TFU

Promoting the conservation and sustainable development of tropical forests

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Mainstreaming sustainability in tropical forests

Examining the contents of this issue of Tropical Forest Update, a reader might struggle to identify a unifying theme given the wide range of topics, from ITTO's global advocacy to microcredit schemes in Cambodia to the emergence of Viet Nam's booming forest sector. In fact, the wide variety of subjects demonstrates how sustainable forest management (SFM) is permeating the whole forest sector. Slowly but steadily, an approach that delivers benefits simultaneously for society, the economy and the environment is becoming mainstream—the status that SFM must attain to be effective.

To become *truly* mainstream, SFM must become the norm for all stakeholders involved in the management of tropical forests. These include communities reliant on forest ecosystem services, commercial actors exploiting forest resources, conservationists focused on the role of forests in protecting biodiversity and the climate, and government and non-government actors seeking progress toward achieving the Sustainable Development Goals.

SFM needs to be embedded in the thinking, discussions, plans and actions in and around tropical forests at all scales, from the global to the local. And it needs to remain there for the long term, if tropical forests are to unfold their vast potential to act as nature-based solutions to some of the most pressing issues of our time.

TFU 33 3/4 serves as a manifesto to this by demonstrating how ITTO, its partners and other actors are promoting and implementing SFM in ways that contribute to its mainstreaming across the tropics and beyond.

For example, the article starting on p.3 provides an overview of ITTO's multifaceted global advocacy for SFM and trade in sustainable timber and other forest products throughout 2024. From the annual COP summits to regional policy fora, various initiatives demonstrate the breadth and intensity of the Organization's efforts to build and maintain political momentum,

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Cover image: Bird's-eye view of lush forests in Chong Luong's Community Forestry situated in Pou Treng village, Dak Dam commune, O' Raing district, Mondulkiri province—showcasing the rich canopy and natural beauty of one of Cambodia's most biodiverse landscapes. Photo: Chhin Navin

generate badly needed investment, and spread knowledge for the conservation and sustainable use of tropical forests.

While these gatherings of policymakers and technical experts are hugely important, the declarations, agreements and frameworks generated must be followed up by action on the ground. That is why ITTO and its partners support field projects that demonstrate the potential of SFM in supporting economic and social development so that they can be scaled up nationally and internationally—thus cementing SFM's place in the mainstream.

The article by Yongyut Trisurat, Tetra Yanuariadi and P.K. Thulasidas (p. 7), for instance, describes the progress of a flagship ITTO project that aims to advance the sustainable production of teak, one of the world's most valuable timber species. Rather than extracting teak from natural forests, the project—now in its second phase—promotes its cultivation in smallholder plantations in southeast Asia and Africa while also exploring techniques to improve its quality.

SFM isn't restricted to high-value commercial timber species or cultivation in plantations. Natalia Chacón describes how an ITTO-funded project has identified new products and strategies to help communities in Costa Rica make more effective use of sustainably managed secondary forest (p. 9).

Focusing on community forests, Hort Sothea, Pang Phanit, Chhin Navin, and Soo Min Lee explain in an article on p. 12 how another ITTO project successfully established microcredit schemes to boost livelihoods and strengthen community-based forest management and protection in Cambodia.

ITTO also develops technical guidance and provides training to promote best practices and new technologies to maximize the benefits from SFM initiatives. A prime example are the Organization's criteria and indicators (C&I), an important tool for monitoring progress toward SFM. The article by Denny Dipchansingh, Steve Johnson and Jurgen Blaser on p.15 presents findings from an ITTO workshop on the application of C&I in Trinidad and Tobago, whose tropical forests are vulnerable to climate change, increased pressure on land, soil and water, and the continuous loss of biodiversity.

Mainstreaming SFM can help countries secure a steady supply of forest products for both domestic and international markets. Ngo Sy Hoai, in TFU's regular markets feature on p. 18, describes how Viet Nam has made a "great leap" from the over-exploitation of its nature forest estate to a thriving wood industry based on timber from plantations.

As more and more countries recognize the value of SFM, the outlook for the world's tropical forests will certainly appear brighter. Investments in SFM, however, remain far below what is required to realize its potential, and tropical forests continue to be lost. ITTO intends to remain at the forefront of efforts to accelerate the shift to more sustainable and resilient forest industries to ensure that SFM's entry into the mainstream will be complete and lasting.

Sustainable advocacy: how ITTO beat the drum for forests in 2024

From shaping global policy to brainstorming regional solutions, ITTO has kept tropical forests high on the international climate and biodiversity agenda

by ITTO Secretariat

(itto@itto.int)

Sustainability call: ITTO Executive Director Sheam Satkuru delivers her keynote address on the opening day of the International Conference on Sustainable Management of Tropical Forests in March 2024. *Photo: R. Carrillo/ITTO*

From Lima to Macao and Nairobi to Stockholm, ITTO officials have endeavoured in 2024 to put tropical forests and their benefits for people and nature in the focus of international events shaping sustainable development.

Across these high-level gatherings, the Organization has sought to communicate how sustainable forest management (SFM)—whether in natural or plantation forests—can support rural livelihoods, drive national-level economic growth, and provide cost-effective solutions to global problems.

Staff members have also presented the latest iterations of the Organization's broad portfolio of policy and project work, including the emergence of promising new technologies and approaches that can magnify the contribution of SFM to human well-being and environmental stability.

This article highlights some of ITTO's high-level interventions during the year. More details of ITTO's global advocacy are available on the Organization's website.[1]

UN Environment Assembly

In February 2024, ITTO contributed to the sixth session of the United Nations Environment Assembly (UNEA-6), the world's top decision-making body on the environment. Held in Nairobi, Kenya, the session focused on how multilateral action can help tackle the triple planetary crisis of climate change, nature loss, and pollution and waste.

During a UNEA-6 side-event convened by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), ITTO stressed how cooperation between the two organizations has greatly assisted countries in implementing CITES listings of tropical tree species such as mahogany.

Key achievements of the cooperation include the development of resource inventories, cost-effective regulatory systems, guidelines and case studies on non-detriment findings and establishment of export quotas, and capacity building in countries across the tropics.

"As more tree species are added to the CITES lists, the need for this work will only grow. ITTO looks forward to continuing its fruitful collaboration with CITES into the future, with the kind support of donors," ITTO Executive Director Sheam Satkuru said in an address to the side-event.

In March, Ms Satkuru attended the International Conference on Sustainable Management of Tropical Forests, a two-day event held in Malaysia that explored the nexus between forestry and sustainable development.

In a keynote address, Ms Satkuru said the sustainable harvesting, processing, and trade of tropical timber and other forest products serves many purposes, such as supplying consumers worldwide, contributing to local and national economies and enhancing the value of tropical forests—key factors in reducing forest conversion to other economic land uses.

"When sustainably managed, tropical forests are healthy, productive, and renewable ecosystems and contribute

[1] www.itto.int/news

Carbon chic: Sustainably produced wood used for long-life purposes is a carbon sink. *Photo: E. Macarios*

nature-based solutions to global challenges," she said. Moreover, SFM is essential for achieving the 2030 Agenda for Sustainable Development and most of the Sustainable Development Goals (SDGs).

Global policy dialogue

Later in March, ITTO participated in a global policy dialogue hosted by the Food and Agriculture Organization of the United Nations (FAO) and the International Union of Forest Research Organizations (IUFRO).

During the event, held in conjunction with the International Day of Forests, Ms Satkuru said there are opportunities to work with countries to further develop sustainable wood supply chains in the tropics in pursuit of society-wide carbon neutrality.

"Tropical wood is an environmentally friendly and carbon-neutral material provided that safeguards for the implementation of sustainable forest management are firmly in place, ensuring sustainable sources, legality, and responsible production," said Ms Satkuru, who participated remotely.

"Sustainably produced wood used for long-life purposes is a carbon sink, and using wood in construction reduces the carbon footprint of buildings," she stated.[2]

At the 19th session of the UN Forum on Forests, held in New York in May 2024, ITTO pressed for action and investment to strengthen legal and sustainable supply chains and integrated fire management, as well as intensified international cooperation to realize the huge potential of tropical forests to address global challenges. An article describing ITTO activities at the event was published in Issue 33 No.1 of the Tropical Forest Update.[2]

[2] Available at: www.into.int/tfu

Building sustainable timber supply chains again figured prominently during the twentieth meeting of the Parties to the Congo Basin Forest Partnership in June. At an ITTO-convened workshop during the meeting in Kinshasa, Democratic Republic of the Congo, ITTO called for more capacity building and training to ensure that the region's vital forest sector and timber industry meet international trade standards.

Meeting sustainability requirements, such as those stipulated in the European Union Deforestation Regulation or for CITES-listed tree species, is a challenge, especially for small-scale operators, Ms Satkuru told workshop participants.

The parties later adopted recommendations arising from the workshop, including a call to urgently enhance capacity building and training for forestry officials and the private sector on legal and sustainable supply chains and recent CITES listings.

IUFRO World Congress

Later in June, at the IUFRO World Congress in Stockholm, Sweden, ITTO took part in a string of events. During a session on improving exchanges between business and science, ITTO and other experts said intensifying those interactions and securing higher investment were key to generating innovative solutions to global challenges, including achieving the SDGs.

In a presentation on the Innovation Stage platform of the congress, ITTO said advances in areas from timber tracking to policy development were central to advancing sustainable forestry in the tropics and magnifying the sector's contribution to the SDGs.

Other innovations harnessing the latest science include improved forest management (see also the article on p.7), forest landscape restoration, and the sustainable use of a vast and growing range of forest products.

During the Green Jobs Arena segment of the congress,

Source of livelihood: Sorting sawnwood at a yard in the Democratic Republic of the Congo. *Photo: Li Yinfeng*

ITTO highlighted the need for new thinking in business and education to realize the potential of tropical forestry to generate green jobs, especially for young people, and advance development.

ITTO and partners also provided updates during the congress on advances in the cultivation of teak, one of the world's most valuable timber species, including the exchange of knowledge, techniques and new technologies through the International Teak Information Network (TEAKNET). ITTO has funded an ongoing series of projects focused on accelerating sustainable teak production in Southeast Asia and other tropical regions.

In July, at FAO headquarters in Rome, Italy, the 27th Session of the Committee on Forestry (COFO 27) convened under the theme "Accelerating Forest Solutions through Innovation." One of 18 global case studies highlighted in FAO's flagship publication, *The State of the World's Forests 2024: Forest-sector innovations towards a more sustainable future*, features a smartphone-based app for estimating log volumes developed by an ITTO project in Guatemala.

On the sidelines of COFO 27, the 9th World Forestry Week featured events and exhibitions on a range of issues. ITTO convened the Tropical Forest Fire Expert Group to review policies, strategies and best practices for integrated landscape fire management while identifying key challenges and changing drivers of forest fires. The meeting also fostered knowledge-sharing and strengthened partnerships among fire management initiatives, including with the Global Fire Management Hub.

In her speech at the event "The Fire Hub: connecting the global fire community", ITTO Director of Forest Management Jennifer Conje said that "ITTO has long recognized that fire is a serious threat and concern in the tropics", noting that ITTO was the first international organization to develop an international set of tropical fire management guidelines back in 1997. She emphasized that ITTO's decades of experience on project-oriented work in fire management help underscore the importance of looking at the issue in a holistic manner, including understanding local drivers of fire, differences in fire behaviour specific to different ecosystems, local capacity for suppression, and need for prevention strategies. She advocated that "it is imperative to have the active participation of the community" and "to incorporate traditional/local knowledge in fire prediction and management strategies" pointing to an ITTO project example in Peru which built the capacities and coordination of local community leaders, Indigenous leaders, and local authorities in four different provinces.

Later in July, ITTO called on countries to take advantage of the synergies between SFM and afforestation and reforestation efforts to optimize the social and environmental benefits of tropical forests.

ITTO market analyst Li Qiang delivered this message at the 1st International Conference on Afforestation and Reforestation held in Brazzaville, the Republic of the Congo. The conference was convened to help plot a strategy for growing the world's forest area to increase carbon sequestration and conserve biodiversity while also supporting the production of forest goods and services.

Asia-Pacific events

In August, the ITTO Executive Director extolled tropical forestry's virtues in contributing to improved livelihoods and sustainable development at the Asia-Pacific Regional Conference on Forest Landscape Restoration in Sarawak, Malaysia.

Among these virtues is the generation of employment for local people, which also addresses such themes as governance, community empowerment, and technological innovation in relation to forest landscape restoration.

"Malaysia, for one, has tremendous experience in how much benefit can be derived from value-adding and processing of wood resources," Ms Satkuru said in a video address.

Later in August, ITTO shared in an Asia-Pacific Economic Cooperation (APEC) meeting that more investments and incentives are needed to unlock the potential of innovations in timber traceability, facilitate their uptake in the timber industry, and ensure that such systems are financially self-sustaining.

Timber tracing and wood identification technologies are enabling the development of robust tracking systems that can build trust across tropical timber supply chains. These systems provide reliable information on the flow of forest products and thereby support SFM, good forest governance and efficiency across supply chains, and ultimately help provide assurance of the legality and sustainability of tropical wood products.

At a workshop during a meeting of APEC's illegal logging expert group (known as EGILAT) in Lima, Peru, ITTO presented details of groundbreaking projects piloting and deploying advanced traceability systems in Brazil, Guatemala and Panama.

"This is an exciting field where technological innovations are leading to greatly enhanced transparency, legality assurance, and operational efficiency," ITTO Projects Manager Tetra Yanuariadi said.

Legality assurance was also a core concern at the Global Legal

Bridging continents: Plenary of the Global Legal and Sustainable Timber Forum, convened by ITTO and Macao's Commerce and Investment Promotion Institute, in September 2024. *Photo: GGSC, ITTO*

and Sustainable Timber Forum (GLSTF) held in September in the Macao Special Administrative Region, China. The GLSTF was established and first convened in 2023 by ITTO and Macao's Commerce and Investment Promotion Institute.

Participants endorsed an action framework launched during the forum covering eight areas—partnerships, information-sharing, market access, certification and traceability, technology, sustainable finance, industrial development and capacity building.

"The GLSTF is an important and innovative forum that, for the first time, is bringing together timber-sector actors across supply chains to support the implementation of sustainable forestry and the legal and sustainable use of timber," ITTO Director of Trade and Industry Nurudeen Iddrisu said. "We need now to strengthen its work with concrete action, as outlined in the framework."

Key UN conferences

ITTO's high-level advocacy continued unabated in the last third of the year with the UN Biodiversity Conference 2024 held in Cali, Colombia in October.

Ahead of the conference, ITTO participated in the Biodiversity Capacity-Building and Development Forum to explore how to strengthen country-level implementation of National Biodiversity Strategies and Action Plans to achieve the goals of the Kunming-Montreal Global Biodiversity Framework (GBF).

ITTO officials also co-organized a session on sustainable forest-based economies that addressed how innovative policies and sustainable commodity supply chains can balance the growing demand for food, fibre, and fuel with the need for forest conservation and biodiversity protection.

During the meeting, the Collaborative Partnership on Forests, of which ITTO is a member, released a new publication titled "The Forest Factor," which lays out how the sustainable management of forest biodiversity is essential to achieving the goals of the GBF.

In November, ITTO officials actively took part in numerous discussions during the UN Climate Change Conference (COP29) in Baku, Azerbaijan, emphasizing and exploring the critical role of tropical forests in addressing climate change.

For example, ITTO and partners hosted a day of discussion at the Forest Pavilion on topics such as the contribution of a sustainable forest-based bioeconomy to both climate mitigation and climate adaptation.

"Sustainable forest management is much more than sustainable timber harvesting. It creates a circular bioeconomy where markets—through sustainable use—become a driver for forest conservation," Ms Satkuru said in a video message.

ITTO also co-organized a seminar at the Japan Pavilion on SFM as a focus for nature-based solutions to climate change and the transition to carbon-neutral economies, as well as a side-event on innovations to maximize the contribution of tropical forests to climate change mitigation and adaptation.

More information on ITTO's activities at COP29 will be presented in the next edition of TFU, including a detailed account of the proceedings at the 60th session of the International Tropical Timber Council held in Yokohama, Japan in December 2024.

Advancing sustainable teak in the tropics

A well-attended workshop for an ITTO project explored how smallholders in Asia and Africa can produce higher quality teak timber

By Yongyut Trisurat[1], Tetra Yanuariadi[2] and P.K. Thulasidas[3]

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[3] ITTO Consultant

How to add value: ITTO Director of Trade and Industry Nurudeen Iddrisu (with microphone), confers with teakwood manufacturers in Phrae province, Thailand during the recent teak workshop. *Photo: PK Thulasidas*

Teak timber is in high demand among producers of furniture and many other wood products. Cultivating teak in smallholdings or community plots provides an opportunity to increase the sustainable supply of the timber, improve rural livelihoods in tropical countries, and ease pressure on their natural forests. But growing teak and other valuable species to a high standard requires resources, skills, and years of patience that many smallholders neither possess nor can afford.

Overcoming those barriers is the focus of an ongoing ITTO project. In its first phase, from 2019 to 2022, the project focused on conservation and management of teak forests in the Greater Mekong sub-region.[4] It demonstrated how legal and sustainable teak supply chains can be established and maintained through the engagement of local communities, smallholders and government actors.

The second phase of the project began in 2023 in six countries located within and beyond the Mekong—Cambodia, India, Indonesia, Thailand, and Viet Nam in the Asia-Pacific region and Togo in West Africa.[5] Both phases have been funded by the Government of Germany through its Federal Ministry of Food and Agriculture (BMEL). Four countries have begun implementing phase two, with India and Indonesia preparing to join them.

In September, the project staged its first regional workshop under the title "Enhancing smallholder plantations towards quality timber production of teak and other economic species and carbon neutrality in the tropics." Convened in Bangkok, Thailand, the workshop drew more than 60 experts from government, business and academia to identify innovative policies and practices that can be implemented to meet this challenge and discuss the project's initial progress.

[4] ITTO Project PP-A/54-331
[5] ITTO Project PP-A/54-331A

Time for teak

In his opening remarks, Nurudeen Iddrisu, ITTO Director of Trade and Industry, said the time is right to assist marginalized smallholders to improve the timber harvested from their plantations.

"Developing management models for smallholder value chains in plantations of teak and other economic species and providing supportive financial mechanisms will encourage smallholders to plan the sustainable management of their plantations," Dr Iddrisu said.

Stephen Wagner, representing BMEL, said phase two of the project will also address issues facing smallholders, such as value-adding and improved silvicultural practices, timber processing, and legality throughout supply chains.

Opening remarks also came from Bannarak Sermthong, Deputy Director General of Thailand's Royal Forest Department, and Kobsak Wanthongchai, the Dean of Forestry at Kasetsart University, the lead implementer of the project.

Policies and practices

Apart from assessing finance mechanisms, such as micro-lending and out-grower schemes aimed at encouraging the cultivation of teak and other valuable species on longer rotations, the workshop reviewed the status and management of smallholder and community-based plantations, and policy and institutional arrangements for legal and sustainable supply chains.

During technical sessions, representatives from Cambodia, the Lao People's Democratic Republic, Myanmar, Thailand, Togo and Viet Nam briefed participants on the status and progress of teak development in their countries, including efforts to raise the quality of timber derived from smallholdings

For example, Say Sinly of the Cambodian Forestry

Collective effort: More than 60 participants from the tropics gathered in the workshop to explore ways to assist smallholder produce high quality timber. *Photo: ITTO-BMEL project*

Administration reported that 12 teak demonstration plots showcasing improved silvicultural practices have been established in Kampong Chan province, including demonstration plots for other valuable species. Training materials are also being prepared.

Papers were also presented on opportunities to enhance value chains; innovations in silviculture and governance; use of unmanned aerial vehicles to assess above-ground biomass in plantations; monitoring and prevention of insect pests, such as the teak beehole borer; and testing of new teak provenances in Togo, where limited genetic diversity has held back productivity.

In a presentation on teak sector governance in Thailand, Michael Jenke of the Faculty of Forestry, Kasetsart University, said establishing associations could enable smallholders to access markets more easily, engage in collective bargaining, share knowledge, pool resources, and advocate for their interests politically.

Success also depends on reforms to reduce bureaucracy, and the establishment of pricing mechanisms based on transparent log grading standards to ensure fair compensation for high-quality timber, Dr Jenke said.

Challenging context

The technical sessions were bookended by keynote addresses that set the project in its wider context, and field trips that allowed participants to view the challenges facing teak producers at close quarters.

PK Thulasidas, a member of the TEAKNET Steering Committee, highlighted key findings of a recent global assessment of teak resources and markets.

For instance, given that some 94 percent of planted teak is less than 40 years old, there has been a significant increase in the supply of small diameter logs to international markets for use as multipurpose timber. At around 2 million m^3 per year, the supply of teak from plantations now far outweighs the less than 0.5 million m^3 harvested from natural forests.

ITTO Projects Manager Tetra Yanuariadi said the challenging global economic and political context—from the COVID-19 pandemic and armed conflicts to inflation and extreme weather—adds to the urgency of adopting nature-based solutions such as sustainable forest management. Dr Yanuariadi also explained critical issues surrounding timber market access and market requirements, including the European Union Deforestation Regulation.

Osamu Saito of the Institute for Global Environmental Strategies, Japan, presented the "Nature Futures Framework," a model for understanding the complex interactions between the natural world and human societies. Developed by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, the framework is intended as a tool to assess the intrinsic, cultural, and instrumental values of nature and help plot future scenarios for humanity.

In the field

The workshop concluded with a wide-ranging programme of field visits to Nan, Phrae and Lampang provinces in northern Thailand. Participants witnessed the challenges faced by smallholders growing teak; inspected newly established commercial plantations; visited a business making teak furniture for the domestic market; and learned about timber grading at a log yard of the Forest Industry Organization, Thailand's state-owned timber company.

Outputs from the workshop will be presented at the 5th World Teak Congress to be held in Kerala, India in 2025.

A full summary of the workshop is available in Volume 6(5) of the ITTO-BMEL Teak Newsletter at: https://teaknet.org/itto.php#newsletter

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Enhancing the value of secondary forest in Costa Rica

An ITTO-funded project identified new products and strategies to help communities make more effective use of sustainably managed secondary forest

by Natalia Chacón

Executive Director, Forestry, Wood and Industry Chamber of Costa Rica (info@camaraforestal.org)

Winning design: The ITTO project developed prototype designs using timber from secondary species, including this modular wall light. *Source: CFMI*

Costa Rica has a strong track record in forest and biodiversity conservation. The country also enjoys international recognition for its actions to reverse deforestation and combat climate change. Still, its forest sector faces challenges to improve its performance, including in the management and use of its extensive secondary forests. Addressing those challenges in order to maintain the supply of ecosystem services, boost sustainable production of forest products, and enhance the livelihoods of vulnerable communities was the focus of a recent project funded by ITTO.[1]

On completion in March 2024, the eight-month project had identified innovative added-value products with the potential to make more effective use of secondary forest resources, and recommended steps that stakeholders can take to realize the benefits. In particular, the project found that developing and marketing products such as handicrafts that meet growing demand for goods that fit a circular economy model are a promising option to add value to the use of sustainably managed secondary forests.

Costa Rica has approximately one million hectares of secondary forests. Secondary forests are not only valuable for timber production and the creation of rural employment, but also for the generation of ecosystem services including greenhouse gas sequestration, water and soil protection, and biodiversity conservation. However, many of these forests suffer degradation because of unsustainable management, and face conversion to other uses perceived as more economically productive. With most of this land belonging to smallholders, effective action to improve the management of secondary forests and their resources can be a lever to boost local economies and increase the resilience of rural communities.

The ITTO project was implemented in the North Huetar and Chorotega regions of Costa Rica. These regions host many of the country's secondary forests and forest industries. They also display high rates of social vulnerability, underlining the urgency of realizing more value from local forest resources.

Establishing a baseline

To gauge the potential of secondary forest ecosystems, the project carried out structural and floristic surveys in a total of 104 plots across the country, as well as by consulting other sources of information. This research provided an in-depth understanding of the characteristics and status of Costa Rica's secondary forests and helped identify the species with the greatest potential and availability for the supply of raw materials for innovative products (Table 1).

Such analysis is also essential to understand forest structure and dynamics, as well as to identify key species that should be subject to conservation or priority management.

To identify elements of a possible strategy to realize the value of sustainably managed secondary forests, the project also undertook an analysis of the existing legal and regulatory framework and current management practices. Using a participatory approach, the project gathered input from multiple stakeholders, including local communities.

On the positive side, Costa Rica has established through its REDD+ strategy a spatial tracking system to monitor changes in forest cover over time. This is complemented by a forest cover monitoring system that provides valuable

[1] ITTO Project PP-A/59-353 "Enhancing the value of secondary natural forests through their sustainable use, generating rural employment in a post-Covid context".

Table 1: Species selected by productive landscape units *(unidades de paisaje productivo (UPP)* with the highest abundance-dominance index

Scientific name	Vernacular name	Abundance-dominance index
UPP1 Pacífico Norte		
Spondias mombin	Jobo	20.9%
Guazuma ulmifolia	Guácimo	20.5%
Cordia alliodora	Laurel	10.8%
UPP2 Pacífico Norte		
Guazuma ulmifolia	Guácimo	28.8%
Bursera simaruba	Jiñocuabe	28.6%
Cordia alliodora	Laurel	26.0%
UPP3 Upala		
Tetragastris panamensis	Canfín	14.0%
Enterolobium scomburgkii	Guanacaste macho	9.7%
Dendropanax arboreus	Fosforillo	9.6%
UPP4 Zona Norte Subsector Cutris		
Pentaclethra macroloba	Gavilán	34.1%
Dialium guianense	Tamarindo	14.7%

information for decision-making on the use and conservation of these forests.

Based on geospatial and regulatory analysis, the project has proposed specific procedures for the effective management of smaller scale secondary forest areas to maximize their productive and ecological value. This would be supported by a training programme on sustainable forest management aimed at different levels, from small landowners to technicians and decision-makers. These proposals consider intergenerational, intercultural and gender participation, recognizing the importance of involving diverse stakeholders in the process of conserving and harvesting secondary forests. This helps to ensure that benefits and responsibilities are equitably distributed among the population.

While current regulations appear adequate, certain decrees need to be modified to eliminate legal loopholes. There is also a need for greater integration between the institutions responsible for rural development and landscape management. It is recommended that applied research and training in secondary forest management be strengthened.

Another finding reflects the fragmented nature of secondary forests in Costa Rica, with forested areas measuring about 30 ha on average. To improve the efficiency and cost-effectiveness of forest and landscape monitoring and management, the project recommended consolidating these areas and managing them collectively, for instance through owners' associations. To this end, the project identified four potential productive landscape units (*unidades de paisaje productivo-UPP*) in the study area. Adoption of these units would help to facilitate the design of effective and focused future interventions, optimize available resources, and improve long-term outcomes.

The specific results and recommendations were submitted to government decision-makers and were positively received.

Sustainable design: The prototype hammock designed at the School of Woodcarving and Carpentry in Berchtesgaden, Germany. S*ource: CFMI*

Picking winners

Through the floristic survey, the project identified native tree species with high potential for the development of value-added products and that could be harvested sustainably from secondary forests (Table 1). Subsequently, the project developed prototypes of products made from the wood of the selected species, also considering factors such as physical-mechanical properties, density (wood workability) and experience in the commercial use of the species.

Several prototypes—a modular wall light, a lamp, a dough proofer, and a workspace—resulted from an international design competition organized with partners including the Costa Rican College of Architects (*Colegio de Arquitectos de Costa Rica*), the Federated College of Engineers and Architects (*Colegio Federado de Ingenieros y Arquitectos*), and the Costa Rican Timber Institute (*Instituto Costarricense de la Madera*). Two additional prototypes—a hammock and a set of coasters—resulted from a collaboration with the School of Woodcarving and Carpentry (*Berufsfachschule für Holzschnitzerei und Schreinerei*) in Berchtesgaden,

Neglected resource: Participants in a workshop on best practices in sustainable forest management. *Source: CFMI*

Germany. Further prototypes included a beach backrest and a wooden and metal chair.

Based on the prototypes, prospective market surveys were carried out through an analysis of relevant publicly available information at both the national and international levels. The surveys identified handicrafts as a significant market segment, particularly given its overlap with tourism, an important economic sector in Costa Rica.

Finally, the project recommended the incorporation into a future strategy of design elements, marketing strategies and channels, and value chains for potential products manufactured from secondary forest timber, including aspects related to access to forest resource management.

The project also developed guidelines for the formulation of an effective marketing strategy adapted to the needs and objectives of the sale of goods produced from secondary forest timber. Formulating such a strategy involves a thorough analysis of the business environment, identification of relevant market segments, in-depth knowledge of customers, evaluation of the competition, and definition of business objectives and goals.

Opportunities for women and youth

In addition, the project identified options including training programmes to integrate women and young people from local communities into the different processes of the value chain, from forest management to the design, manufacture, marketing and sale of products. Taking up these options can promote equitable participation and generate new rural employment opportunities.

Steps have been taken to ensure the sustainability of the project's achievements, such as the creation of databases on secondary forests and of a Forest Information and Monitoring Centre at the Wood and Industry Chamber of Costa Rica, and the training of personnel in data management and analysis. These databases have been made available to other interested institutions, expanding their usefulness and scope. In addition, cooperation agreements have been formalized with governmental and business entities to promote and support the results.

A second-phase project focused on implementing a marketing and commercialization strategy would further consolidate progress. This would ensure that the conclusions and tools from the first phase translate into long-term sustainable impacts, strengthening the development of the forestry sector and its integration into national and international markets.

Project outputs can be found by inserting the project code PP-A/59-353 into the ITTO project search function at www.itto.int/project_search.

Project PP-A/59-353 was made possible by funding from the Governement of Japan.

Tapping microcredit to strengthen community forests in Cambodia

Microcredit schemes are boosting livelihoods and generating revenue under an ITTO project that explores how to incentivize the sustainable management of community forests

by Hort Sothea,[1] Pang Phanit,[2] Chhin Navin,[3] and Soo Min Lee[4]

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Extending credit: Signing ceremony to establish a microcredit scheme for community forestry members in Phnom Totueng, Kratie Province, Cambodia. *Photo: Pang Phanit*

Cambodia's community forestry programme, initiated in 1994, has become an important part of the Southeast Asian country's efforts to reduce forest loss and alleviate poverty. Supported by government policy, a conducive legal framework and the issuance of guidelines, the National Forest Programme has targeted the creation of 1,000 officially recognized community forests by 2029, with 648 already established by 2023.

An ongoing ITTO project in Cambodia[1] provides support for a central aspect of the government programme: improving the livelihoods of people engaged in community-based forest management and protection. The project, implemented in Cambodia's Kratie and Mondulkiri provinces, uses microcredit schemes and other measures to provide incentives to members of four communities for the sustainable management and conservation of their forest resources.

Two years after their inception, the microcredit schemes, which represent a model that could be extended to other community forests, are generating revenue to increase the capital base and fund community activities, including forest patrols.

The ITTO project team, after a careful assessment process, had selected the community forests that received financial support to implement a microcredit scheme. Selection criteria included previous community forest protection activities, willingness to use microcredit for the collective benefit of its members (determined in dialogue with Community Forest Management Committees, or CFMCs), support from local authorities, and the presence of active CFMC members.

The project team selected three community forests in Kratie province (O' Dar, Phnom Totueng and Kantout) and one in Mondulkiri Province (Ping Prong Klangpestho). In May 2022, the project signed agreements with the management teams elected from the CFMCs of the chosen community forests.

[1] Project PD 836/17 Rev.2 (F)

Key parameters

The project team and CFMCs had discussed key parameters in operating the microcredit schemes, including interest rates to be applied on loans, livelihood options to be supported, sharing of benefits and management of risk.

These discussions confirmed the desirability of setting rates lower than the 2% or more per month offered by commercial banks and of ensuring that community forest group members determine the amount of principal. It was agreed that loans should be used in a manner that protects community forests and helps improve livelihoods. Loans would be made, for example, to purchase agricultural inputs (e.g. fertilizer, pesticides or seeds), provide start-up capital for a family business, or invest in a business that is not detrimental to forest and wildlife conservation. Loans would not be provided for items such as the purchase of fixed assets such as real estate or mobile assets like vehicles used to transport logs from the forest.

While the ITTO project provides the initial capital for the microcredit schemes, additional capital could come from other sources, including contributions from members, interest payments on the loans made, or contributions from donors, non-governmental organizations, or the government—all of which could increase the flow of benefits to the community. To support the sustainable management of the schemes, the CFMCs suggested that income be allocated to the following uses:

- Provision of annual incentives for the management team
- Meeting administrative and other expenses
- Payments for community forest patrols or other development activities in the village
- Increasing the capital of the microcredit scheme

Risks to the sustainability of the microcredit schemes include unwillingness or inability of members to repay loans, death

of borrowers, and force majeure. It was suggested that applicants name three guarantors to ensure loans would be repaid, reducing the risk of default. In the event of the death of a borrower, the loan would be repaid by a relative. Borrowers would also be required to provide collateral (e.g. a copy of a motorcycle ID card with its number recorded on the loan agreement). Repayment could take various forms, including paying interest every month with the principal paid at the end of the borrowing period or paying both principal and interest in monthly instalments.

The project developed documents, including implementation agreements and management rules, to help the microcredit schemes realize their goals of improving local livelihoods, generating revenue to sustain their operations and protecting community forests. Forms were also designed for the management teams to use, including a loan application form, an individual loan tracking record, and a cash flow tracking record.

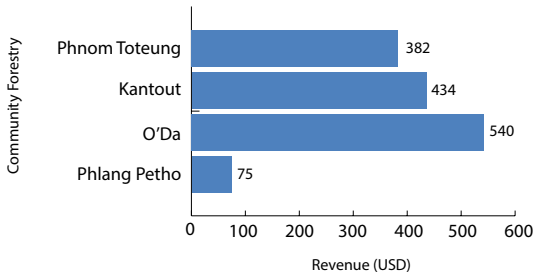
Governance of the schemes is democratic. Each scheme is managed by a three-member team, comprising a chairperson, a deputy chairperson in charge of planning and accounting, and a cashier to manage the budget. The team is responsible for preparing loan plans, monitoring and supporting their implementation, amending management rules where necessary, settling disputes and establishing interest rates. Management decisions need the approval of members during regular meetings.

Growing revenues

Since the signing of the microfinance scheme agreements with the four community forest groups, the project team has monitored their implementation through regular meetings, noting both the progress made and challenges encountered.

Progress has been substantial. Loans totaling about USD 4000 have been advanced to members of the four groups. So far, all loans have been repaid and interest payments have been made in full, helping generate estimated revenue of USD 1400 (Figure 1).

Figure 1: Revenue generated by microcredit schemes in four community forests in Kratie and Mondulkiri Provinces, Cambodia.



The revenue was used to increase the schemes' available capital (30%), support community forest patrols or other village development programmes (30%) and cover administrative and other expenses (10%). The remaining 30% is paid to the managers of the schemes as an incentive, provided they secure a repayment rate of more than 90%. The loans themselves have been used to support farming activities and the establishment of small businesses.

Setting the conditions: Discussion with members of a community forest management committee about the parameters and risks of a microcredit scheme. *Photo: Pang Phanit*

A promising model

Based on the first two years of operation, the project's microcredit schemes show promise as a means of improving the local livelihoods of community forest members, thus providing incentives for local communities to participate in protecting and conserving community forests. The schemes have also made progress in generating income to sustain and expand their own operations.

The capital provided through the ITTO project, however, is modest. This limits the number of community forestry members that are able to borrow at any one time. Further injections of capital could increase the schemes' impact and perhaps demonstrate to policymakers and other stakeholders in Cambodia and beyond that microcredit schemes can be a powerful tool in advancing the sustainable management of community forests.

Moving forward: Presentation by community forest groups in Kratie Province describing the implementation of their microcredit schemes

Photo: Chhin Navin

Project outputs can be found by inserting the project code PD852/17 rev.4 (F) into the ITTO project search function at www.itto.int/project_search

Project PD 836/17 Rev.2 (F) was made possible by funding from Japan, the Republic of Korea and the United States of America.

Indicating sustainability in the Caribbean

An expert workshop recognized the value of ITTO's criteria and indicators in strengthening the management of Trinidad and Tobago's extensive tropical forests

by Denny Dipchansingh,[1] Steve Johnson[2] and Jurgen Blaser[2]

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[2] ITTO consultant

Key ecosystem: Mangroves are among the tropical forests in Trinidad and Tobago whose management can be strengthened using criteria and indicators developed by ITTO. *Photo: Pond5/Altinosmanaj*

ITTO's criteria and indicators (C&I) are an important tool for monitoring progress towards sustainable forest management (SFM) in Trinidad and Tobago, whose tropical forests are increasingly vulnerable to climate change, increased pressure on land, soil and water, and the continuous loss of biodiversity.

This was among the conclusions of an ITTO workshop for forestry professionals in Trinidad and Tobago on the utility of C&I for the management of the Caribbean nation's forests. It was the first event of its kind since ITTO revised its C&I in 2016,[3] a hiatus prolonged by the COVID-19 pandemic.

Nearly 30 participants attended the national training workshop held on 27 February–1 March 2024 at a hotel in Port of Spain, Trinidad and Tobago's capital. The workshop with funded by the European Union, Japan and the United States, and hosted by the Forestry Division of the Ministry of Agriculture, Land and Fisheries (MALF).

The event was organized under ITTO's 2024–25 Biannual Work Programme and is part of the Organization's wide-ranging capacity-building activities in member countries in areas that also include forestry statistics and fire prevention and management.

Two senior consultants from ITTO—Juergen Blaser, Professor of Forest Management at Bern University of Applied Science, and Steve Johnson, who recently retired as ITTO Director of Trade and Industry—acted as facilitators.

In remarks at the start of the workshop, Denny Dipchansingh, Trinidad and Tobago's Conservator of Forests, highlighted the Forestry Division's management efforts, including reafforestation, species establishment, and collaboration with the oil and gas industry through conservation easements.

Avinash Singh, Minister of Agriculture, Land and Fisheries, referenced the country's Vision 2030 policy document and goals for SFM, and expressed optimism about the workshop's benefits.

Evolving ITTO tools

On the first day of the workshop, the facilitators presented an overview of ITTO's global role and activities, including the development of C&I, and of its collaboration with Trinidad and Tobago, a founding member of the Organization whose tropical forests cover some 500,000 ha—about half of the country's total land area.

ITTO pioneered the development of C&I in the early 1990s and has been a leader in promoting their use for monitoring and reporting on forests throughout the tropics. The Organization has now convened C&I workshops in 32 of its 37 producer countries.

ITTO's C&I list seven key factors, or criteria, influencing forests and their management: enabling conditions for SFM; extent and condition of forests; forest ecosystem health and resilience; forest production; forest biodiversity; soil and water protection; and economic, social and cultural aspects.

For each criterion, ITTO has developed between 5 and 12 indicators that can be used to assess and report on progress toward sustainability. In 2016, ITTO published an update to the C&I with new indicators addressing forest governance, sustainable wood fuel production, forest restoration, the global carbon cycle, and forests' role in climate change adaptation.

Both the criteria and the indicators are designed to be adaptable to the specific circumstances in any tropical setting,[4] from local to national to global, with ITTO providing guidance on their use via its publications as well as hands-on training.

Attendees also heard a presentation on the global significance of effective SFM practices, particularly in the face of rapid environmental change that requires new approaches and widened objectives in SFM.

Boots on the ground

The second day of the workshop took place entirely in the

[3] The most recent edition *of ITTO Criteria and Indicators for the Sustainable Management of Tropical Forests* (ITTO Policy Series No. 21) is available at www.itto.int/policy_papers/.

[4] While the C&I are globally applicable, ITTO has also developed *ITTO criteria and indicators for the sustainable management of African tropical forests*, available at www.itto.int/policy_papers/.

field, beginning at the Forestry Division tree nursery near the town of Saint Joseph to witness its role in providing quality seedlings for conservation projects. The group continued to Caroni Swamp, a vast mangrove ecosystem on the west coast of Trinidad, to understand its importance for coastal protection and biodiversity. Further south, at San Fernando Hill, they observed urban range management, showcasing natural landscapes in urban environments.

A visit to degraded natural forests several years after harvesting was then conducted at Cats Hill conservancy. At the same conservancy, participants analyzed teak plantations in the second rotation, including strip regeneration. Discussions focused on innovative techniques such as assisted natural regeneration and agroforestry.

The field trip provided valuable insights and highlighted the importance of collaboration in forest management and the utility of the ITTO C&I in assessing progress towards it.

In the field: Nearly 30 participants attended the ITTO workshop in Trinidad and Tobago on using criteria and indicators to monitor sustainable forest management. *Photo: Forestry Division, Trinidad and Tobago*

National application

On the last full day of the workshop, discussions highlighted the groundbreaking nature of ITTO guidelines for SFM,[5] which introduced concepts that were once considered controversial but have today become international best practice.

The ITTO C&I draw on these guidelines and are broadly used for measuring progress towards SFM, forest management certification, and practices like reduced impact logging and forest law enforcement and governance.

The participants then divided into three groups—named Balata, Carimbo and Marouba after local timber types—for discussions designed to deepen their understanding of the purpose and application of C&I, and to examine their use in the case of Trinidad and Tobago.

In the main session, the working groups evaluated the clarity and applicability of the criteria and their corresponding indicators, including the availability of suitable data at different spatial scales, and reported back to the plenary on their relevance and comprehensiveness in the national context.

A final working group session was dedicated to evaluating the country report for Trinidad and Tobago included in ITTO's *Status of Tropical Forest Management Report*.[6] The deliberations showed that most of the basic data and findings of the 2011 report were still valid, though an update of the report would need to include more recent data, policy and institutional changes.

Under threat: Forests in Trinidad and Tobago are vulnerable to climate change, biodiversity loss and increased pressure on land, soil and water. *Photo: Kyle Edghill*

Next steps

Overall, the workshop confirmed the continuing validity of the ITTO C&I to assess how a country is faring in the implementation of procedures designed to achieve SFM. Forest managers today must pay as much attention to addressing environmental challenges as to producing timber and planting trees. Participants also acknowledged how the forestry sector must work with other stakeholders in the decision-making process.

Through discussions of the criteria, the workshop helped participants to explore and find practical solutions to forest management challenges facing Trinidad and Tobago. The participants also gave wide support to the recommendation to adapt and utilize the ITTO C&I in future forest management activities—monitoring, assessing and reporting.

Another key conclusion was that the Forestry Division consider requesting ITTO assistance in preparing a project to assess the management of degraded natural forests, particularly of so-called "closed range forests", and their potential restoration and transformation into multipurpose production forests.

Participants also identified an urgent need to update Trinidad and Tobago's forest information base to remove an obstacle to policy reform and the financing of SFM. The last national forest inventory was carried out back in 1969.

ITTO assistance could also be sought for the management and marketing of the country's more than 15,000 ha of planted forests, a large part of which is valuable teak plantations managed in a coppicing system. Such assistance, workshop participants noted, could include the development of a timber tracking and/or certification system, a key element in establishing sustainable timber supply chains and ensuring access to international markets for wood and wood products.

More details of the workshop and the presentations made can be found at: www.itto.int/news/2024/03/05/itto_promotes_use_of_criteria_and_indicators_in_trinidad_and_tobago/

[5] *Voluntary guidelines for the sustainable management of natural tropical forests,* available at www.itto.int/policy_papers/

[6] Available at www.itto.in/technical_report/

Viet Nam's great leap toward sustainable forestry

The country has undergone a remarkable shift from overexploitation of its natural forest estate to a thriving wood industry based on timber from plantations

by Ngo Sy Hoai

Vice President and Secretary General, Viet Nam Timber and Forest Products Association (ngosyhoai89@yahoo.com)

Adding value: Viet Nam's increasingly sustainable forest industries now supply both domestic and export markets for wood products. *Photo: Cao Xuan Thanh*

Located in Mainland Southeast Asia, Viet Nam as well as neighbouring Cambodia and the Lao People's Democratic Republic were long renowned for their vast and mysterious tracts of untouched tropical forest. But between 1943 and 1983, forest cover in Viet Nam shrank from 43% to 22%—a decline of some 14 million ha—as a result of conflict, poverty and improper forest management. Forests fell victim to overexploitation, the impacts of shifting cultivation, and the conversion of vast areas of forested lands to agriculture and other uses.

The tide was turned by the *Doi Moi* economic reform programme launched by the government in the 1980s. Cleared or degraded forest lands owned by state enterprises were transferred to farmers for reforestation. Supported by rising demand, improvements in seed quality, and other silvicultural advances, the success of Viet Nam's forestry and wood industry over the subsequent decades is undeniable.

While reforestation efforts in the 1990s with exotic eucalypt varieties failed due to poor seed selection and site matching, and a shortage of buyers, the successful introduction of acacia varieties has helped spur the establishment of over 3 million ha of commercial plantations and significant development in Viet Nam's wood industries. The shift to plantation forestry was further accelerated by the country's 2014 ban on logging in natural forests. Viet Nam now possesses around 4.7 million ha of planted forests, including more than 1 million ha for nature conservation and watershed management.

Acacia grows quite fast, is relatively free of pests and diseases and can thrive in a variety of sites. Moreover, its timber has found multiple uses, including in the production of furniture, wood-based panels, woodchips and woodpellets, and has become the dominant plantation timber species. Locally sourced acacia along with eucalyptus and rubber wood now meets up to 75% of total wood material demand.

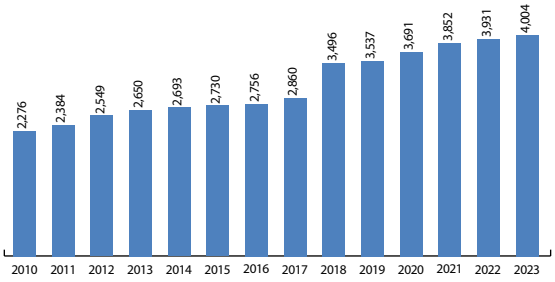
Reforestation and the shift to plantation forestry has set the conditions for the robust development of Viet Nam's wood industry and its emergence as a top global exporter of wood and wood products. Together, forestry and wood industries have become major foreign currency earners and enlarged the contribution of the forest sector to the growth of the national economy.

This article aims to provide an updated picture of the Viet Nam forestry and wood industry and share experiences gained and lessons learnt along the course of its development.

Plantation development

Between 2010 and 2023, the total area of planted forests in Viet Nam increased by 53%, from about 3.1 million ha to 4.7 million ha. This largely reflects the growth of commercial plantations from about 2.3 million ha to 4 million ha, an average expansion of 133 000 ha per year (Figure 1).

Figure 1: Total area of commercial plantations 2010–2023 (thousand ha)

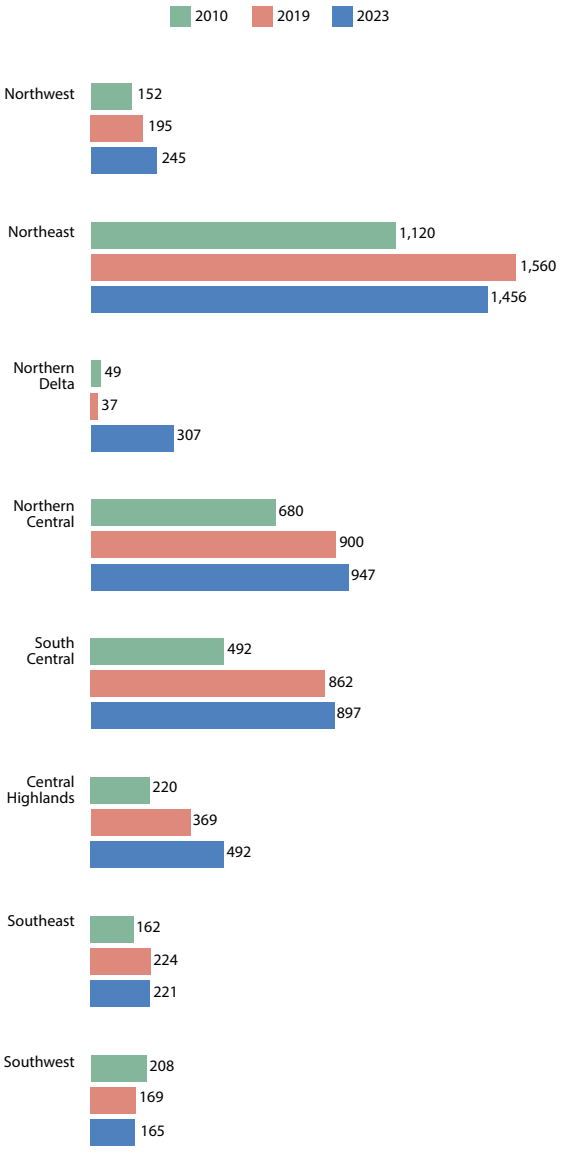


Source: Forest Protection Department, MARD

Most of the production forest area has been developed on bare land or denuded hills; since 2015, no more conversion of natural forests into planted forests has been observed.

For management purposes, Viet Nam's forestry has been divided into eight ecological zones. As shown in Figure 2, the area of planted forests has tended to increase everywhere except the Southwest zone. The Northeast, North Central and South Central zones play a key role as suppliers of materials to the wood industry. Together, these three zones account for more than 70% of the national planted forest area and most of the expansion since 2010.

Figure 2: Area of planted forests by forest ecological zone in 2010, 2019 and 2023 (thousand ha)



Source: Data from the Viet Nam Forest Protection Department, analyzed by the Vietnam Timber and Forest Product Association (VIFOREST).

To improve the performance of the forestry and wood industry sectors, the government has advocated for the establishment of 1 million ha of large-wood plantations nationwide. Large-wood plantations are defined as those where at least 70% of standing trees per unit area have a diameter at breast height (DBH) of over 20 cm for fast-growing trees, or 30 cm for slow-growing trees, at the main harvest age. Small-wood plantations are those where fewer than 70% of trees meet these criteria. While the cycle of small-wood plantations is 5–7 years, that of large-wood plantations is 8–10 years for fast-growing species.

Large-wood plantations are usually established by organizations or households that have a larger land area (more than 10 ha) and other sources of income in addition to the plantation business. Thse growers prolong the harvest cycle on part or all of their plantation. The species chosen is mainly acacia.

Although the Ministry of Agriculture and Rural Development (MARD) pursued a plan to develop large-timber plantations in the period 2014–2020, and the government restrains the export of woodchips made from small-wood timber with a 2% export tax, forest owners still mainly plant forests to supply the small-wood timber business. By the end of 2022, the area of large-timber plantations was only about 509 000 ha, or 13% of the total area of commercial plantations.

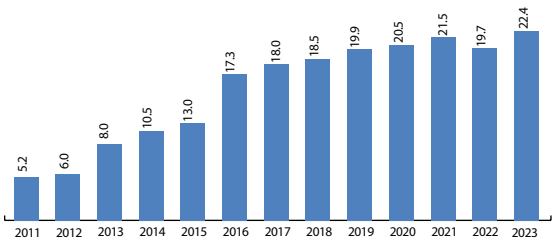
According to MARD, the development of large-wood plantations faces challenges and difficulties including: small land allocations; farmer preference for quick returns; land-use taxes; lack of access to credit; strong demand for small wood; poor infrastructure and seed quality; and lack of insurance against risks such as forest fires, natural disasters and extreme weather.

Wood production

The supply of domestically produced wood is increasing due to the growth of plantations and the application of science and technology to improve planting materials and forest management. The average yield of plantations in the 2011–2020 period reached 20–23 m^3/ha/year, with variations according to the species, site conditions and cutting cycle.

Between 2011 and 2023, the wood volume harvested from commercial plantations increased 4.3 times, from 5.2 million m^3 to 22.4 million m^3 (Figure 3). Most plantation wood is harvested in the Northeast, North Central and South Central zones, which together account for about 90% of total wood production.

Figure 3: Wood production from commercial plantations 2011–2023 (million m^3)



Source: Viet Nam Department of Forestry

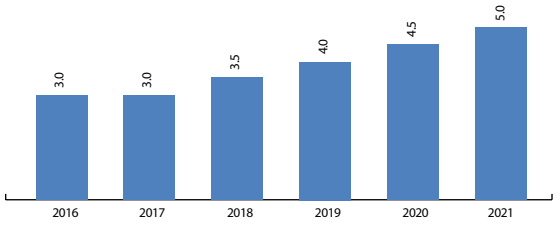
Exchanging ideas: B2B exchange to promote sustainable consumption of wooden products in Vietnam. *Photo: Cao Xuan Thanh*

To improve wood quality, plantation owners have been encouraged to expand the cutting cycle to over 10 years with an initial planting density of 1600–2000 stems/ha. In reality, however, the commonly applied plantation cycle varies between 4 and 7 years. With this short cycle, the planting density may vary between 3000–4000 stems/ha. Plantation farmers assume that densely planted plantations have less branches, grow faster in height and achieve higher yields within a short cycle. However, in some locations, after 4–5 cycles, plantation yields start to diminish due to soil degradation and increases in pests and disease. To maintain steady yields, plantation holders need to extend the cycle and apply fertilizer.

Acacia wood accounts for about 80% of the total annual domestic wood supply. Of this, 70–80% of acacia wood is produced by households on a 5–7 year cycle, giving an average yield of 20–25 m^3/ha/year. The volume of acacia wood harvested by this group of plantation owners is estimated at about 20–30 million m^3/year.

Viet Nam also maintains around 900,000 ha of rubber plantations, mainly in private smallholdings. By 25–30 years of age, the productivity of rubber trees diminishes, and they are cut and replaced. Rubber wood is lightweight, easy to process, and can be considered an environmentally friendly byproduct of latex production. In recent years, rubber wood has become an important source of raw materials for Viet Nam's wood industry, and demand to supply both domestic and export markets is increasing. In 2016–2021, rubber wood production increased by two-thirds from 3 million m^3 to 5 million m^3 (Figure 4). Insignificant volumes of rubber wood are imported.

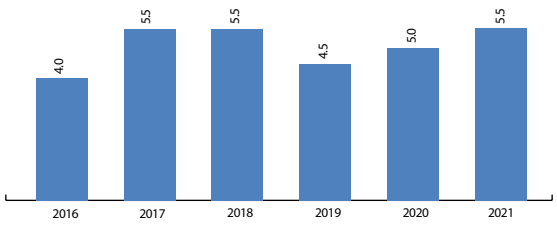
Figure 4: Rubber wood production 2016–2021 (million m^3)



Source: MARD

In the last decade, an average of 136 million scattered trees per year have been planted in Viet Nam and are making a significant additional contribution to the growing wood supply; 4– 5.5 million m^3 of wood is harvested from this source annually (Figure 5).

Figure 5: Dispersed wood production 2016–2021 (million m^3)



Sources: MARD, General Department of Forestry

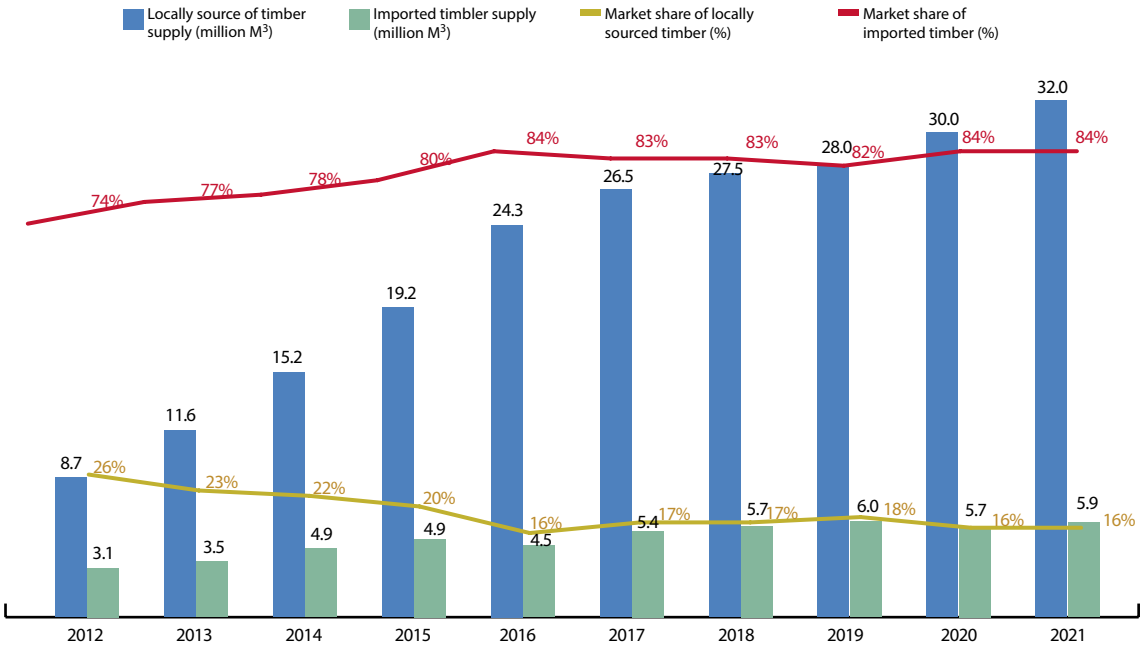
Falling import share

With demand for wood soaring as the wood processing industry has emerged, Viet Nam supplements the supply of locally sourced wood with imports from more than 100 markets worldwide.

Figure 6 shows the domestic and imported wood supply for 2012–2021. While the domestic wood supply increased 3.7 times from 8.7 million m^3 to 32 million m^3 over the period, the volume of imported wood increased at about half that pace, from 3.1 million m^3 to 5.9 m^3 and was relatively stable toward the end of the period.

The continuous growth of domestic supply has helped Viet Nam's wood industry gradually reduce its dependence on wood imports. In 2012, the volume of wood used by the industry was 11.8 million m^3, with imports accounting for 26% of the total. In 2021, when total wood demand had more than tripled to 37.9 million m^3, the share of imported wood was just 16% of the total. This is a positive result of the immense efforts to improve the performance of the commercial plantation business in Viet Nam over past decades.

Figure 6: Domestic and imported wood supply 2012–2021 (million m^3)



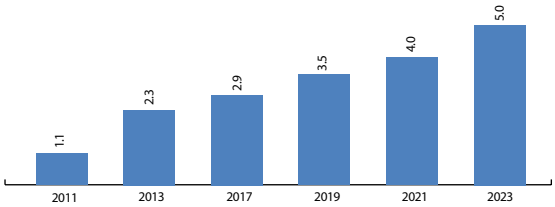
Source: VIFOREST

Seeding quality: Tissue culture to produce high quality seedlings of acacia hybrid. *Photo: Cao Xuan Thanh*

Booming wood industries

The 2010s saw a boom in Viet Nam's real estate market driven by construction. Major cities such as Hanoi, Ho Chi Minh City and Da Nang have witnessed the rapid development of a series of new urban areas. This is also the reason why domestic demand for wood products increased rapidly during this period. The value of wood furniture consumed domestically increased nearly 4.7 times from USD 1.1 billion in 2011 to USD 5 billion in 2023 (Figure 7).

Figure 7: Domestic wood and wooden product consumption (billion USD)



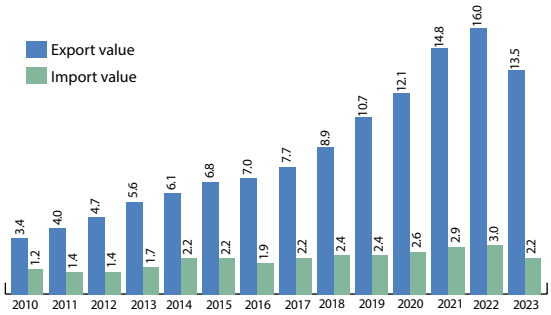
Source: VIFOREST

Viet Nam has a system of 340 officially recognized wood industry villages that are home to thousands of small businesses, most of them informal and household-based. About 80% of wood products consumed in the domestic market are supplied by these businesses. The main raw material used is imported tropical hardwood, with locally sourced wood playing a gradually increasing role.

Viet Nam has also emerged as a major wood product exporter. The United States of America, China, Japan, the Republic of Korea and the European Union are (in order of importance) the top five markets, consuming nearly 90% of the wood and wood products shipped from Viet Nam. With 70–80% of the total wood product value derived from overseas markets, Viet Nam's wood industry is heavily export-oriented.

In 2024, wood and wood products worth USD 16.28 billion were exported, showing year-on-year growth of 20.9%. Wood products accounted for USD 11.26 billion of the total. Growing exports to several top markets show that the global market has improved over 2023. Raw wood imports in 2024 are reported at 5.59 million m^3 (mostly logs and sawnwood for value-added processing), worth USD 1.81 billion, up 25.8% in volume and 19.9% in value over 2023.

Figure 8: Wood and wood product export/import 2010–2023 (billion USD)

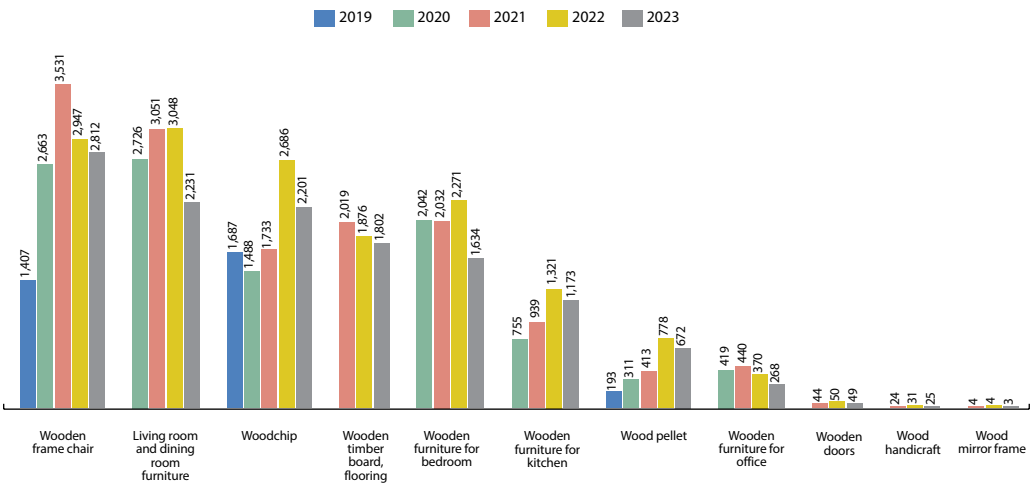


Source: Data from General Statistics Office, analyzed by VIFOREST

Figure 8 shows that, excepting 2023 (which saw a drop of 15.9% year-on-year), exports have grown impressively, rising almost fourfold from USD 3.4 billion in 2010 to USD 13.5 billion in 2023. On the other hand, wood and wood product imports increased by just 1.9 times, from USD 1.2 billion to USD 2.2 billion. These figures again show that Viet Nam's wood industry has achieved a dual goal: maintaining rapid export growth while reducing its dependence on raw wood imports thanks to the sustainable growth of locally sourced wood supply.

The dynamics of exports of various types of wood and wood products between 2019 and 2023 is shown in Figure 9.

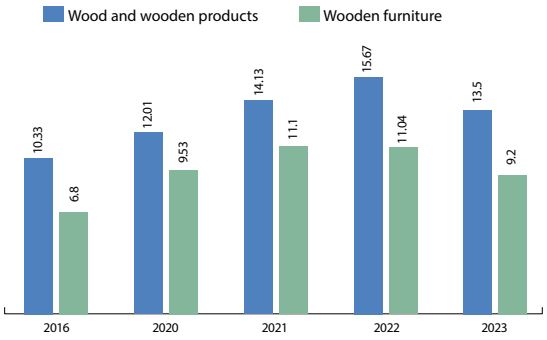
Figure 9: Wood and wood products exported 2019–2023 by product group (thousand USD)



Source: Data from Viet Nam Office of Customs, analyzed by VIFOREST

In 2023, Viet Nam exported wood and wood products valued at USD 13.5 billion, down 15.9% compared to 2022 (Figure 10). Wood products alone fetched USD 9.2 billion, down 16.7% on the same basis. It was the first overall decline after more than a decade of continuous growth.

Figure 10: Wood and wood product exports 2019–2023 (Billion USD)



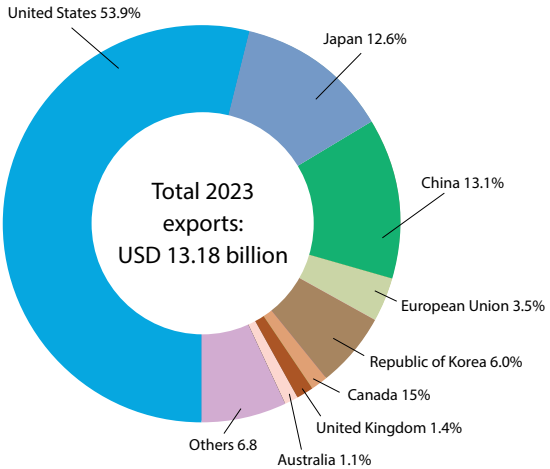
Source: Data from Viet Nam Office of Customs, analyzed by VIFOREST

In the period 2019–2022, the value of exports grew by more than 10% annually and peaked in 2022 at USD 15.67 billion before dropping back by 15.9% in 2023 to USD 13.5 billion.

Export markets

In 2023, wood and wood products produced in Viet Nam were exported to nearly 170 countries and territories. The top 5 markets—the United States, China, Japan, the Republic of Korea and EU—consumed USD 11.74 billion, accounting for over 89% of total export turnover (Figure 11).

Figure 11: Key export markets for wood and wood products in 2023



Source: Data from Viet Nam Office of Customs, analyzed by VIFOREST

The United States is by far the top destination for wood and wood products shipped from Viet Nam. In 2023, US imports were more than USD 7.1 billion, down 16.3% compared to 2022, but still accounting for more than half of the total. Next was China, with a turnover of USD 1.73 billion, down 20.4% compared to 2022. Over the 2019–2023 period, exports to the United States, China and Japan tended to increase, while the South Korea and EU markets remained steady.

Picture of progress

Viet Nam has made remarkable progress in forestry and wood industry development. As discussed, key factors behind this success included land tenure reform, market drivers, seed improvements and innovative financing mechanisms. This provided the basis for the expansion of commercial plantations to supply the vibrant private sector wood industry that today represents an important sector of the Vietnamese economy.

To continue to prosper, Viet Nam's commercial plantation business and wood industry development now need further improvements, including expanded production of larger-sized and higher quality wood and upgrades in the efficiency of wood industries. These steps will help to make the industry's use of wood more sustainable, meeting an increasingly important demand from both local and export markets. Stands of pure acacia grown on extremely short cycles need to make way for more sustainable forestry with alternative planting species. It is also imperative to further develop the country's export-oriented wood industries. That should include improving their capacities in design, branding and marketing and introducing digital technologies to add more value along Viet Nam's already impressive wood and wood products supply chain.

Tropical and topical

ITTC extends ITTO Executive Director's term, approves projects worth USD 4.3 million

During its 60th session on 2–6 December 2024, the International Tropical Timber Council approved the extension of the term of appointment of ITTO's Executive Director until January 2028. The Council also approved projects, pre-projects and activities with a total value of USD 4.3 million. It further decided that ITTO will continue the programmatic approach introduced on a pilot basis as part of the Organization's fundraising approach and supported preparations for the negotiation of a new International Tropical Timber Agreement (the current agreement expires in 2029) and efforts for ITTO to obtain observer status in the United Nations General Assembly.

Read full coverage of ITTC-60: www.itto.int/ittc-60/

Criminals may be exploiting drought-driven wildfire in Brazil for illegal land clearing

Wildfires, exacerbated by Brazil's worst recorded drought, have swept through an area the size of Switzerland, resulting in the loss or degradation of vast areas of tropical forest, The Associated Press reported. The level of destruction has raised suspicion among officials and experts that criminals exploited the dry conditions by setting fires to illegally clear land to create more pasture. Global carbon emissions from forest fires are increasing, contributing to climate change that, in a vicious circle, may be intensifying droughts that make forests even more vulnerable to fire.

Read the full story: https://apnews.com/article/brazil-amazon-weakened-forest-wildfire-deforestation-climate-change-0a79180b8c8e433785dbeb73852f265b

Study pinpoints potential for natural regeneration of tropical forests

A new study has found that in humid tropical regions around the world up to 215 million hectares of land—an area larger than Mexico—has the potential to naturally regenerate. As reported in ScienceDaily, that much forest could store 23.4 gigatons of carbon over 30 years and have a signficant impact on concerns such as biodiversity loss and water quality. More than half of the area with strong potential for regrowth lies in five countries: Brazil, China, Colombia, Mexico and Indonesia. The authors said the findings, including a digital map showing regrowth potential in the global tropics, could help identify where natural regeneration offers a cost-effective alternative to tree-planting as part of restoration efforts.

Read the full story: www.sciencedaily.com/releases/2024/10/241030150020.htm

Global consumer goods companies investigate palm oil sourcing

Consumer brands, including Nestlé and Procter & Gamble, said they conducted investigations after an environmental group claimed palm oil sourced from an illegally cleared wildlife reserve in Indonesia may have found its way into their supply chains, Reuters reported. Forest within the Rawa Singkil Wildlife Reserve had been cleared to make way for palm oil plantations during the last eight years, the US-based Rainforest Action Network said, citing satellite imagery and field investigations. Rainforest Action Network said fruit from the illegal plantations was sold to mills that supply brands including Mondelez and PepsiCo as well as Nestlé and Procter & Gamble. Environmental groups have frequently accused palm oil producers of illegally clearing rainforests, including protected areas and wildlife reserves, to expand their plantations.

Read the full story: www.businesstimes.com.sg/international/asean/nestle-pg-investigate-palm-oil-sourcing-after-green-groups-indonesia-deforestation-report

Rainforest tech competition showcases biodiversity monitoring innovations

A team of ecologists, robotics engineers and Indigenous scientists has won first place in a USD 10 million competition aimed at identifying solutions to automate tropical forest monitoring and protection, Mongabay reported. At the finals in Brazil, the team assembled by a group at Colorado Mesa University in the United States deployed canopy rafts, drones, and artificial intelligence models to identify 250 species and 700 unique taxa in 24 hours in a 100-hectare plot of Amazon forest. Some 300 teams initially entered the competition, organized by California-based nonprofit XPRIZE Foundation in 2019, with 13 progressing to the semifinals in Singapore in 2023. Four took part in the finals in Manaus, Brazil in July.

Read the full story: https://news.mongabay.com/2024/11/five-year-rainforest-tech-competition-culminates-with-four-winners/

US President Biden's historic Amazon visit

Joe Biden became the first sitting president of the United States to set foot in the Amazon rainforest, the New York Post reported. During a visit to Manaus, Brazil in November 2024, Biden visited the Museu de Amazonia and the surrounding Adolpho Ducke Forest Reserve. The outgoing US president also signed new conservation initiatives aimed at protecting the region and engaged with indigenous leaders to discuss the importance of safeguarding tropical forests to address global climate challenges.

Read the full story: https://nypost.com/2024/11/17/us-news/president-biden-becomes-first-sitting-president-to-venture-into-amazon-rainforest-fight-for-humanity/

Recent editions

Maplesden, F. 2024. *Tropical timber trends*. ITTO Technical series No. 52. International Tropical Timber Organization (ITTO). Yokahama, Japan.

ISBN 978-4-86507-084-2

Available at: www.itto.int/technical_report/

This study presents ITTO's core statistical data for the period 1990–2020 to provide an essential overview of long-term developments in tropical timber markets. The study highlights significant trends, such as the progress of selected ITTO producer countries in timber processing. While in the 1990s most countries exported mainly low-value-added products, including industrial roundwood or sawnwood, many have progressed to higher-value-added products such as furniture in the past two decades. The study also recognizes how improved forest product definitions have been essential to ITTO's efforts to monitor the production and trade of tropical forest products.

FAO. 2024. *The State of the World's Forests 2024 – Forest-sector innovations towards a more sustainable future*. Rome, FAO.

ISBN 978-92-5-138867-9

Available at: https://doi.org/10.4060/cd1211en

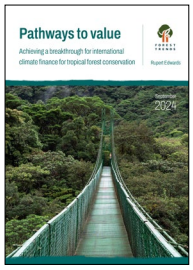
The 2024 edition of the UN Food and Agriculture Organization's flagship report highlights the transformative power of evidence-based innovation in the forest sector, ranging from new technologies and creative policies and institutional changes to new ways of getting finance to forest owners and managers. Eighteen case studies from around the world provide a glimpse of the wide range of technological, social, policy, institutional, and financial forest-sector innovations—and combinations of these—being tested and implemented in real-world conditions. The report also identifies barriers to, and enablers of, innovation and enumerates five actions for empowering people to apply their creativity in the forest sector to solve problems and scale up positive impacts.

FAO and UNECE. 2024. *Forest Products Annual Market Review 2023–2024*. Geneva, Switzerland.

ISBN 978-92-1-003184-4

Available from: https://openknowledge.fao.org/items/0966581f-f8ad-42bd-a69c-8ffcd9ee325d

The Forest Products Annual Market Review 2023–2024 provides a comprehensive analysis of markets in the United Nations Economic Commission for Europe region and reports on the main market influences within and beyond the region. It covers products from the forest to the end user and from roundwood and primary processed products to value-added products, housing, and wood energy. The review highlights the role of sustainable forest products in international markets, discusses policies concerning forests and forest products, assesses the main trends and drivers, and analyses the effects of the current global economic situation on forest product markets.



Edwards, R. 2024. *Pathways to value: Achieving a breakthrough for international climate finance for tropical forest conservation*. Forest Trends, Washington, D.C.

Available at: www.forest-trends.org/publications/pathways-to-value/

The publication addresses the significant challenge of reversing the global trend of tropical forest loss, which is a major obstacle to realizing the full potential of natural climate solutions in achieving climate goals. The paper explores past challenges in scaling finance to combat tropical deforestation and restore degraded forests and outlines core "pathways to value" for REDD+. It emphasizes that results-based finance from international governments is crucial for supporting forest countries. The publication also underscores the potential of combining public results-based payments with private sector demand for high-integrity carbon credits, based on jurisdictional baselines, as the most effective strategy to mobilize large-scale finance.

ITTO. 2024. *Annual report 2023*. International Tropical Timber Organization (ITTO). Yokahama, Japan.

ISBN 978-4-86796-002-8

Available at: www.itto.int/annual_report/

Building on the significant successes of previous years, ITTO continued to strengthen its commitment to sustainable tropical forest management in 2023 and promote legal and sustainable timber trade as an effective and viable approach for ensuring a more sustainable and resilient future. The 2023 annual report documents ITTO's activities in pursuit of those goals and the key decisions taken at the governing International Tropical Timber Council. The report demonstrates the efficacy of ITTO's two-pronged approach, emphasizing the crucial role of international cooperation and capacity building on the ground to address global challenges, including climate change and biodiversity loss, and meet the Sustainable Development Goals.

Meetings

ITTO meetings

17–20 September 2025
5th World Teak Conference: "Sustainable Development of the Global Teak Sector – Adapting to Future Markets and Environments"
Cochin, India
Organized by ITTO, along with the International Teak Information Network (TEAKNET), Kerala Forest Research Institute, International Union of Forest Research Organizations, and Food and Agriculture Organization of the United Nations, the conference brings together researchers, students, entrepreneurs, and forestry sector professionals to build networks and share knowledge on the latest technological developments and market trends in the sector and other topics.
The fifth edition of the conference centres on the theme of "Sustainable Development of the Global Teak Sector – Adapting to Future Markets and Environments".
More: www.worldteakconference2025.com

23–24 September 2025
Global Legal & Sustainable Timber Forum 2025
Macao SAR, China
The GLSTF 2025 aims at enhancing networking, collaboration, and business exchange among timber industry stakeholders - producers, consumers, processors and market players to strengthen support for sustainable tropical forest management, and the uptake of legal and sustainable wood product supply chains to facilitate the legal and sustainable use and trade of wood products in a stable, transparent and predictable business environment while contributing to sustainable development and climate-change mitigation.

27-31 October 2025
61st Session of the International Tropical Timber Council and Sessions of the Associated Committees
Panama City, Panama
The International Tropical Timber Council, ITTO's governing body, meets once a year to discuss a wide-ranging agenda aimed at promoting sustainable tropical forest management and the trade of sustainably produced tropical timber. Council sessions are open to official delegates and accredited observers.
More: www.itto.int/council_committees/

Other meetings

14–17 April 2025
26th International Wood Machining Seminar (and post-seminar industrial tour)
Florence, Italy
More: www.dagri.unifi.it/vp-1018-26th-international-wood-machining-seminar-14-15-april-2025-post-seminar-tour-16-17-april-2025.html?newlang=eng

5–9 May 2025
20th session of the UN Forum on Forests (UNFF20)
New York, United States of America
More: www.un.org/esa/forests/forum/index.html

20–21 May 2025
Forest Bioeconomy Innovations 2025 Conference
Rotorua, New Zealand
More: https://innovatek.co.nz/event/forest-bioeconomy-2025/

22–26 June 2025
World Conference on Timber Engineering 2025: "Advancing Timber for the Future Built Environment"
Brisbane, Australia
More: www.wcte2025.org/event/df0d5655-c16d-47df-b4a6-457a7dc63d96/wcte-2025

30 June–4 July 2025
6th International Conference on Soil Bio- and Eco-Engineering (SBEE25): "The Use of Vegetation to Improve Slope Stability"
Xalapa, Mexico
More: https://sbee2025.com/

14–18 July 2025
High-level Political Forum on Sustainable Development (HLPF) 2025
New York, United States of America
More: https://sdg.iisd.org/events/high-level-political-forum-on-sustainable-development-2025/

18–19 September 2025
2nd Global Summit on Climate Change & Environmental Sustainability: "Sustainable Pathways: Innovating for Climate Resilience"
Los Angeles, United States of America
More: https://climatechangeconferences.org/program-schedule

9–15 October 2025
IUCN World Conservation Congress: "Powering Transformative Conservation"
Abu Dhabi, United Arab Emirates
More: https://iucncongress2025.org/

28–30 October 2025
Biodiversity Conference 2025: "Nature Positive"
Perth, Australia
More: www.biodiversity2025.com/

10–21 November 2025
2025 UN Climate Change Conference (UNFCCC COP 30)
Belém, Brazil
More: https://sdg.iisd.org/events/2025-un-climate-change-conference-unfccc-cop-30/

19–21 November 2025
IX Latin American Forestry Congress (CONFLAT)
Lima, Peru
More: https://conflat.org/

24 November–5 December 2025
20th meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species (CITES CoP20)
Samarkand, Uzbekistan
More: https://cites.org/sites/default/files/notifications/E-Notif-2024-117.pdf

8–12 December 2025
Seventh session of the United Nations Environment Assembly (UNEA-7): "Advancing sustainable solutions for a resilient planet"
Nairobi, Kenya
More: www.unep.org/environmentassembly/unea7

Note that all meetings are subject to change or cancellation. Please check the contact addresses for the latest information.

ITTO provides this list of international meetings as a public service and is not responsible for changes in date or venue or for other errors.