

Furniture production in Indonesia for domestic market. Photo: T. Yanuariadi



POLICY BRIEF

Encouraging greater domestic use of legal and sustainable tropical wood

Lessons from experiences in Southeast Asia



Furniture fair aimed at the domestic market in Viet Nam. Photo: T. Yanuariadi

The world needs materials that are low-carbon, reusable and recyclable and which can be disposed of without contributing to the planet's pollution burden. One such material—and arguably the best—is wood.¹

Harvested wood products can help mitigate climate change by storing carbon over the life of the product, which for some uses can be many decades, and by substituting for products (such as steel, concrete and fossil fuels) with higher carbon footprints. Wood is also reusable and recyclable, and it has a huge range of possible uses.

This policy brief identifies common elements and challenges in promoting sustainable wood use in Indonesia, Thailand and Viet Nam

But the role of wood in mitigating climate change and achieving a more circular bioeconomy will only be optimized if there is sustained demand for it and fair prices.

A major concern is the scale of illegal logging and timber theft. Interpol estimates the value of the illegal timber trade globally at a mammoth USD 152 billion; it attracts some of the world's biggest organized-crime groups and depresses prices, especially domestically. The international community has taken various steps in recent decades to curb illegal trade, with some success. But more needs to be done, and a major step forward will be the development of robust domestic markets for legally and sustainably produced timber in the tropics.

¹ The terms wood and timber are used synonymously here to encompass logs, sawnwood, plywood, veneer and other products made of wood, including furniture.

With funding from the Government of Japan, ITTO is supporting projects in three Southeast Asian countries (Indonesia, Thailand and Viet Nam) aimed at increasing domestic markets for legal and sustainable wood. Among other things, the projects are catalysing changes in national strategies and policy environments; educating consumers about the advantages of wood products over alternatives; enriching the range of wood products in domestic markets; and strengthening sustainable wood value chains to enhance their social, economic and environmental benefits.

This policy brief reports the main findings of a review of these projects designed to identify common elements and challenges in the promotion of sustainable wood use in the three countries. The study involved a crosscutting review of existing policies and regulations and prevailing practices in the forest industry and trade. It identified 17 lessons from the three countries, which may also be applicable in other tropical wood-producing countries. These are outlined below.

1. **Supply-side management** in the sourcing of legal and sustainably produced timber requires that major exporting countries have large, stable, domestic markets for such products. Setting up exclusively export-oriented production units as islands of legality and sustainability in otherwise undiscerning domestic markets may be useful in certain situations but is unlikely to lead to the sustainable management of the entire forest resource. In Indonesia, the sluggish development of domestic timber consumption is due at least in part to the failure of industry to recognize the changing tastes and preferences of consumers; the limited availability of choices; and widespread market penetration by substitute products.

The situation is similar in Thailand and Viet Nam. Thus, efforts are needed to expand and develop domestic timber sectors to suit the changing needs and tastes of local consumers while also insisting on legal and sustainable sourcing. Sustained efforts are needed by industry bodies, suitably backed by government, to encourage the development of domestic markets for legal and sustainable timber.

A clear incentive for increasing domestic wood use is the potential to attract multilateral finance through the Green Climate Fund

2. **Demand-side management** in importing countries can be an important means for encouraging reforms in timber-exporting countries. Efforts are needed, therefore, to persuade governments worldwide to put in place the mechanisms needed to ensure imports of only legal timber (and products made from such timber) from sustainably managed forests and plantations. Effective detection is needed to identify imports of illegally produced timber at customs using technologies and processes that do not cause undue inconvenience or expense for traders of legal and sustainably produced goods. Mechanisms such as ecolabelling, the tracking of timber to the source, and certification may be required, but only after enabling exporting countries to put these in place through technology transfer, financial support and capacity building. Care is needed to ensure that any trade restrictions are in line with World Trade Organization regulations.

3. **Evolving national strategies.** Indonesia has established a council charged with developing a national strategy for promoting a sustainable and resilient domestic wood market. Thailand and Viet Nam would also benefit from strategies to develop their domestic markets, although creating a national council for this purpose may be unnecessary—progress could be made by the respective forestry agencies, working with the apex bodies of wood industry organizations, for example under memoranda of understanding. A clear incentive for increasing domestic wood use is the potential to attract multilateral finance through the Green Climate Fund, given the carbon-storage potential of wood. The ministries in charge of climate-change negotiations in Indonesia, Thailand, Viet Nam and other developing countries need to be aware of this potential.
4. **Wood use in construction.** Construction for commercial and residential purposes has enormous potential for increasing wood consumption in many tropical countries: for example, building with wood can increase safety in earthquake-prone areas, such as in some parts of Southeast Asia. Indonesia, Thailand and Viet Nam are all working on policy interventions to better exploit the potential of wood in the construction sector. For their efforts to succeed, however, certain real and perceived drawbacks need to be addressed through research—these include the flammability of wood (discussed below); height limits for wood-constructed buildings; and the relatively short life span of wooden buildings. Research and development in these areas would help address the reluctance of banks to lend for wood-building construction and of insurers to cover wooden buildings.



Stacks of sawnwood for the domestic market in a factory in Viet Nam. *Photo: T. Yanuariadi*



Teak logs in the Kroweng Krawia plantation, Kanchanaburi Province of Thailand, destined for the domestic market. *Photo: T. Yanuariadi*

5. **Reducing the flammability of wooden buildings** to acceptable levels—at par with buildings that use other materials—will require both technological solutions and the upgrading of municipal fire-safety measures, as has been done (for example) in Finland and Japan. The speed at which such improvements are made can be increased through technological collaboration among countries, as provided for in the technology framework referred to in Article 10.4 of the Paris Agreement on climate change.

The three countries are all working on policies to better exploit the potential of wood in construction

6. **Setting standards.** A fundamental aspect of promoting greater wood use in buildings is the setting of standards, such as those pertaining to the drying and pretreatment of logs before processing. This is a substantial task in the tropics because tropical timber comprises hundreds of species. Such standards would address concerns regarding strength and durability and facilitate insurance at reasonable premiums. In Indonesia, the Ministry of Industry is working on a standardization process with the Ministry of Public Works and Public Housing. ITTO could facilitate similar processes in Thailand, Viet Nam and other tropical countries, including in cooperation with academic and other institutions with experience in wood standardization processes elsewhere.
7. **International cooperation on low-cost wood-based housing.** The use of wood in buildings entails the long-term post-harvest storage of carbon and therefore has significant potential for climate-change mitigation. This presents an opportunity for voluntary cooperation under Article 6.2 of the

Paris Agreement, according to which developed countries with advanced wood-use technologies and experience in the construction of wooden buildings (e.g. Finland and Japan) could provide technological and financial assistance to enable large-scale housing in developing countries in exchange for internationally transferred mitigation outcomes (ITMOs), which, in turn, may be used to achieve the NDC targets of those countries. The rules and procedures for implementing this provision are yet to be fully developed and agreed, however.

8. **Carbon credits for private-sector participants.** The climate-change mitigation value inherent in long-term carbon storage is also recognized in Article 6.4 of the Paris Agreement (should the rules and procedures of this provision be fully developed). The mechanism will enable companies working in a jurisdiction and causing measurable climate-change mitigation by way of long-term storage of carbon in wooden housing to obtain carbon credits for this, which could then be sold to other companies or to countries for meeting greenhouse-gas emission reduction obligations. This could catalyse huge private investments in wooden housing and other real estate with enhanced wood use, while also helping address housing shortages.
9. **Support for smallholder forest plantation owners to add value.** Many tree-growers in the tropics are smallholders, most of whom would benefit from the closer proximity of first-stage value-adding to their forests. In Indonesia, the Ministry of Environment and Forests is contemplating providing incentives for investment in collective wood-processing facilities. This would help reduce the cost of log transport, increase the access of local communities (including growers) to wood waste for household energy use, and save time that could be used

more productively. It is a work-in-progress in Indonesia: when the planned incentives take more shape and are put into operation, the outcomes will be useful for informing policies in Thailand, Viet Nam and other countries where tree-growers would benefit from similar support from the state.

10. **Green public procurement policies.** The public sector is often one of the largest procurers of furniture and other wood products, and therefore its purchasing decisions can have huge impacts on the market. Countries could enact green public procurement laws and policies that require their governments and other publicly funded organizations to purchase wood products made exclusively with legal and sustainably produced timber. Indonesia already has a green public procurement policy requiring that purchased goods have the least negative environmental impact of the available options. Similar policies could be developed in Thailand, Viet Nam and elsewhere.
11. **Effective and easy-to-implement regulations.** Existing regulations in Indonesia are enabling steady progress towards sustainable wood use, and similar regulations may prove useful in Thailand, Viet Nam and elsewhere, suitably adapted to national circumstances. For example, the aim of Indonesian Law No. 11 (2020) is to streamline regulations and simplify the licensing process to improve the ease of doing business in the country and thereby attract more investment and create jobs. The law enables authorities to create new economic zones, provide new incentives in existing zones, simplify land acquisition processes, and provide enhanced government support for socially and economically desirable businesses that may carry higher risks. The law also simplifies environmental assessment requirements and integrates environmental permits and business licences. Another regulation, Regulation No. 8 (2021) of the Indonesian Ministry of Environment and Forestry, relates to timber certification, notification of legality and sustainability, and disposal of forest waste. It ensures community participation, sets criteria for business activities allowed in protected forests, and provides easy procedures for the application, extension or restriction of business permits for forest use and penalties for excessive forest exploitation. Thus, the framework of policies and legislation empowers Indonesian authorities to move rapidly in desired directions, as decided by the government of the day. A comprehensive review of this framework would provide insights for other countries interested in developing similar policies, laws and regulations.
12. **Timber legality assurance systems.** Voluntary partnership agreements (VPAs) under the European Union's Forest Law Enforcement, Governance and Trade (FLEGT) Regulation (2005) are operational in Indonesia and Viet Nam and in the early

stages of development in Thailand. Timber legality verification systems (TLASs) form the basis of VPAs and must be adopted by all businesses in a timber supply chain. Compliance under a TLAS is verified through certificates issued to involved businesses by the appropriate authorities using criteria developed for each business type; these certificates are subject to independent audits. Indonesia's TLAS, known as SVLK, sets legality standards, lays down verification procedures, keeps watch over supply chains, and awards certificates. A TLAS is also in operation in Viet Nam. Thailand and other countries may benefit by adopting appropriate parts of the Indonesian and Vietnamese systems, after due refinement to suit national circumstances.

Most smallholder tree-growers would benefit from the closer proximity of first-stage value adding to their forests

13. **Supplier declarations of conformity.** An important part of Indonesia's SVLK is the "supplier's declaration of conformity" (SDC)—a self-declaration made by a supplier to enable products and the recipients of those products to enter legal supply chains under certain conditions. This is available only to small and medium-sized enterprises (SMEs) and to smallholders dealing exclusively with low-risk timber obtained from privately owned forests and certified plantations or from state-owned companies. The approach could be seen as a dilution of the legality standards for the granting of certificates, but it is an unavoidable compromise to facilitate the involvement of SMEs and smallholders in the SVLK. If the SDC system is confined to its intended use and subject to ongoing scrutiny, its potential to cause extensive damage to the SVLK is relatively low. Thailand, Viet Nam and other countries may also find it to be a necessary approach in the early stages of setting up of their TLASs.
14. **Industry hubs.** "Wood villages"—hubs in which multiple wood processors operate near each other—constitute an innovative approach in Viet Nam to promote small-scale wood-based industries and generate employment in rural areas. They make it easier for companies to organize raw-material supplies, reduce transportation costs for both inputs and outputs, bring together a workforce with the required skills, and enable efficient capacity building. Banks also find it easier to provide loans to units in wood villages. Another advantage is that staff of forestry agencies are better able to prevent the use of illegal timber in the manufacture of final products. Thailand, Indonesia and other countries could benefit from creating similar hubs in their rural hinterlands.

ITTO could facilitate efforts to build forest-crime detection capacity

- Data.** Open access to high-quality, reliable data is an essential requirement for the development of legal and sustainable forest sectors. Viet Nam is developing an online database on all aspects of the country's wood industry, such as tree plantations of all species; the volume of wood extracted in the past and projected to be available in the future; timber imports; wood-processing units of all sizes and descriptions; the wood products manufactured; skilled and unskilled workers employed; wood villages; domestic sales; exports; and other information relevant to the industry. Similar databases could usefully be established in Indonesia, Thailand and other countries with significant wood industries.
- Capacity building.** The use of forensic evidence in forest-crime detection is little used in Indonesia, Thailand and Viet Nam and should be increased. The work to build capacity carried out as part of the ITTO–CITES (Convention on International Trade in

Endangered Species of Wild Fauna and Flora) programme and the follow-up CITES Tree Species Programme provides a good model in this regard. ITTO could facilitate efforts in its producer member countries to build this highly specialized capacity, although it would require significant financial resources. Most ITTO consumer member countries have laws in place to avoid the entry of illegal and unsustainably harvested forest products in their jurisdictions, and it would seem to be in their best interests to help fund the development of capacity in this field in producer member countries with significant timber exports.

- Awareness campaigns.** Prolonged and imaginative public-awareness campaigns, directed towards children and young adults, are needed in both producer and consumer countries to emphasize the importance of legal and sustainably harvested timber. Young people are often able to influence the purchasing decisions of their parents and therefore informing them about ecolabels and timber legality certificates could have a powerful effect on the development of environmentally friendly domestic markets.



Processing acacia sawnwood in Viet Nam. Photo: ITTO project PD 815/19 (1)

Future actions

The findings of the review include the following proposed actions that constitute a possible approach for countries interested in further developing their domestic markets for legal and sustainably produced timber:

- 1) strengthening supply-side management, with producer countries encouraging the development of domestic markets for legal and sustainable timber;
- 2) improving demand-side management, with importing countries putting in place the technologies and processes necessary to reduce the risk of illegal timber imports;
- 3) developing national strategies in producer countries to encourage domestic markets;
- 4) making concerted efforts to shift the building-construction sector towards increased wood use;
- 5) technology transfer to reduce the flammability of wooden buildings;
- 6) developing standards for wood use in building construction;
- 7) increasing international cooperation, especially through technological and financial assistance, to enable producer countries to increase low-cost wood-based housing and to tap into the ITMO mechanism;
- 8) encouraging private-sector actors to obtain and trade carbon credits for the climate-change-mitigation impacts of wooden buildings;
- 9) enabling smallholder forest plantation owners to tap into the benefits of first-stage value adding;
- 10) putting in place strong public procurement policies that require governments and public agencies to purchase legal and sustainably produced timber, especially that produced domestically;
- 11) ensuring a simple, clear, easy-to-operationalize legislative environment to enable the wood sector to flourish, based on legal and sustainable timber;
- 12) developing TLASs to provide assurance of timber legality;
- 13) facilitating the involvement of smallholders in TLASs, possibly through the use of SDCs;
- 14) developing hubs to better enable the development of wood industries based on legal and sustainable timber via the benefits of scale and co-location;
- 15) providing open access to high-quality forest-related data;
- 16) working collaboratively, including with international organizations such as ITTO and CITES, to increase capacity in the use of forensic evidence in forest-crime detection; and
- 17) conducting public-awareness campaigns, potentially in collaboration with international organizations and other countries, on the benefits of preferencing legal and sustainable timber in consumption choices.

Full reports of the ongoing projects reviewed for this policy brief (PD 922/21 Rev.1 (I) “Promotion of Sustainable Domestic Wood Consumption in Vietnam”; PD 926/22 Rev.1 (I) “Promotion of Sustainable Domestic Consumption of Wood Products in Thailand”; and PD 928/22 Rev.1 (I) “Development of Sustainable Domestic Market for Wood Products (Indonesia)”) will be available through the Project Search feature on ITTO’s website as the projects are completed in 2024–25. The full report on which this policy brief is based (Sustainable Wood Use in Selected Countries of Southeast Asia Region—PP-A/53-323H) will also be available on the ITTO website. ITTO with continuing support from the Government of Japan is in the process of extending the lessons learned in the three countries to others, with new sustainable wood utilization projects under development in Malaysia and India in early 2024.



Photo: N. Bhumpakphan



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