost: US\$3780

The course will enable participants to articulate recent concepts, issues and strategies in sustainable forest and rural development; evaluate the applicability of new people-oriented approaches in forest resource management to their own work situation; and design, manage, monitor and evaluate forest community development program/project through the active participation of the different stakeholders.

Environmental impact assessment for proposed forestry development projects

15 October–25 November 2002 14 October–24 November 2003
Cost: US\$3780

This course deals with the basic concepts, principles, theories, tools, methodologies, strategies and practices of environmental impact assessment for proposed forestry development projects. It is designed for individuals working with non-government organisations, people's organisations and government agencies.

For all the courses in this box -contact: The Director, Training Center for Tropical Resources and Ecosystems Sustainability (TREES), College of Forestry and Natural Resources, University of the Philippines Los Baños, PO Box 434, College, Laguna 4031, the Philippines; Tel (63-49) 536 2268; Fax (63-49) 536 3340; trees@laguna.net

- ▶ 3–4 April 2002. **ITTO International Workshop on Certification.** Kuala Lumpur, Malaysia. **Contact:** *Amha bin Buang, ITTO Secretariat; Tel 81-45-223 1110; Fax 81-45-223 1111; itto@itto.or.jp; www.itto.or.jp*
- ▶ 25–26 April 2002. **Seminario: Establecimiento y Manejo de Plantaciones.** Bogotá, Colombia. **Contact:** *El semillero, Calle 70 No. 14-95, Bogotá, DC, Colombia; Fax 57-91-347 3760; semilla@latino.net.co*
- ▶ 25–27 April 2002. **2002 Forest Leadership Forum.** Atlanta, Georgia, USA. **Contact:** *Certified Forest Products Council, 721 NW 9th Ave, Suite 300, Portland, Oregon 97209, USA; Tel 1-503-224 2205; conferencequestions@certifiedwood.org*
- ▶ 7–9 May 2002. **Diseases and Insects in Forest Nurseries.** Kerala, India. IUFRO 7.03.04. **Contact:** *Stephen Fraedrich, USDA Forest Service, 320 Green Street, Athens, GA 30602, USA; Tel 1-706-559 4273; Fax 1-706-559 4287; sfracdri@fs.fed.us*
- ▶ 13–18 May 2002. **32nd Session of the International Tropical Timber Council.** Denpasar, Indonesia. **Contact:** *Collins Ahadome; Tel 81-45-223 1110; Fax 81-45-223 1111; itto@itto.or.jp; www.itto.or.jp*
- ▶ 3–7 June 2002. **Partnerships in Forestry: an International Seminar.** Brussels, Belgium. **Contact:** *Dirk Van Hoye, Ministry of the Flemish Community, Division of Forests and Green Spaces, Koning Albert II-laan 20, bus 8, B-1000 Brussels, Belgium; Tel 32-2-553 8102; Fax 32-2-553 8105; dirka.vanhoye@lin.vlaanderen.be*
- ▶ 4–6 June 2002. **Global Perspectives on Indigenous Peoples Forestry, Linking Communities, Commerce and Conservation.** Vancouver, British Columbia, Canada. **Contact:** *Jessica Rice, Forest Trends, 1050 Potomac St, NW, Washington, DC 20007, USA; Fax 1-202-298 3014; jrice@forest-trends.org; www.forest-trends.org*
- ▶ 10–13 June 2002. **4th Ministerial Meeting of the Conference on Humid Dense Forest Ecosystems in Central Africa (CEFDHAC).** Kinshasa, Democratic Republic of Congo. **Contact:** *Cléto NDIKU MANGENGE; cletn.cefhdhac-uicn@camnet.cm*
- ▶ 16–20 June 2002. **25th Annual Meeting of the Council on Forest Engineering: Forest Engineering Challenges—a Global Perspective.** Hosted by Caterpillar Forest Products and Mead Corporation. Auburn, Alabama. **Contact:** *Tel 1-541-754 7558; Fax 1-541-754 7559; cofe.org*
- ▶ 2–6 July 2002. **Wood for Africa 2002.** Pietermaritzburg, South Africa. **Contact:** *Lolly Stuart and Sue James; Fax 27-33-394 4842; woodforafrica@futurenet.co.za; www.woodforafrica.com*
- ▶ 22–26 July 2002. **FAO/ITTO/INAB International Conference on Criteria and Indicators for Sustainable Forest Management.** Guatemala City, Guatemala. **Contact:** *Eva Mueller, ITTO Secretariat; Tel 81-45-223 1110; Fax 81-45-223 1111; itto@itto.or.jp; www.itto.or.jp*
- ▶ 28 July–1 August 2002. **Mountain Forests: Conservation and Management.** Vernon, British Columbia, Canada. IUFRO 1.05.00. **Contact:** *Tom Rankin, Forest Continuing Studies Network; Tel 1-250-573 3092; Fax 1-250-573 2882; tom.rankin@fcsn.bc.ca; www.mountainforests.net*
- ▶ 31 July–2 August 2002. **2nd Congreso Forestal Latinoamericano: Bienes and Servicios del Bosque Fuente de Desarrollo Sostenible.** Guatemala City, Guatemala. **Contact:** *Julieta Calderón Pontaza; confla@c.net.gt*
- ▶ 14–21 August 2002. **17th World Congress of Soil Science: Confronting New Realities in the 21st Century.** Bangkok, Thailand. **Contact:** *Congress Office, Kasetsart University, Box 1048, Bangkok 10903, Thailand; o.sfst@nontrj.ku.ac.th*
- ▶ 26 August–4 September 2002. **World Summit on Sustainable Development (Rio +10).** Johannesburg, South Africa. **Contact:** *Johannesburg Summit Secretariat, Division for Sustainable Development, United Nations Department of Economic and Social Affairs, Two United Nations Plaza, DC2-2220, New York, NY 10017, USA; dsd@un.org; www.johannesburgsummit.org*
- ▶ 3–4 September 2002. **Forest Information Technology 2002: International Conference and Exhibition.** Helsinki, Finland. **Contact:** *Leila Korvenranta, Finpro, Arkadiankatu 2, POB 908, FIN-00101 Helsinki, Finland; Tel 358-204 6951; Fax 358-204 695 565; info@finpro.fi*
- ▶ 3–5 September 2002. **II Latin America Symposium on Forest Pests.** Belo Horizonte, Brazil. **Contact:** *Prof. José Cola Zanúncio; Tel 55-31-3899 1185; Fax 55-31-3899 2476; sifdc@mail.ufv.br*
- ▶ 15–18 September 2002. **Ecological and Economic Benefits of Mountain Forests.** Innsbruck, Austria. **Contact:** *Robert Jandl, Forstliche Bundesversuchsanstalt, Seckendorff, Gudent Weg 8 A1131, Wien, Austria; mountainforest@fbva.bmlf.gv.at; www.fbva.forvie.ac.at/iym/ecology.html*
- ▶ 19–21 September 2002. **III Seminar on Integrated Management and Forest Certification.** Viçosa, Brazil. **Contact:** *Prof. Sebastião Renato Valverde, Federal University of Viçosa; valverde@mail.ufv.br*
- ▶ 24–25 September 2002. **Malaysian Timber Marketing Convention.** Kuala Lumpur, Malaysia. **Contact:** *MTMC 2002, Level 18, Menara PGRM, 8 Jalan Pudu Ulu, 56100 Cheras, Kuala Lumpur, Malaysia; Tel 603-982 1778; Fax 603-982 8999; mtmc@mtc.com.my*
- ▶ 23–28 September 2002. **VI Congreso de la Asociación Latinoamericana de Estudiantes de Ciencias Forestales.** Eheredia, Costa Rica. **Contact:** *marianelag@costarricense.com*
- ▶ 29 September–5 October 2002. **International Seminar on New Roles of Plantation Forestry Requiring Appropriate Tending and Harvesting Operations.** Tokyo, Japan. IUFRO 3.04. **Contact:** *Japan Forest Engineering Society Office, c/o Laboratory of Forest Utilization, Graduate School of Agricultural and Life Sciences, University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113-8657, Japan; Fax 81-3-5841 7553; JFES-office@fr.a.u-tokyo.ac.jp; http://jfes.ac.affrc.go.jp/iufro2002.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*
- ▶ 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*
- ▶ 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*
- ▶ 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@infoc.cl*
- ▶ November 2002. **4th International Teak Conference.** IUFRO 5.06.02. Peechi, India. **Contact:** *K.M. Bhat, Head, Wood Science Division, Kerala Forest Research Institute, Peechi 680 653, Trichur District, Kerala, India; Tel 91-487-282 037; Fax 91-487-282 249; kmbhat@kfri.org; www.kfri.org*
- ▶ 11–15 March 2003. **Forest Products Research: Providing for Sustainable Choices.** IUFRO Division 5, Rotorua, New Zealand. **Contact:** *Lesley Caudwell, Forest Research, Sala Street, Private Bag 3020, Rotorua, New Zealand; Tel 64-7-343 5846; Fax 64-7-343 5507; alldiv5iufro@forestresearch.co.nz; www.forestresearch.co.nz/site.cfm/alldiv5iufro*
- ▶ 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*
- ▶ 26–31 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*
- ▶ 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*

order to continue to export its own ramin—as long as it has been legally cut within the country.

Progress

Following the CITES listing of ramin and the inauguration of a new Indonesian President, a new Minister for Forests was appointed in early August 2001. Up to then no concrete steps had been taken to actively pursue the timber barons both in Indonesia and neighbouring countries who are involved in the running of illegal logging and the supply of illegal timber to syndicates with businesses that feed the international markets. Although ramin had been placed on CITES Appendix III, the issue of enforcement and accountability within Indonesia was still being avoided.

In September 2001, the Forest Law Enforcement and Governance East Asia Ministerial Conference (FLEG) was held in Bali, Indonesia (see *TFU 11/4* for a report). It was attended by 150 people representing government, NGOs and the private sector from 20 countries, although Singapore and Malaysia were not represented. The result was an unprecedented commitment from government ministers from around the East Asia region to take action in combating 'forest crimes' that included illegal logging, the trafficking of illegal timber, parts and products, and the trade in illegal imports. Other consuming countries including the USA, UK, Japan and China were also represented and agreed to the declaration. It was acknowledged and openly discussed that at the centre of this problem was corruption, which existed not just within governments but within the industry as well.

Two months after FLEG, authorities from the Ministry for Forests and the Indonesian Navy seized three cargo ships allegedly illegally transporting timber from the Indonesian province of Central Kalimantan to China. The ships were detained and the captains and crew are currently being held at the navy depot in Jakarta. While investigations continue it is estimated that the shipping companies are losing about US\$10 000 a day. The broker involved in providing the illegal timber has lost its commodity and the importer its goods. A small but significant signal has been sent to shipping companies that Indonesia is now prepared to seize and hold timber that is being traded illegally.

More effort needed

It is hard to believe that the issue of illegal logging and the illegal timber trade is only now starting to be addressed openly. With the commitments made by the governments of the East Asia region the industry must also participate in ensuring that the resources they buy and sell come from legal sources. There is an urgent need for new legislation prohibiting the import and sale of illegally sourced timber and products. The laundering of illegal timber is in itself a massive commerce benefiting only those who control the syndicates; criminal elements within the trade must be confronted.

Governments need to develop new procurement policies that demonstrate that timber and wood products have come from legal sources, and industry needs to adopt transparent chain-of-custody processes that allow timber tracking from source to market. Producing countries need to formalise a system of cross-border cooperation between national enforcement authorities, and to enact legislation allowing the confiscation of illegal timber and those dealing in it outside the country of origin. These are some of the recommendations that

Tanjung Puting National Park has become a test case for the Government of Indonesia and its willingness to combat illegal logging and the trafficking of illegal timber for international consuming markets.



Processed ramin: Illegally obtained ramin photographed undercover in Indonesia, May 2000. Photo: © Faith Doherty, Environmental Investigation Agency

EIA/Telapak see as being essential first steps in combating illegal logging and the illegal timber trade.

Founded in 1984, the Environmental Investigation Agency is an independent, international campaigning organisation committed to investigating and exposing environmental crime. It is based in London, UK and Washington, DC, USA.

Reference

EIA/Telapak Indonesia 2001. *Timber trafficking: illegal logging in Indonesia, South East Asia and international consumption of illegally sourced timber*. Environmental Investigation Agency and Telapak Indonesia, September 2001. (Available at www.eia-international.org)

It's time for governments and the timber industry to deal with illegal logging and illegal timber trade

by Faith Doherty

Environmental Investigation Agency

faithdoherty@eia-international.org

IN Indonesia, illegal logging and illegal timber trade is a massive problem that undermines the rule of law and deprives the state of substantial revenues. It encourages other forest crimes, has serious economic and social implications for the poor and disadvantaged, and is a major threat to ecosystems and biodiversity. In short, illegal logging and the illegal timber trade have very few long-term advantages for anyone other than those responsible for plundering the forest and smuggling the timber from one country to the next.

National park logging

In August 1999, the Environmental Investigation Agency (EIA) and its Indonesian partner Telapak released a report in Jakarta called *The Final Cut* exposing the commercial logging of Tanjung Puting National Park in Central Kalimantan, Indonesia.

We found that the main timber species being exploited in the park for global markets is ramin (*Gonystylus* spp.), a tropical hardwood that grows in peat swamp and the lowland freshwater swamp forests in Borneo, Sumatra and Peninsula Malaysia. It is traded internationally for a range of products including interior mouldings, furniture components, picture frames and dowels. *The Final Cut* and the EIA/Telapak campaign exposed names and gave evidence with footage and stills; we continue to investigate and monitor not just the illegal logging of Tanjung Puting, but also the illegal trade that allows this timber to be sold in international markets.

... illegal logging and the illegal timber trade have very few long-term advantages for anyone other than those responsible for plundering the forest and smuggling the timber from one country to the next.

By focusing on a single commercial tree species, the workings of the illegal logging and trade in this area have been revealed, from the gangs of illegal loggers controlled by middle men, to the politicians and military who profit directly from illegal activities. Tanjung Puting National Park has become a test case for the Government of Indonesia and its willingness to combat illegal logging and the trafficking of illegal timber for international consuming markets.



Photo: © Environmental Investigation Agency

Indonesia's illegal timber finds its way to the international market either directly or through neighbouring states, especially Malaysia and Singapore, where the timber is relabelled and sent on to the US, Europe, Japan, Taiwan and mainland China markets (EIA/Telapak 2001).

After two years of further investigations by EIA/Telapak and local partner NGOs, which gave revealing insights into how these crimes were being committed, the Government of Indonesia began to show some political will to deal with the situation. In April 2001, a ministerial decree was issued to place a temporary moratorium on the cutting and trading of this threatened species. Following this decree, the Secretariat of the Convention on International Trade in Endangered Species (CITES) was notified that Indonesia was placing its ramin on Appendix III of CITES with a zero quota, effectively banning its export from the country. By doing this, the Indonesian government is asking for international support and is placing some of the responsibility for ramin timber theft on importing countries. Consuming countries are now bound by their national CITES legislation to prevent imports of Indonesian ramin with the exception of that produced by Diamond Raya Timber, a company controversially certified by the Forest Stewardship Council-affiliated Indonesian Ecolabelling Institute in April 2001. CITES is the only international legally binding instrument that the Indonesian government can use to help start protecting its forest in Tanjung Puting. Currently, no other laws exist that address the trade in illegally sourced timber and its consumption.

On 17 August 2001 the Malaysian CITES management authority notified the CITES Secretariat that they would be taking an exemption on the ramin listing for its parts and products. It is difficult to understand the reasoning for this

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