Tracking the wood

Many tropical countries need help to improve their timber-tracking systems

by
Jussi Lounasvuori
and
Sheikh Ibrahim Sheikh Ali

ITTO Consultants

Tracked and sawn: processing tracked logs in Douala, Cameroon. *Photo: J. Lounasvuori*

IN 2006, ITTO commissioned a study of recent experiences in the use of tracking systems in tropical forest industries using three case-studies and a literature review. This article summarizes some of its main findings.

The basics of log-tracking systems

Timber-tracking systems—also called chain-of-custody systems, particularly when associated with certification—are used to provide information on timber flows from the forest, through storage and transportation, to end users, and to verify that the raw materials of timber products originate from legal, sustainable or otherwise acceptable sources. Tracking systems are considered by some to be essential tools for combating illegal logging and trade in illegal timber.

Log-tracking and chain-of-custody systems are typically employed to assist forest law enforcement, ensure that all applicable government royalties and taxes are paid, and to demonstrate that labelled products originate from certified forests within the framework of voluntary forest certification schemes.

The basic elements of timber tracking include:

(i) product identification;

(ii) product separation;

(iii) record keeping; and

(iv) documented procedures for the above.

Verified timber can be segregated from unverified timber in two main ways: physical separation and inventory management. The physical separation of timber or products can be achieved by:

- physical marking;
- separate storage; and
- the processing of materials of different origin at different facilities or at different times.

Under inventory management, two systems can be applied—mainly under a forest certification scheme—to link the final product with the origin of the raw material:

(i) the minimum average percentage system, which allows a certain percentage of uncertified wood material in the final product; and

(ii) the volume credit system, which allows a proportion of products to be labelled as certified. In the volume credit system, the labelled output volume must be reconciled with the input volume of certified materials.

The role of timber tracking

Log-tracking and chain-of-custody systems are typically employed to assist forest law enforcement, ensure that all applicable government royalties and taxes are paid, and to demonstrate that labelled products originate from certified forests within the framework of voluntary forest certification schemes. Some sort of governmental oversight of the timber supply chain is needed so that authorities can determine the actual intensity of harvesting operations and ensure that the volumes harvested, traded and processed do not exceed the authorized amounts.

Log tracking is also becoming a requirement in some markets. The European Union (EU) recently introduced a licensing scheme as part of its forest law enforcement, governance and trade (FLEGT) initiative. Under the scheme, timber imports to the EU must demonstrably originate

from legal sources (as defined by the exporting country on the basis of its legislation in force). Thus, the supply chain of wood products from the forest through transportation, storage and processing must be known and verifiable until the border of the EU.

Current practice in tropical countries

Most tropical countries use conventional paper-based tracking systems with physical marks on the timber products, but more advanced systems have been developed recently to improve the efficiency and reliability of supply-chain control. These mostly commercial systems involve the use of computerized databases, barcodes, the internet and satellites for the management and transfer of data on timber flows between forests and final consumers. Of the three government tracking systems described below, Brazil's nascent system is the most sophisticated.

Brazil

The governmental control system used in Brazil to verify the legality and origin of timber and timber products is based on two official, obligatory documents:

(i) *Authorization of Forest Exploitation* (AUTEX): this document specifies the volume of logs—by tree species—that a wood-harvesting enterprise is allowed to extract from an annual production unit. Prior to issuance of an AUTEX, the harvesting enterprise must prepare an annual production plan that is evaluated by the environmental authorities. The AUTEX operates as a credit, which is used up as the enterprise dispatches logs from its forest area; and

(ii) *Authorization of Forest Products Transport* (ATPF): Serial-numbered ATPFs are issued for the transportation of logs and timber products. An ATPF includes the name and address of the company that has sent the timber consignment, the point of departure, the quantity and value of the consignment, and the destination. Each consignment must be accompanied by an ATPF.

ATPFs are applied to primary-processed timber for their transportation to further-processing facilities or to final consumers. ATPFs are also required for the transportation of goods from the further-processing plants to the domestic market and export ports. For the international trade, all exporters must be registered with the Foreign Trade Secretariat (SECEX). Each export shipment requires a timber export permit, a certificate of origin and a fiscal payment receipt.

The existing system has proved ineffective in controlling forest management, transportation and wood-processing activities. Government agencies have therefore initiated projects to develop improved control systems, one of which, the *Sistema documento de origem florestal* or DOF system, was introduced in autumn 2006. It builds on the existing system but is fully transferred to a computer environment and makes use of modern communication technology. The main steps of the DOF system are as follows:

- the harvesting volume specified in the AUTEX is entered into an electronic database;
- prior to the transportation of logs or timber products, the producer accesses the system through the internet, fills out bar-coded transportation documents (DOFs) and prints out copies of the DOFs for trucks. The transportation volumes are debited from the producer's credit;

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- the road police check the trucks (eg volume and origin of timber) by comparing the data on the DOFs against an inspection of the loads and by verifying the authenticity of transportation documents; and
- upon the truck's arrival at the mill, the company communicates the received volume of logs to the DOF system, which are then credited back to the company.

The DOF system is likely to result in significant improvements in the control and monitoring of legal compliance. However, it requires computer literacy and reliable access to the internet, the lack of which may affect the functionality of the system, at least in the short term.

Cameroon

In Cameroon, pre-harvesting inventories, harvesting prospects and authorized cutting volumes provide the foundation for the existing government log-tracking system. In the forest, a logging company completes a field register (DF-10) and submits it to government agencies. The serial-numbered DF-10 specifies, among other things, the name of the company, the forest management unit, and data on individual logs such as tree species, diameter (top, bottom, average), length, volume and value.

Log-specific identification data given in the DF-10 is painted on one end of the log to facilitate physical traceability until

Call for expressions of interest in establishing log tracking systems

ITTO's 2006–2007 Work Programme includes the following activity:

"Work with the private sector in producer countries to study the feasibility of adopting timber tracking systems, including provision of support for five pilot schemes."

ITTO is now seeking expressions of interest from companies in producer member countries interested in benefiting from this activity. Expressions of interest should be addressed to the Executive Director (itto@itto.or.jp) and include details of the nature of the company, area to be covered by the system, products to be covered by the system, annual production levels, current control mechanisms in place (if any) and information on the type of system desired (if known). Expressions of interest should be received by the ITTO Secretariat by **31 March 2007**.

Tracked and stamped: certified Brazilian sawnwood. *Photo: J. Lounasvuori*

arrival at the primary processing plant or export port, and waybills for the transportation of logs (*lettre de voiture le transport des bois d'œuvre*) are used for controlling the transfer of logs from the forest area to the transportation destination. The serial-numbered waybill specifies, among other things, the name of the company, the forest management unit, the destination, truck registration number, and data on individual logs such as log number (reference to DF-10), tree species, diameter (top, bottom), length and volume.

Truckloads of logs transported from the forest to the export port are checked at the port entrance by timber-yard officials (*brigade du parc à bois*), who scrutinize the transportation documents and conduct measurements or visual observations of the loads. After the checkpoint, the logs are stored in the port's timber yard before customs valuation and shipping. Customs valuation is outsourced to *Société Générale de Surveillance SA* (SGS) and aims to ensure that the government levies the correct amount of export taxes.

ITTO should continue to assist producer countries in finding innovative ways of ensuring legal compliance. In many countries, the business environments in which the forest and timber-processing sectors operate could be developed to favour those companies complying with relevant legislation and voluntary requirements for sustainable forest management.

If the logs are transported to a sawmill or other processing plant, the company receives the logs together with the waybills. The origin of individual logs must remain identifiable at the timber yard but is not required during and after processing. The company needs a waybill for the transportation of the processed products (*lettre de voiture le transport des bois débités*). The serial-numbered waybill specifies, among other things, the name of the producing company and the transportation company, the truck registration number, the transportation destination, and product data such as the nature of the product, tree species, thickness, width, length, volume and number of pieces.

At the export port, the inspection and customs declaration procedures for processed timber products are similar to those for logs, except that SGS is not contracted to carry out the customs valuation.

The current governmental control system is based on paper forms and records, from which data are transferred to electronic databases for analysis and the generation of reports on individual phases of the production chain. However, the databases are not interactive and the whole production chain from the forest to export port can only be analysed by combining information from various data sources on an ad hoc basis.

A database called *Commercialisation du bois au Cameroun* (COMCAM) was launched recently with ITTO support to improve transparency in the foreign trade of logs and timber products. COMCAM is a software application that can draw data from different sources among the country's various administrative units of government. It can generate a wide range of reports on the wood products trade, including trade volumes by exporting company, tree species, export destination, export port and type of transportation. The database provides an excellent basis for the development of a comprehensive information management system for the Cameroonian forestry and wood-processing sector, and its enlargement to include forest operations and the transportation of logs to processing plants should be explored.

Malaysia

All the permanent reserved forests in Peninsular Malaysia and certain concessions in Sabah and Sarawak have been certified, mainly by the Malaysian Timber Certification Council. For certified areas, it is possible to trace logs to the stump; in other forests, logs can be traced to the licenced area in which they were harvested.

The areas licensed for logging are clearly demarcated on the ground (to prevent harvesting beyond their boundaries) and an inventory is conducted to determine stocking and species composition. From this information, the harvesting volume allowable in that area is computed and provides a check on the actual out-take. The trees to be felled and retained are marked and tagged to provide another means of checking out-take. In certified areas, tree stumps are numbered so that logs can be traced to the stump.

At the felling site, the logs are incised at both ends with a property mark to denote ownership and a classification mark indicating the licence area. The logs may then be moved to a designated forest checking station for the assessment of royalty and other statutory charges, which are

deducted from the licence-holder's account at the Forestry Department. At this point, a government revenue hammer mark is made on both ends of the log and a removal pass issued to enable the logs to be transported to mills or the point of export. At the mill the logs are recorded in a log intake book and checked with the accompanying removal pass; if in order, the removal pass is cancelled and the logs may be processed.

Further controls and documentation are in place for both the export and import of timber, including checks by customs officials. The strict control measures and documentation in place in Malaysia enable log tracking to the forest of origin or even to the tree of origin in an effective and transparent manner.

Recommendations

ITTO should continue to assist producer countries in finding innovative ways of ensuring legal compliance. In many countries, the business environments in which the forest and timber-processing sectors operate could be developed to favour those companies complying with relevant legislation and voluntary requirements for sustainable forest management. Incentive programs (such as priority positions and tax releases) could also be created to support companies that have responsible internal governance.

Timber companies should be encouraged to introduce their own tracking systems, but this still requires governments to establish or improve structures for control and monitoring. These may include databases in which companies enter data on their harvesting and trade in timber products, which would be useful for reconciling the authorized cuttings, actual cuttings and trade in timber products. A governmental inspection service would be needed to verify the company-provided data through random samples or some other basis. The results of third-party certification could also be integrated into the control system to contribute to the reliability and credibility of the internal control systems of the private companies.

*The full report on which this article is based ('*Report on the auditing of existing tracking systems in tropical forest industries*') can be found on www.itto.or.jp and is available on request from eimi@itto.or.jp*

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Over the last six years, annual foreign exchange earnings from forestry have averaged US$156 million or 361 million Kina. In 2005, foreign exchange earnings alone were US$173 million or 541 million Kina, which was 5% of the total merchandise exports. This makes forestry second only to the mining and petroleum sector as an export earner. It also generated an average of 115 million Kina in log exports taxes over the past six years. The sector generates around 5% of PNG's export, and for over a decade, it has contributed an average of 30% of PNG's expenditure on development.

PNGFA estimates that the sector directly employs 9000 people, mainly in the rural areas. This represents about 4% of formal national employment. The sector's contribution to national employment has declined by about 28% from its 1990s level, when it employed directly around 13 000 people. In addition, the sector is a major contributor to rural infrastructure development—roads, airfields, air services, health clinics, services and schools.

While eco-forestry has a place in PNG, the majority of the key local NGOs agree that commercial timber harvesting is important for the PNG economy and should continue albeit on a sustainable basis. This view was confirmed to the writer at a meeting held with key representatives of the local ENGOs in Port Moresby on 17 October 2006.

PNG now has a framework in place, which can assist in achieving sustainable forest management, as well as enhanced forest law enforcement and governance. It has a Forest Act, a Forest Policy and a Code of Forest Harvesting. Like many tropical timber producing countries, the major challenge facing PNG is effective implementation of its forest law and policies, as well as monitoring to ensure continuous improvement. ITTO's recent study into the progress made in sustainable forest management in tropical timber producing countries concluded that while progress had been made overall, there was still room for improvement in almost all the member producer countries.

The fact that PNG can further improve its performance in sustainable forest management cannot be used to justify allegations that all commercial harvesting activities in the country are illegal. In the writer's view, there has been a tendency to confuse "illegality" with "effective implementation" of the Forest Act and related policies and guidelines in the commercial timber harvesting debate in PNG.

One area definitely requiring immediate action is the definition of illegal harvesting activities in the context of PNG's forestry law and policy. At present, there is no agreed national definition of illegal harvesting activities in PNG. The PNGFA generally uses the FAO/ITTO definition, which is the "harvesting, transporting, processing, and trading of forest products in violation of national laws." It would be useful if this definition can further be expanded in the context of PNG to identify specific activities which would constitute illegality in the context of PNG's Forestry Act 1991 and the Forest Policy 1991.

In the absence of an agreed national definition of illegality, commercial timber harvesting activities in PNG are being judged based on Greenpeace's definition, which has been adopted by the local ENGOs. Under Greenpeace's definition, commercial timber harvesting activities are not legal unless the operations have met all laws and regulations and international treaties including labour rights, indigenous people's rights and the payment of all taxes and fees. This is a much broader definition and encompasses areas of responsibility, which are beyond the mandate of the PNGFA. Based on this definition, it would be fair to conclude that commercial timber harvesting activities in almost all timber producing countries in the world—both developed and developing—can be said to be illegal in one aspect or the other. This being the case, is there any justification in singling out PNG?