TFU

Promoting the conservation and sustainable development of tropical forests

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ITTO's next five years

The Earth faces challenges related to, among other things, climate change, biodiversity loss and poverty and we urgently need solutions. Sustainable tropical forest use can help restore the environmental balance while enabling people to earn a decent living, including through the international trade of tropical timber. This is ITTO's rationale and the basis for the Organization's Strategic Action Plan 2022–2026, which the International Tropical Timber Council adopted at its most recent session in November/December 2021. Stephanie Caswell and Jorge Malleux, who supported the ITTO Secretariat and membership in formulating the new plan, describe it in their article starting on page 3 of this edition.

The core purpose of the plan is to advance the Organization's twin overarching objectives, as set out in Article 1 of the International Tropical Timber Agreement, 2006. It was developed in the context of today's multitude of economic, social and environmental challenges, including those presented by the COVID-19 pandemic but also climate change, biodiversity loss, tropical deforestation and rural poverty. Many tropical forest stakeholders have been hit hard by the pandemic and associated containment measures, and one of the plan's cross-cutting strategies is to promote the integration of the tropical forest sector in COVID-19 recovery plans and recommend actions to be taken, including much-needed investment.

Overall, the plan involves four strategic priorities, four crosscutting strategies and 38 targets to be achieved in the next five years. Caswell and Malleux conclude that, "The full implementation of the plan will strengthen the Organization and increase its contributions to the 2030 Agenda for

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Cover image: Local women plant seeds in a mahogany nursery on Mexico's Yucatan Peninsula as part of efforts to build back better. *Photo: INIFAP*

Above: Minato-mirai, Yokohama, Japan. *Photo: R. Carrillo*

Sustainable Development and other global aspirations".

In her article on page 6, Diah Arini describes an ITTO project in North Sulawesi, Indonesia, designed to encourage smallholders to grow cempaka, a valuable indigenous tree species. Ultimately, the aim is to ensure a sustainable supply of the species for the local and regional construction and furniture industries as an example of a sustainable solution on the ground. By project completion, reports Ms Arini, local people had much more awareness of the potential benefits of cempaka plantations and the conservation of existing cempaka resources. But expanding cempaka plantations will still require a concerted effort, including incentives.

Two articles in this edition outline virtual workshops convened by ITTO and partners to spread the word on forest landscape restoration, drawing on the Organization's *Guidelines for Forest Landscape Restoration in the Tropics*. Cesar Sabogal (page 10) reports on three workshops in Latin America—two subregional events (co-hosted by the Tropical Agricultural Centre for Research and Education) and a Peru-focused version (co-hosted by that country's National Forest and Wildlife Service). Taesik Ham (page 13) summarizes a five-day workshop for the Asia-Pacific region, co-hosted by the Asian Forest Cooperation Organization. Both articles stress the increasing need for forest landscape restoration in the tropics and the importance of ongoing international support to disseminate the guidelines and assist their implementation on the ground, coinciding with priority 3 of the Strategic Action Plan.

On page 15 we present an article by Jeffrey Weiss and his colleagues, first published as a blog by the legal firm Steptoe. This objective piece explores measures to minimize deforestation in certain commodity supply chains introduced by the European Union, the United Kingdom and the United States, and we are reproducing it in the TFU to help readers understand the scope and stated purposes of these measures and how they might affect timber producers. Among other things, the article concludes that the measures "are likely to increase costs for producers and/or purchasers of the relevant commodities and products derived from these commodities to a significant degree". The authors suggest that other jurisdictions may be expected to also adopt anti-deforestation measures in the future.

Elsewhere in this edition, Bayron Ruiz (page 19), an agroforestry engineer from Colombia, describes his experience as an ITTO Fellow. Dr Ruiz used his Fellowship to conduct field work as part of his doctoral studies on the contributions of teak and melina plantations to climate-change mitigation in Mexico. He concludes that mixed plantations make a greater contribution to climate-change mitigation than monocultures.

Mike Adams (page 21) reviews the extent of recovery in the tropical timber trade from the COVID-19 pandemic. A huge issue for the international trade—especially small and medium-sized enterprises—is the lack of shipping containers and their exorbitant cost. Soaring freight prices are another.

Perhaps these trade-related issues will resolve themselves in a year or two, but the deeper challenges facing tropical forests and the tropical timber sector will undoubtedly remain. ITTO's five-year plan is part of the necessary response but, needless to say, it will take a whole-of-planet effort to avert the multiheaded crisis we face.

New strategic plan sets ITTO's goals to 2026

The ambitious and pragmatic plan involved a broad consultative processs

by Stephanie Caswell[1] and Jorge Malleux[2]

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A new vision: Xochitl Tapia Sánchez (far left) graduated from the International Intensive Course on Diversified Management of Tropical Natural Forests at CATIE, thanks to an ITTO Fellowship. *Photo: M. Manzanero*

The International Tropical Timber Council adopted a new strategic action plan at its 57th session in December 2021 to guide the Organization over the next five years. This article describes the main components of the plan.

The new strategic action plan comes at an unprecedented time for both ITTO and the global forest community and has been designed to provide clear guidance in the face of economic uncertainty. Its five-year time horizon coincides with the Council's extension to December 2026 of the International Tropical Timber Agreement (ITTA), 2006.

A multipurpose document—internal guidance and external communication

The core purpose of the ITTO Strategic Action Plan 2022–2026 is to advance the Organization's twin overarching objectives, as set out in Article 1 of the ITTA, 2006 (Box 1). It was developed in the context of today's broad global forest agenda as well as the economic, social and environmental challenges presented by the COVID-19 pandemic.

Box 1: ITTO's overarching objectives

- To promote the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests
- To promote the sustainable management of tropical timber-producing forests

The new plan serves as the Organization's primary internal guidance document and is both ambitious and pragmatic. It takes into account the significant work done in recent years toward a new financial architecture for ITTO (without prejudging the outcome of the ongoing pilot phase). The plan also serves as a communication tool for external audiences and contributes to the ambitions set out in the Sustainable Development Goals (SDGs), the Global Forest Goals (GFGs), the Paris Agreement on climate change and the draft post-2020 global biodiversity framework.[1]

An open and participatory development process

The process to produce the new strategic action plan began in November 2020 with a decision by the Council at its 56th session. This initiated a process facilitated by the Secretariat with the assistance of two consultants (the authors of this article) that was open and participatory throughout. It engaged ITTO members, the Trade Advisory Group (TAG) and the Civil Society Advisory Group (CSAG) at key points. There were five major milestones:

1) **April 2021**—Circulation of a ten-question survey in the Organization's three working languages (English, French and Spanish) to all ITTO members and TAG and CSAG focal points to gather initial views on the effectiveness of the Strategic Action Plan 2013–2018 and the way forward for the new plan.[2]

2) **July 2021**—Circulation of a comprehensive background paper in English, French and Spanish to all ITTO members and TAG and CSAG focal points. The paper assessed the implementation of the Strategic Action Plan 2013–2018

1 The Conference of the Parties to the Convention on Biological Diversity is expected to adopt the post-2020 global biodiversity framework at its resumed 15th session rescheduled for the third quarter of 2022 in Kunming, China.
2 Twenty-four responses were received from 13 producers, ten consumers and the TAG focal point.

Table 1: ITTO's strategic priorities and crosscutting strategies, 2022–2026

Strategic priority	Relevant to:		
	Articles in the ITTA, 2006	Global Forest Goals	Sustainable Development Goals
1. **Governance and investment**—Promote good governance and policy frameworks to enhance financing and investment in sustainable tropical forest management, legal and sustainable forest product supply chains and related trade	1.a, 1.c, 1.i, 1.k, 1.n	1, 3, 4, 5	15, 16, 17
2. **Economies and tropical timber trade**—Increase the contribution of the tropical forest sector to national and local economies and resilient livelihoods, including through the further processing and trade of tropical timber and other forest products and services	1.a, 1.c, 1.i, 1.k	2	8, 15
3. **Resilience, restoration and conservation**—Reduce tropical deforestation and forest degradation, enhance forest landscape restoration and the resilience of forest ecosystems to climate change, and conserve forest biodiversity and ecosystem services	1.a, 1.c, 1.i, 1.j, 1.k, 1.m, 1.q	1, 2, 3, 5, 6	13, 15
4. **Statistics and information**—Improve the quality, availability and timeliness of information on tropical forest product markets, supply chains and international trade, including challenges and opportunities related to market access, expansion and diversification	1.a, 1.b, 1.c, 1.e, 1.h, 1.k, 1.l, 1.o, 27, 28	4, 6	15
Crosscutting strategy			
1. Help build capacity in member countries to advance the Strategic Action Plan 2022–2026	1.a, 1.c, 1.d, 1.g, 1.q, 1.r		4, 15
2. Enhance ITTO's operational effectiveness	All articles	6	15
3. Promote integration of the tropical forest sector in COVID-19 recovery plans, measures and investments	1.a, 1.c, 1.s	5	
4. Promote gender equality and the empowerment of women	1.a, 1.c		5, 15

(extended to 2021), provided an overview of global trends and COVID-19 impacts in the tropical forest sector, analyzed responses to the above-mentioned survey and, on that basis, proposed a framework for the new plan.

3) **July 2021**—Invitation issued to all ITTO members and the TAG and CSAG focal points to comment on the proposed framework for the new strategic action plan contained in the background paper.[3]

4) **September–October 2021**—Working group (comprising three producer and three consumer representatives[4] and the TAG and CSAG focal points) convened to review a preliminary draft of the plan prepared by the consultants in close consultation with the Secretariat and based on responses to milestones 1 and 3.

5) **October 2021**—Circulation (in English, French and Spanish) of the working group's report and the proposed strategic action plan to all ITTO members and TAG and CSAG focal points in advance of the 57th Council session.

3 Responses were received from Ecuador, Honduras, Japan, Mexico, the Philippines and CSAG.

4 The producer countries represented were Benin, Malaysia and Peru and the consumers were Japan, the European Union and the United States of America.

Key features of the new plan

The Strategic Action Plan 2022–2026 has five parts: 1) Introduction to ITTO; 2) trends and challenges in the tropical forest sector; 3) ITTO strategic priorities, crosscutting strategies and targets 2022–2026; 4) implementation framework; and 5) monitoring and review.

Part 1 highlights the importance of tropical forests for human wellbeing and introduces ITTO, including its purpose, governance structure, partnerships and comparative advantages in meeting global forest-related commitments.

Part 2 outlines the ongoing threats to tropical forests from competing land uses, unsustainable practices and climate change, the recent and projected impacts of COVID-19, and the importance of investments in tropical forests and forest-based enterprises for recovery from the pandemic.

Part 3 is the heart of the new plan. It sets out four strategic priorities and four crosscutting strategies aligned with the ITTA, 2006, the SDGs and the GFGs (Table 1), as well as 38 targets associated with the priorities and crosscutting strategies to be achieved in the next five years.

The four strategic priorities update those contained in the previous strategic action plan to address climate change explicitly and incorporate the four programme lines that are the focus of ITTO's ongoing pilot work on a

Bridging SFM: This suspension bridge spans a valley in the Gunung Gede Pangrango National Park, Indonesia, the location of an ITTO project. ITTO's work bridges the many components of sustainable forest management, including biodiversity conservation and sustainable livelihoods. *Photo: Randi/Gunung Gede Pangrango National Park Authority*

streamlined project cycle.[5] The four crosscutting strategies highlight key issues relevant to all four strategic priorities. The 38 targets operationalize the strategic priorities and cross-cutting strategies.

Part 4 addresses how the new plan will be implemented through policy activities financed under ITTO's biennial work programmes and projects financed under the ITTO project cycle, as well as through the actions of members, partners and stakeholders at the national, regional and global levels.

Part 5 sets out the processes for reviewing the plan's implementation. The Executive Director will report to the Council annually on progress, including financing, accomplishments and challenges. The Council will review and assess the effectiveness of the plan in 2026 and may also undertake a mid-term review in 2024.

New ITTO mission statement

The new plan includes a new mission statement for the Organization (Box 2) based on the overarching objectives set out in Article 1 of the ITTA, 2006. It replaces the previous mission statement, which dates from 1998.

Box 2. ITTO Mission Statement

To facilitate discussion, consultation, international cooperation and policy development on the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests and on the sustainable management of tropical forests

Next steps

Council Decision 5/(LVII)[6] directs how the new plan is to be taken forward in the near term. It requests the Executive Director to:

1) publish and widely disseminate the new strategic action plan;
2) identify the resources needed to achieve the 38 targets contained in the plan; and
3) develop an indicative five-year resource mobilization goal and related resource mobilization strategy for presentation to the Council at its 58th session in November 2022.

The new strategic action plan is about to be published and will be available in English, French and Spanish on the ITTO website (task 1). The Secretariat has also initiated work on tasks 2 and 3, which are interrelated—identifying the resources needed to meet the plan's 38 targets will inform the Council's decision on the indicative five-year resource mobilization goal.

The Strategic Action Plan 2022–2026 sets ITTO's course for the next five years in a way that can be understood by users at all levels within and beyond the ITTO family. The full implementation of the plan will strengthen the Organization and increase its contributions to the 2030 Agenda for Sustainable Development and other global aspirations.

The Strategic Action Plan 2022–2026 will be available at www.itto.int/council_committees/action_plans

5 The programme lines are "legal and sustainable supply chains for tropical forest products"; "conservation of tropical forest biodiversity and ecosystem services"; "tropical forest landscape restoration and resilient livelihoods"; and "emerging issues and innovation".

6 The decisions of the International Tropical Timber Council are available at www.itto.int/council_committees/decisions

The beginnings of cempaka conservation

An ITTO project in North Sulawesi, Indonesia, has increased awareness among local people of the benefits of growing this valuable species and started a policy process

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Stand with the trees: These farmers in North Sulawesi, Indonesia, received training on cempaka planting techniques as part of efforts under an ITTO project to revitalize cempaka-growing in the province. *Photo: D.I.D. Arini/MEFRDI*

Cempaka wasian ("cempaka"; *Elmerillia* spp.), in the Magnoliaceae family, is one of the most well-known local trees in the Indonesian province of North Sulawesi (Ratnaningrum and Wibisono 2002). It has been used widely on the Minahasa peninsula since the eighteenth century in the construction of traditional wooden houses and the manufacture of the *kolintang*, a traditional musical instrument, and furniture. Cempaka wood has a distinctive fragrance and beauty and strong links to the history and culture of the Minahasa ethnic group.

In the past, cempaka stands dominated the lands of the Minahasa. Local people planted it in mixed stands with other species of tree and agricultural crops such as coconut, clove and nutmeg (Waisaley et al. 2018) in family farms called *pasini*. Mixed stands of cempaka can be found today in North Sulawesi province in the regencies of North Minhasa (Klabat Mountain); Tomohon (Mahawu Mountain, Masarang Mountain, Pinaras and Taratara); Minahasa (Kawangkoan, Langowan and Tondano Timur); and South Minahasa (Tareran) (Effendy 2016).

High demand for cempaka wood, especially for house construction, has outstripped the sustainable supply, leading to scarcity, and the wood has progressively been replaced in construction by other timbers such as nantu, kenari and binuang. Moreover, many farmers are harvesting cempaka trees at 16–20 years of age; the desirable harvesting age is 30 years or more, and the timber from the younger trees is considerably lower in quality.

The reduced availability of cempaka is compounded by a lack of interest in replanting among smallholders. According to Kinho and Mahfudz (2011), however, pure and mixed-species plantations of cempaka could achieve stand volumes as high as 550 m^3 per hectare over a 16-year period, which would likely be economically viable.

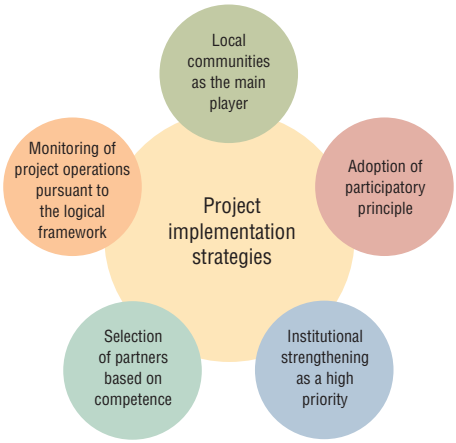
Packed with cempaka: A traditional Minahasa house made predominantly of cempaka wood. *Photo: Muh. Farid/MEFRDI*

An ITTO project[1] that started in 2016 and was completed in 2021 set out to assist efforts to increase the sustainable supply of plantation-grown cempaka in the regencies of Minahasa, North Minahasa and South Minahasa (Figure 1). Implemented by the Manado Environmental and Forestry Research and Development Institute (MEFRDI), the project documented silvicultural techniques for the species; increased community knowledge in cempaka cultivation; developed 18 hectares of demonstration plots of cempaka across the three regencies; surveyed community and government interest in supporting the cempaka conservation programme; conducted training and hosted a province-level forum of cempaka stakeholders; and helped develop the Integrated Strategic Management Plan for Cempaka Resource Conservation and Development (ISMP-CRCD).

1 ITTO PD 646/12 Rev.3 (F): "Initiating the conservation of cempaka tree species (*Elmerrillia* spp.) through plantation development with the local community participation in North Sulawesi".

Figure 1: Map of project sites, three regencies in North Sulawesi province, Indonesia

Figure 2: Project implementation strategies



Project implementation strategies

The low interest among local people in planting cempaka is due to several factors, such as an inadequate knowledge about the species and its cultivation; a popular belief that the financial benefits of tree-growing take much longer to materialize compared with agricultural crops such as cloves and nutmeg; government policies that do not support the development of cempaka plantations; and a lack of high-quality seed, startup capital and training.

The overall aim of the ITTO project was to contribute to cempaka conservation in North Sulawesi by working with local communities to conserve the species and establish plantations. The project has three main outputs: 1) an increased capacity among local communities in cempaka plantation development; 2) the increased participation of local communities in cempaka plantation development; and 3) the review and strengthening of government policy on the conservation and use of cempaka species. The project involved 17 activities in five strategies (Figure 2).

Achievements from specific objectives

Project achievements include the following:

- Sufficient high-quality seed (330 000 seeds per year) is now being produced to support the establishment of at least 100 hectares of cempaka plantations per year. Under the project, six locations (four in North Sulawesi and two in South Sulawesi) were identified as having high-quality cempaka seed resources. Based on personal communications with experts, these six stands are capable of producing up to 1 million seeds per year.
- Eighteen hectares (of a targeted 30 hectares) of plantations have been established in the three regencies to demonstrate various agroforestry configurations involving cempaka. These have a 3 m × 3 m arrangement—the species requires shading in its first year (Halawane 2020).
- Three small-scale nurseries (one in each of the regencies) near the demonstration sites have been constructed by contractors with the assistance of local people and are now in operation.
- A cempaka stakeholder forum was created in 2020 through a decree issued by the Head of the North Sulawesi Provincial Forestry Agency (NSPFA); it is open to farmers, central and regional governments, distributors, academics, enterpreneurs and non-governmental organizations. The forum agreed to and is following an initial action plan for 2020–2023.

Enhancing capacity of local communities

The capacity of local communities in cempaka conservation is one of the main success factors. For example, there is a lack of information on high-quality seed sources and insufficient understanding among local people about how to grow the trees. The project identified cempaka mother trees in two provinces capable of producing viable seeds and recommended methods for collection, storage and germination. These methods have been published in a book that is readily available to and understood by farmers, distributors and other members of the community.

Increasing participation of local communities

Increasing the participation of local communities in the development of planted cempaka forest has involved dialogue, training and the development of guidelines. Dialogues were conducted in 21 villages in three regencies to inform local people about the economic and ecological benefits of planting cempaka trees. Discussions also addressed the incentives needed to encourage people to pursue the development of cempaka plantations, such as free seeds, financial support, training in cempaka cultivation

Valuable resource: A stand of cempaka trees, Minahasa regency, North Sulawesi, Indonesia. *Photo: R. Suryaningsih/MEFRDI*

techniques and business strategies, and policy support for the marketing of cempaka timber (Golioth et al. 2020). The project conducted training on seed germination techniques and plantation establishment, with 45 participants in each training course. Forest management unit extension officers in the North Sulawesi Provincial Forestry Agency are distributing a manual (produced by the project) on seedling outplanting and the construction of small nurseries.

Strengthening government policy

A lack of data has hindered the development of effective policies on cempaka resource conservation at both the central and regional government levels. The project addressed this by using satellite imagery and statistical modelling to estimate the cempaka resource potential in North Sulawesi, finding that the resource in North Sulawesi province amounted to about 1.2 million m^3, with the largest portion in South Minahasa (Abdulah et al. 2020).

An economic analysis conducted as part of the project found that the use of cempaka in the construction of Minahasa traditional wooden houses is declining due to its reduced quality. Many housing craftspeople now use a mix of timbers, of which only 20–30% is cempaka (Subarudi et al. 2020). Nevertheless, traditional wooden house construction remains a profitable venture for builders.

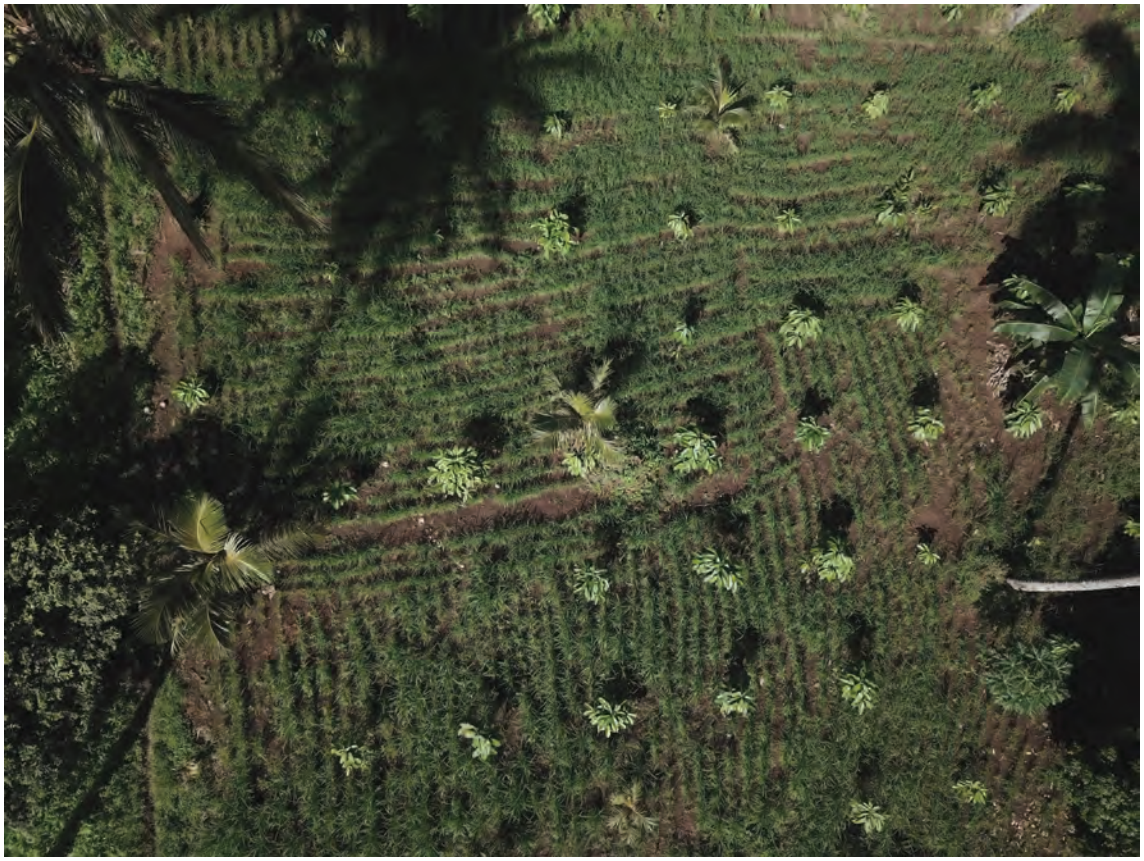
In addition to use in house construction, cempaka timber is suitable for the manufacture of doors, window frames, chairs and cupboards, which can last for more than 20 years if made from cempaka grown on 30-year (or longer) rotations. Abdulah et al. (2020) projected the consumption of cempaka at 0.17 m^3 per capita per year in North Sulawesi, indicating that demand will outstrip supply without widespread cempaka plantations.

These studies showed that favourable government policies on land allocation and the provision of seeds and other incentives are needed to ensure the sustainable supply of cempaka in North Sulawesi. Regulations affecting markets for cempaka are seen as a constraint to plantation development—the timber is not categorized as cultivated wood, meaning additional hurdles for demonstrating legality. The project encouraged stakeholders to reflect on solutions to this problem, one of which would be to develop clusters of cempaka conservation areas and establish a specific regulation for licensing cempaka wood from these areas to demonstrate legality and encourage community involvement in promoting cempaka. More work and data are required to implement this concept effectively.

The ISMP-CRCD was the focus of a provincial workshop held in August 2020 with 115 participants (most of whom attended virtually) from diverse backgrounds—local communities and cempaka farmers from three districts, representatives of regional and central governments and non-governmental organizations, and university experts. The ISMP-CRCD is expected to be used mainly by regional government offices in North Sulawesi, especially the Development Planning Agency and the North Sulawesi Provincial Forestry Agency.

Challenges and the future

The project achieved its three main outputs via 17 activities, but its lasting accomplishments will be best observed in the years to come. Local people now have much more awareness of the potential benefits of cempaka plantations and the conservation of existing cempaka resources. Nevertheless, expanding the cempaka plantation resource will require ongoing efforts by extension agencies, researchers and other



Emerging agroforest: A cempaka demonstration plot, one year after planting. The cempaka saplings were planted at a spacing of 3 m × 3 m amid a crop of corn, coconut and banana. *Photo: Hendra S. Mokodompit/MEFRDI*

institutions, scientific research, new technologies, incentives and conducive government policies. Both the central and regional governments will need to accommodate the ISMP-CRCD in policies to ensure the sustainable use of cempaka in North Sulawesi.

Sustainable project outcomes will also require ongoing commitment by all stakeholders. MEFRDI will continue monitoring cempaka performance in the three demonstration areas, which can be used as a field "laboratory" to generate information and data on cempaka management and use. MEFRDI and NSPFA will also continue to support the cempaka stakeholder forum as a means of communication on the benefits, risks and challenges of cempaka conservation and sustainable use.

Project outputs can be found by inserting the project code 646/12 Rev.3 (F) into the ITTO project search function at www.itto.int/project_search. This ITTO project was made possible by funding from the Government of Japan.

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Spreading the word on forest landscape restoration in Latin America

Three webinars in the region have raised awareness about ITTO's guidelines on FLR

by Cesar Sabogal

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Glad handlers: A crew heads to the field to plant seedlings as part of a restoration effort in the Pomacochas area, Amazonas, Peru. *Photo: W. Palomino*

In 2020, ITTO—in close collaboration with members of the Collaborative Partnership on Forests, the Asian Forest Cooperation Organization and many other partners working in tropical forests—published *Guidelines for Forest Landscape Restoration in the Tropics* with the aim of helping policymakers, practitioners, community-based organizations and others put forest landscape restoration (FLR) into practice in the field.[1]

To encourage the applied use of the guidelines, ITTO organized three training webinars in 2021 targeting stakeholders in Latin America. This article presents insights and lessons from these workshops that might help in ensuring the success of FLR efforts in the future.[2]

About the webinars

The first two webinars, co-hosted by ITTO and the Tropical Agricultural Centre for Research and Education (CATIE), targeted attendees from Central America and Mexico (19 August 2021) and tropical South America (23 September 2021). A third webinar was convened for participants in Peru (7 October 2021), co-hosted by Peru's National Forest and Wildlife Service (SERFOR). Overall, about 300 participants from more than 15 Latin American countries and elsewhere attended the webinars, each of which had a duration of four hours.

The webinars provided opportunities for exchanges on good practices in FLR among practitioners, researchers and administrators in ITTO member countries in Latin America and gave rise to recommendations for increasing application of the guidelines in the region. At each of the three events, international and national experts[3] explored the themes covered by the six FLR principles (Box 1) and practical applications, using case studies from countries in the region.

Insights from the training content

The following insights were gained from presentations and discussions at the webinars.

- **FLR requires consensus-building and good governance processes.** It needs to be planned and organized at the landscape scale and not in forested areas alone. This, in turn, requires a functional intersectoral governance structure and a broad, multidisciplinary stakeholder participation process that clarifies who the key actors are, how they will participate and how they will be affected by the FLR interventions.[4]
- **FLR based on productive models offers a viable option for reducing deforestation**. A case study in Mexico's Oaxaca state[5] shows that FLR based on productive models offers a viable alternative to other land uses by delivering economic profitability and various social returns, thereby helping reduce deforestation. As in any restoration effort, this must be accompanied by adequate regulatory instruments and financing models that link restoration to incentives for the conservation of natural vegetation in productive landscapes.

1 www.itto.int/guidelines
2 The article that follows this one summarizes some of the outcomes of a five-day workshop with a similar purpose held in the Asia-Pacific region in 2021.
3 The participation of most experts was possible thanks to their own organizations, with special mention to the Partnership for Integrated Research and Development (AIDER) (Peru), the Center for International Forestry Research-World Agroforestry Centre (CIFOR-ICRAF), Centro de Conservación, Investigación y Manejo de Areas Naturales (CIMA) (Peru), Helvetas (Switzerland), Instituto Privado de Investigación sobre Cambio Climático (ICC) (Guatemala), the International Union for Conservation of Nature (IUCN), Ministerio de Medio Ambiente y Recursos Naturales (MARN) (El Salvador), Restor and the World Resources Institute (WRI).
4 "Planning forest landscape restoration", by Roger Villalobos (CATIE).
5 "Applying restoration with a landscape approach and integrated management: the case of the State of Oaxaca, Mexico", by Silvio Simonit (IUCN).

Putting trees back: Trees and other restoration measures are increasing the provision of ecosystem services and tree products in this agricultural landscape in rural Costa Rica. *Photo: E. Payán/ITTO Fellow*

Box 1: What is forest landscape restoration?

FLR is "a process that aims to regain ecological functionality and enhance human well-being in deforested or degraded landscapes" (Besseau et al. 2018). It is an inclusive, whole-of-landscape approach that can help reverse land degradation, increase carbon storage, conserve biodiversity and create sustainable livelihoods for local communities (ITTO 2020).

Six principles have been formulated to establish a common understanding on FLR and guide efforts at the international, national and local levels. These are: 1) focus on landscapes; 2) engage stakeholders and support participatory governance; 3) restore multiple functions for multiple benefits; 4) maintain and enhance natural forest ecosystems within landscapes; 5) tailor to the local context using a variety of approaches; and 6) manage adaptively for long-term resilience (Besseau et al. 2018). The ITTO guidelines have been developed using these principles, and they set out guiding elements and recommended actions for each principle to assist stakeholders in implementing FLR. The recommended actions are presented in an operational framework comprising four phases:

1) Visioning (preparation)—short-term timeframe to define the FLR goal and a long-term timeframe for achieving the vision.
2) Conceptualization (planning)—relatively short-term timeframe (e.g. 1 year).
3) Implementation (acting)—mid-term timeframe (e.g. 3–10 years).
4) Sustainability (sustaining the achievement)—long-term timeframe (at least decades).

- **The prioritization of restoration interventions should be based on the problems and needs of local producers.** This was illustrated by a case study in the Peruvian Amazon,[6] where water regulation was identified as the top priority and interventions focused on an income-diversification strategy using species and designs to achieve synergies between restoration, conservation and climate-change mitigation and adaptation.
- **Productive value chains can help in restoring degraded landscapes.** A case study of a cacao-based agroforestry system in Guatemala[7] showed that developing restoration-based value chains can take decades. It also requires continual efforts to address the many facets of FLR, such as land tenure, marketing, technical management, finance and the environment.
- **Scaling up FLR will take incentives.** Public incentives are needed to scale up FLR, given that many of its benefits have no market value. Governments need to reformulate, prioritize and redirect incentives to enable the development of sustainable value chains through FLR actions, encourage long-term restoration interventions and provide additionalities that reduce deforestation and forest degradation.[8]
- **Integrating territorial planning, community engagement and institutional coordination is also needed.** The aim of a programme by CIMA (a non-governmental organization in Peru) was to assist small-scale local initiatives to undertake integrated territorial planning for landscape restoration and development.[9] The experience showed that the first consideration is to maintain connectivity through landscapes to enable the flow of ecosystem services and wild populations. Under

6 "Applying restoration with a landscape approach and integrated management: Experience in Padre Abad, Ucayali, Peru", by Valentina Robiglio (ICRAF).

7 "Experience in Lachuá, Alta Verapaz, Guatemala", by Tania Ammour (IUCN).
8 "Public incentives for landscape restoration", by Rene Zamora (WRI).
9 "Ensuring the conservation of natural ecosystems through the ecological restoration of the landscape in the Buffer Zone of the Cordillera Azul National Park, San Martín, Peru", by Lily Rodriguez (CIMA).

the programme, local farmers have been involved in the FLR planning process from the outset and in the identification of benefits, and they have a long-term commitment to maintaining the restored areas. Another strategy for achieving scalability and long-term outcomes is to involve various levels of governance, such as municipalities, the environmental authorities of regional governments and national park authorities, and other institutions, such as universities.

- **FLR requires adequate, targeted communication.** Tailoring communication according to the audience, and listening to all parties, are crucial for the FLR process and its outcomes.

Application of the guidelines—feedback from participants

Participants in each webinar were asked to complete a short questionnaire. On the question of which aspects of the guidelines they considered most important and useful for their work, most respondents (n = 68) indicated principles 2 ("engage stakeholders") and 1 ("focus on landscapes"), followed by 6 ("manage adaptively") and 3 ("restore multiple functions").

Danielle Schweizer, from Restor, a non-governmental organization, seemed to reflect a common view on the guidelines among participants when she wrote: "The effort to create a guide on the application of the FLR principles using a project management framework to operationalize them seems to me fundamentally important. The ITTO *Guidelines for Forest Landscape Restoration in the Tropics* is the first clear and unspoken result to attempt this. The case studies [in the guidelines] to illustrate the application of the principles and guiding elements help immensely to move from theory to practice and to understand how FLR initiatives have managed to successfully comply with some of the principles. Similarly, users of the guide may see that it is difficult for a project to comply with all the principles correctly but that a first step is to try and be aware that these principles and the guide exist to support project managers."

Questionnaire respondents suggested that the guidelines might be encouraged and applied to situations in their own countries by (for example):

- promoting the active and dynamic participation of authorities and local people and fostering interinstitutional, multisectoral and intercultural articulation;
- integrating FLR into public investment projects, particularly for community-driven restoration initiatives;
- improving the planning, execution and monitoring of FLR projects by giving more voice to stakeholders, greater engagement with local communities, and improving monitoring and follow-up tools and approaches;
- generating or adapting the necessary policies and regulations for the promotion of FLR, as well as generating guidelines based on relevant experiences;
- strengthening FLR-related programmes, especially in the long term, with sustainable monitoring and evaluation systems supported by academia and other stakeholders;
- awareness-raising and sensitization in schools and among rural people and authorities, and including FLR topics in higher-education and technical training curricula; and
- promoting academic and scientific research into FLR, providing training and capacity strengthening to local promoters and restoration practitioners, and integrating FLR strategies and good practices into technical assistance and rural extension programmes.

The main purpose of the webinars was to disseminate the guidelines as a tool for guiding FLR planning and implementation in Latin America, given prevailing highly complex policy, institutional, financial and technical challenges. But other strategies for knowledge transfer are much needed, as acknowledged by webinar participants. As AIDER's Mariolidy Sanchez observed, "Dissemination is not enough to guarantee the transfer of knowledge to key stakeholders, many of whom often have internet access limitations and cannot participate in workshops or events to socialize the tools. More adequate dissemination strategies to consider would be, for example, alliances with civil-society organizations, professional associations and universities that operate at the subnational level and have direct ties with actors and could more easily transfer information".

A further step, according to Manuel Guariguata from CIFOR-ICRAF, could be "to validate [FLR's] applicability in the field and examine how the different actors involved perceive its practical utility and what gaps should be filled in or which aspects should be corrected".

The materials produced (including summaries and references for further learning), and the videos of each webinar, can be downloaded at

www.itto.int/news/2021/09/16/local_livelihoods_the_key_to_forest_landscape_restoration_in_central_america_and_mexico_webinar/

www.itto.int/news/2021/10/22/more_outreach_needed_for_uptake_of_forest_landscape_restoration_in_south_america_webinar/

Building momentum for forest landscape restoration in Asia-Pacific

A five-day online workshop brought ITTO's guidelines to the attention of practitioners and policymakers

by Taesik Ham

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School outing: Students, teachers and officials of the Forestry Administration had a tree-planting day in early 2020 in the Teuk Kraham commune, Preah Vihear province, Cambodia, as part of an FLR initiative. *Photo: Hort Sothea/Cambodia Forestry Administration*

ITTO published guidelines on forest landscape restoration in 2020, setting out 30 guiding elements and a number of recommended actions for each of six FLR principles (see article on page 10), with the aim of providing guidance for restoring degraded forests and landscapes in the tropics. To help disseminate the guidelines and encourage their uptake, ITTO and the Asian Forest Cooperation Organization (AFoCO) convened a five-day virtual workshop in September–October 2021 for member countries of the two organizations in the Asia-Pacific region. This article summarizes the workshop outcomes.

Seventy-two people from 15 countries in the region took part, including participants from Central Asian AFoCO member countries Kazakhstan, Tajikistan and Turkmenistan—although these countries do not have tropical forests, the principles of FLR still apply in their contexts.

The workshop comprised 15 sessions, each 1–2 hours in duration. It featured four keynote presentations giving a global perspective on forest restoration and reforestation, six lectures covering the most important concepts related to FLR (Box 1), question-and-answer segments, and case studies on FLR from Bhutan, Cambodia, Fiji, India, Indonesia and the Lao People's Democratic Republic. Through this, participants were able to think about how to implement FLR and the problems and opportunities they might encounter in applying FLR.

Workshop participants presented on key issues in their countries and their reasons for participating in the workshop. The current situation in each country was diagnosed through a SWOT [strengths, weaknesses, opportunities and threats] analysis of FLR application.

Box 1: Presentations at the workshop

Keynote addresses

- "Forests and climate change: forests as an element in a carbon-neutral commitment", by Professor Jürgen Blaser
- "ITTO's *Guidelines for Forest Landscape Restoration in the Tropics*", by Professor Jürgen Blaser
- "Best practices approaches in forest-related ecosystem restoration", by Dr Michael Kleine
- "Financing forest landscape restoration", by Mr Jerry Velasquez

Lectures

- "Overview of FLR and the Restoration Opportunities Assessment Methodology (ROAM): a case study on the use of ROAM in Viet Nam", by Dr Scott Perkin and Mr Jake Brunner
- "Safeguards and free, prior and informed consent in REDD+", by Dr Nguyen Quang Tan
- "Stakeholder analysis for FLR intervention with a case study: empowering local communities for the restoration of a coastal landscape in the Ayeyarwady Delta, Myanmar", by Mr Asep Sukmana
- "Logical framework (SMART Indicators) for FLR intervention", by Mr Orlando A. Panganiban
- "Carbon benefit analysis for FLR intervention", by Professor Nophea Sasaki
- "Identification of potential degraded forests for restoration in the tropics: implications for carbon sequestration and revenues", by Dr Manjunatha Venkatappa

Patrolling: Community members on their monitoring rounds at the Prey Lang Forest, a nature reserve in Kampong Thom, and Preah Vihear, Kratie and Stung Treng provinces, Cambodia. *Photo: RECOFTC*

Giving nature a helping hand: Forest restored through assisted natural regeneration in San Miguel, Danao Municipality, Boho, the Philippines. *Photo: Patrick Durst*

Forest degradation and deforestation were mentioned as issues in each country; participants explored the application of FLR in their countries, the potential benefits, and how FLR might positively and negatively affect the livelihoods and welfare of stakeholders.

Insights from the workshop

The workshop identified two factors that might limit success in applying the FLR guidelines. One of these is a lack of interaction between FLR practitioners and international institutions, which reduces the potential for synergy and local insights in projects developed by the latter. The other is a lack of understanding of funding sources and procedures. To increase the chances of success in gaining finance for FLR project proposals, participants acknowledged that it is important to access the right kind of funding sources and to obtain co-financing that reduces the risk for funding agencies (Box 2).

In their post-workshop evaluations, participants said they hoped to directly develop project proposals through future workshops. They also indicated a desire for more opportunities to exchange information with other countries and to increase understanding of FLR.

The Deputy Director of the Department of Wildlife and Biodiversity, Cambodia's Forestry Administration, Mr Hort Sothea, who attended the workshop, said, "the workshop provided very comprehensive knowledge and experiences and ability to develop action plans for forest landscape restoration projects. The knowledge and experiences gained will be used to develop action plans for forest landscape restoration in Cambodia, especially the analysis of issues and weaknesses, strengths and opportunities, and the setting of project development goals, outcomes, objectives, outputs and activities." Mr Sothea expressed his ambition to share experiences in FLR implementation in Cambodia with other countries in the future.

Box 2: Potential sources of funding for FLR, by national circumstances and type of activity

- Countries with high financial capability—public and private domestic finance
- Countries with limited financial capability—bilateral and multilateral finance
- Activities that store carbon and increase resilience—e.g. Green Climate Fund, Adaptation Fund
- Activities that are part of government mandate—public domestic finance
- Activities that are transformative—bilateral funders and multilateral organizations such as the Green Climate Fund
- Activities that generate income—private finance
- Activities that need short-term finance—public international finance
- Activities that need long-term financing—payment schemes for ecosystem services, carbon markets, private finance

The risk of forest degradation is increasing in the Asia-Pacific region due to population growth and economic expansion, and demand for FLR, therefore, is likely to increase. International organizations such as ITTO and AFoCO can encourage the uptake of FLR by facilitating the exchange of success stories and lessons learned among countries, helping develop capacity in FLR, and supporting educational opportunities. The two organizations will continue to cooperate towards this end.

Workshop materials, including presentations and a video of the event, are available at: www.itto.int/news/2021/09/29/workshop_explores_key_elements_of_successful_forest_landscape_restoration_in_asia_pacific/

Comparing recent deforestation measures

There are similarities and significant differences between such measures introduced by the European Union, the United Kingdom and the United States

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Still intact: Primary rainforest in Guyana. The US, EU and UK have all recently adopted trade measures aimed at eliminating illegal deforestation. *Photo: Guyana Forestry Commission*

In the last quarter of 2021, the United States (US), the European Union (EU) and the United Kingdom (UK) introduced or adopted measures aimed at eliminating illegal deforestation throughout the world. All three measures recognize the harmful effects of deforestation with regard to climate change and seek to address such effects by prohibiting certain commodities produced on (illegally) deforested land from being placed on their respective markets. However, there are significant differences among the measures that warrant closer examination as they could have market access implications for companies.

This article sets out the key similarities and differences across the US, EU and UK anti-deforestation measures, building on Steptoe's previous posts on the proposed Fostering Overseas Rule of Law and Environmentally Sound Trade Act of 2021 ("FOREST Act") in the US,[1] the EU's Proposal for a Regulation on Deforestation-free Products ("Proposed Regulation"),[2] and the UK's Environment Act 2021 ("Environment Act").[3]

Scope of products

As noted above, the three anti-deforestation measures prohibit the entry of certain commodities originating from (illegally) deforested land onto their respective markets. Table 1 summarizes the scope of products that are covered under each measure.

The covered commodities under the US and European Commission ("Commission") proposals are nearly identical—with the exception of rubber, which is only on the US list, and coffee, which is only on the EU list. Both proposals also include whole commodity products and products derived from such commodities. It is important to note that the scope of the derivative products appears to be broader under the Proposed Regulation, as it not only includes products that contain or have been made with the relevant commodities, but also includes products that have been fed the relevant commodity. Moreover, while the Proposed Regulation seems to cover wood products in general, as compared to the wood pulp products covered under the FOREST Act, both jurisdictions maintain laws that prohibit illegally sourced timber (the EU Timber Regulation and the Forest Law Enforcement Governance and Trade Regulation, as well as the US Lacey Act Amendment of 2008, respectively).

Unlike the proposed US and EU measures, the UK Environment Act does not specify the products included under "forest risk commodities". Instead, the legislation directs the Secretary of State to pass regulations to define "forest risk commodities". As noted above, current consultations of the Secretary of State include similar commodities as the US and EU lists, with the exception of maize, which is exclusive to the UK list. Moreover, similar to the FOREST Act, the UK proposal does not include timber or timber products, as they are regulated under the UK Timber Regulations. Although no commodities have yet been specified as "forest risk commodities", the Environment Act adopts a similar approach to the Commission's Proposed Regulation and includes both commodities and derivative products, including "any product of an animal fed on a forest risk commodity or a product derived from a forest risk commodity".

1 www.steptoeglobaltradeblog.com/2021/11/potential-implications-of-the-forest-act-of-2021-and-related-developments-in-other-jurisdictions
2 www.steptoeglobaltradeblog.com/2021/12/the-european-commissions-proposed-ban-on-products-driving-deforestation-and-forest-degradation
3 www.steptoeglobaltradeblog.com/2021/12/the-european-commissions-proposed-ban-on-products-driving-deforestation-and-forest-degradation

Table 1: Scope of products covered under each measure

EU	UK	US
"Relevant commodities": oil palm, soya, cocoa, cattle, wood and coffee **"Relevant products":** products that contain, have been fed with or made with relevant commodities, including palm oil, soya-bean oil, leather, chocolate and furniture	**"Forest risk commodities":** to be determined by the Secretary of State. Current consultation proposes cattle (e.g. beef and leather), cocoa, coffee, maize, palm oil, rubber and soy	**"Covered commodities":** palm oil, soy, cocoa, cattle, rubber and wood pulp **"Covered products":** products made wholly or in part of a covered commodity

Table 2: Prohibition of entry

EU	UK	US
No relevant commodities and products can be placed, made available on or be exported from the EU market, unless the following conditions are met: • **deforestation-free** • **produced in accordance with relevant legislation of the country of production** • covered by a due-diligence statement (12-month grace period after entry into force)	No use of forest-risk commodities or products derived from that commodity in UK commercial activities unless **"local laws were complied with in relation to that commodity"** in the country of production	No covered commodities or products that are produced from **illegally deforested land** (i.e. deforestation in violation of the law of the country where deforestation is occurring) can enter the US market No covered product from countries with action plans can enter the US market, unless the importer files a declaration upon entry certifying that certain due-diligence measures were taken to assess and mitigate risks of illegal deforestation in the supply chain (Effective 1 year after enactment)

Finally, for the proposed US and EU measures, reviews of the lists of commodities and products will be conducted on a regular basis. Under the FOREST Act, the list of covered commodities is to be updated at least annually, while the Proposed Regulation contemplates a review two years after enactment, and thereafter at regular intervals. A review period was not specified in the Environment Act, but one of the reasons for allowing the Secretary of State to define forest risk commodities by regulations is because it "offers the flexibility … to extend the range of commodities captured … to accommodate changing patterns of deforestation", and therefore regular reviews are anticipated.

Prohibitions

All three measures prohibit the entry of illegally deforested commodities and products into their markets. However, what is considered illegal deforestation varies.

As shown in Table 2, potential coverage of the Proposed Regulation is more extensive than the FOREST Act and the UK Environment Act with regard to how deforestation is defined. All three measures prohibit market access to commodities and products that were produced in violation of the relevant laws of the exporting market, but the proposed Commission regulation also requires the commodities and products to be "deforestation-free". The Proposed Regulation defines "deforestation-free" as relevant commodities and products that were produced on land that has not been subject to deforestation since 31 December 2020, and wood that has been harvested from forests without inducing "forest degradation" after 31 December 2020.

Put simply, the Proposed Regulation can prohibit market access to relevant commodities and products produced on land that was *lawfully* deforested under the local laws of the country of production. Moreover, "deforestation" is broadly defined under the Proposed Regulation as "the conversion of forest to agricultural use, whether human-induced or not". Additionally, even if the product was produced on deforested land, the definition for "forest degradation" is also expansive. Specifically, the definition covers land where "harvesting operations that are not sustainable and cause a reduction or loss of the biological or economic productivity and complexity of forest ecosystems, resulting in the long-term reduction of the overall supply of benefits from forest, which includes wood, biodiversity and other products or services".

In addition, the prohibitions under the EU and UK measures extend further than the FOREST Act in terms of the list of prohibited acts. The Proposed Regulation prohibits the import, sale and export of relevant commodities and products from the EU and applies equally to foreign and domestic commodities and products. The Environment Act prohibits the use of covered forest commodities in UK commercial activities, which includes activities such as manufacturing, production, processing, distribution, sales, supplying and purchasing for the purposes of producing or distributing, so it also applies to both foreign and domestic commodities and products. In contrast, the FOREST Act's restrictions are limited to imports of certain commodities and products.

Due diligence

All three measures implement a risk-based system for conducting due diligence on the supply chains of the selected commodities and products.

The FOREST Act imposes due-diligence measures on importers of certain commodities and products to certify that the imports were not produced on illegally deforested land. Specifically, importers of covered products must file a declaration upon entry certifying that reasonable care was taken to assess and mitigate the risks that any covered

commodity used to make the product was produced on illegally deforested land. This provision goes into effect one year after enactment. The FOREST Act directs the US Customs and Border Protection ("CBP") to publish guidance on standards for "reasonable care" within 90 days of enactment.

Importers of covered products from countries with action plans (explained further in the next section) are subject to more stringent due-diligence measures. For these importers, a declaration with "sufficient information to identify the steps in "the supply chain and all points of origin for the covered commodity and the "steps taken to assess and mitigate the risks" that there was illegal deforestation along the supply chain in those countries must be filed at time of entry. This provision is also effective one year after enactment.

Under the Proposed Regulation, operators and traders (other than SMEs [small and medium-sized enterprises]) must undertake due diligence to ensure that relevant commodities and products are not prohibited pursuant to the Proposed Regulation, and submit a due-diligence statement certifying compliance. Operators are those who place "relevant commodities and products on the Union market or export them from the Union market" in the course of commercial activities, while traders are those "in the supply chain other than the operator who, in the course of commercial activity, makes available on the Union market relevant commodities and products."

To comply with these due-diligence measures, operators and traders are required to: (i) collect and keep records of information related to the supply chain of the relevant commodities and products; (ii) conduct risk assessments of potential non-compliance with the requirements; and (iii) perform risk mitigation measures if there is a non-negligible risk of non-compliance. If this is not possible, they will be prohibited from placing or making available the relevant commodities or products on the EU market or exporting therefrom. Large companies will be given a 12-month grace period before they will need to certify compliance, while microenterprises will be given a 24-month period.

The Environment Act enacts a similar due-diligence system as the Proposed Regulation. Businesses of a certain size that use a forest risk commodity or derivative product in their UK commercial activities must establish and implement a due-diligence system. This system must: (i) identify and obtain information about the commodity/product; (ii) assess the risk of non-compliance with local laws; and (iii) mitigate such risks. The Environment Act tasks the Secretary of State to provide further guidance with respect to the types of information to obtain, standards to assess risk, and ways to mitigate risk. The Secretary is also consulting on the risk-mitigation level and considering proposals to "eliminate risk or reduce risk to as low as reasonably practicable." Moreover, the threshold for when a business will be within scope is under consultation. Businesses within scope, but that only use small amounts of the commodity, can apply for an exemption. There will be a transition period of at least six months.

Country risk assessment

Accompanying the due-diligence measures explained above, the FOREST Act and the Proposed Regulation require additional due diligence for commodities and products produced in countries with higher risk of deforestation.

Under the Proposed Regulation, the Commission will create a benchmarking system that classifies countries as low, standard, or high risk based on assessment criteria that evaluate a country's rate of deforestation and forest degradation, its initiatives to tackle deforestation and forest degradation, as well as specific assessments linked to particular commodities. Relevant commodities and products originating from countries identified as low-risk would have less-stringent due-diligence obligations, where only the first step of the due-diligence measure would apply. However, relevant commodities and products originating from high-risk countries will be subject to higher scrutiny of their due-diligence performance by Member States. Concerns have been raised as to whether such a system conflicts with EU Member States' World Trade Organization obligations.

The FOREST Act also classifies countries as high-risk or not high-risk and applies additional due-diligence measures to high-risk countries. The United States Trade Representative (USTR), in consultation with the State Department and the United States Agency for International Development, would identify countries with inadequate and ineffective protections against illegal deforestation. For countries identified as high-risk, USTR would develop action plans with measurable goals and benchmarks. Covered products originating from countries with action plans would be subject to stricter due-diligence requirements. The FOREST Act requires USTR to identify high-risk countries within 180 days of enactment and to develop action plans for them within three years.

Unlike the Proposed Regulation and the FOREST Act, the Environment Act does not provide for different tiers of risk assessment based on a central list produced by the UK government: instead, it is for businesses to determine whether there is a low, medium or high risk of illegal land use in a source country, and plan its mitigation according to that level of risk.

International cooperation

The FOREST Act and the Proposed Regulation contemplate cooperation with other countries. The FOREST Act allows limited cooperation with producer countries for the purpose of developing action plans. The action plans ultimately must implement certain goals, such as new laws to eliminate illegal deforestation in the producer country, measures to ensure that the country has sufficient capacity to enforce deforestation laws, processes to address and remedy previous illegal deforestation activities, and comprehensive monitoring and data sharing with the producer country to track deforestation and potential impacts on commodity supply chains.

While producer countries are not involved in the European Commission's risk classification, the Proposed Regulation directs the Commission to notify and extend an opportunity to countries to participate in the classification process, if the Commission intends to change the country's risk level. The Proposed Regulation also provides for cooperation and engagement between the Commission and producer countries so as to develop partnerships to jointly address deforestation and forest degradation. Types of cooperation include: structured dialogues, support programmes, and provisions in agreements to "enable producer countries to make the transition to an agricultural production that facilitates" compliance. Implementation of such provisions will be considered by the Commission when classifying risk levels.

The UK Environment Act does not contain any specific provision for international cooperation, but the consultation indicates that where producer countries wish to establish standards on sustainable production, the UK will "continue to support and help strengthen those standards to deliver robust environmental outcomes while supporting local economies".

Enforcement

The rules regarding enforcement of the Proposed Regulation will need to be implemented across the EU's Member States. Each EU Member State's relevant authorities is responsible for enforcement. To enforce the due-diligence measures of the Proposed Regulation, EU Member State authorities must ensure that annual compliance checks cover at least 5% of the relevant operators and 5% of the quantity of each of the relevant commodities placed, made available, or exported from their markets. For relevant commodities and products produced in high-risk countries, however, Member States are obligated to annually review 15% of operators and 15% of the quantity of the relevant commodities placed, made available, or exported from their markets.

The FOREST Act assigns enforcement obligations to multiple federal agencies, including US Customs and Border Protection (CBP) and the departments of Agriculture, Interior, and Justice. In addition, the US Animal and Plant Health Inspection Service, in collaboration with other federal agencies, will conduct random audits of importer filing declarations, and share declarations with other federal agencies to ensure effective enforcement. Under the bill, CBP will establish enforcement mechanisms within 180 days after enactment and include a process for receiving information from the public of potential violations.

The enforcement provisions under the UK Environment Act will be built out through regulations implemented by the Secretary of State. Such regulations may include guidance on how enforcement authorities will exercise their powers (e.g. inspection, examination, search and seizure) as well as recordkeeping requirements.

Timeframe for passage

Unlike the UK Environment Act, which was enacted in November 2021, and the Proposed Regulation, which the Commission hopes to be adopted by 2023, the likelihood of the FOREST Act's passage and timing are uncertain. The bill's sponsors are committed to moving it, but it is unlikely to be voted on in 2022, and the political environment for climate measures in the US could change dramatically in 2023. In 2022, while the FOREST Act and Proposed Regulation continue to be developed, it will be important to monitor the crafting of UK secondary legislation to bring the due-diligence obligations of the Environment Act into force.

Conclusion

While this article provides a general overview of the similarities and differences of the US, EU, and UK measures, businesses interested in the potential compliance implications for their supply chains would benefit from a closer reading of each measure and an analysis of how the measures may impact their supply chains. All three measures are likely to increase costs for producers and/or purchasers of the relevant commodities and products derived from these commodities to a significant degree, even precluding market access in some cases. While the Commission's Proposed Regulation appears to be the most restrictive of the three measures, at least at the moment, both the EU and US measures are likely to undergo major changes, and the UK implementing regulations are still to come. It is also a near certainty that these three will not be the only jurisdictions to adopt anti-deforestation measures. Firms that are conducting business in one or more of these jurisdictions and that may be impacted need to follow closely the development of these measures, examine their supply chains, and begin evaluating options to mitigate potential risks and take advantage of opportunities.

This article is reprinted unedited here, with the authors' agreement, from the online law journal, LexBlog.com (published on 21 January 2022), because of its likely interest to ITTO members, especially producer members whose trade of tropical forest products could be affected by these evolving policies.

The original article is available at www.lexblog.com/2022/01/21/comparing-recent-deforestation-measures-of-the-united-states-european-union-and-united-kingdom

What a hundred women can do

An ITTO activity has helped two women's groups in Togo create new forest resources

by Cécile Bibiane Ndjebet

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New resource: ODEF officials and local women inspect recently planted teak trees on 12 hectares of previously degraded land near Pagala-Gare village, Blitta, Togo. *Photo: Abalo Kpatcha*

With support from an ITTO initiative, 100 women from two locally based groups in the Blitta and Lakes prefectures of Togo produced nearly 30 000 seedlings of forest tree species in a 12-month period and used them to restore 20 hectares of degraded lands. The outcome was 8 hectares of tree plantations and 12 hectares of agroforests (7 hectares of trees and maize and 5 hectares of trees and soybeans). The agroforests are already generating significant financial income, and the plantation will help address local needs for wood energy and timber.

"This project has enabled us to strengthen our technical and material capacities," said Ms Béatrice Sandji, president of the NOVISSI women's group. "we are proud to have tree plantations today and we have also mobilized large sums of money through the sale of maize and soybeans. We have stored large quantities of our production for the feeding of our families."

The initiative has aroused great interest among women in other localities and among local traditional authorities and sectoral administrations.

"It is a very important contribution to the restoration of landscapes in our country; it will also contribute to the reduction of pressure on forest resources," said Pyoabalo Alaba, Director General of the Office of Development and Exploitation of Forests (ODEF).

The success of this ITTO project shows what can be done with relatively small amounts of financial support.

The two women's groups do not intend to limit themselves to their current achievements. They would like to double the reforestation area and take the lead in the production and sale of tree seedlings in Togo.

The two groups are seeking additional support from ITTO to enable them to:

- continue monitoring, replanting, maintaining, surveilling and protecting the seedlings for the next two years to ensure a high survival rate;
- duplicate the activity in other prefectures to greatly increase the number of women producing seedlings for sale and reforestation and to help increase forest cover and create sustainable woodfuel resources; and
- develop other income-generating activities in the initiative's original area of influence to diversify women's sources of income and thereby increase their financial autonomy and the food security of their communities and reduce pressure on forests in the area.

"It's inspiring to see what 100 women can do in a year," said ITTO Executive Director Sheam Satkuru. "Imagine what a thousand, ten thousand, a million women could do."

This ITTO initiative was made possible by funding from Soka Gakkai.

Fellowship report

Sooner or later, dreams do come true!

By Bayron Alexander Ruiz

(toxbombaso@yahoo.es)

Carbon rich: Field workers collect soil samples in a mixed melina plantation, Santiago Ixcuintla, Nayarit, Mexico, for analysis as part of the author's doctoral thesis. *Photo: B.A. Ruiz*

I am an agroforestry engineer from Colombia. I obtained my undergraduate degree at the Technological University of Chocó Diego Luis Córdoba (UTCH) in Colombia and a science master's degree in forest products and a doctoral degree in biosystematics, ecology and the management of natural and agricultural resources at the University of Guadalajara in Mexico.

In mid-2008, I learnt about the ITTO Fellowship Programme from Ditter Horacio Mosquera Andrade (now deceased), who at the time was my professor and mentor at UTCH. Ten years later (2018), I joined the select—but growing—group of ITTO Fellows, which was an extremely important moment in my professional life and helped finance part of my doctoral studies.

I began my master's degree in 2014 and ultimately obtained my PhD in 2021. The focus of my study was commercial plantations of teak (*Tectona grandis*) and melina (*Gmelina arborea*) in Mexico and their contributions to the reduction of atmospheric carbon dioxide and therefore to the mitigation of climate change. Both species are introduced to Mexico and are commercially valuable species there.

I used the assistance I received from the ITTO Fellowship to conduct the following two field activities: biomass and soil sampling at different depths, which made it possible to determine the carbon sequestered in the plantations under study; and the sampling of melina logs to assess their physical and mechanical properties and hence their suitability for the forest industry. This field work also included laboratory work to assess, among other things, the concentration of macro- and micronutrients and carbon in biomass and soils.

Root mass: Mechanized sampling of root biomass in a pure melina plantation at Santiago Ixcuintla, Nayarit, Mexico. *Photo: B. Ruiz*

The field work helped strengthen and enrich my doctoral thesis, "Carbon dynamics and technological characterization of melina (*Gmelina arborea*) established in two forest production models", which was published in June 2021.[1]

Undertaking my doctoral thesis was an amazing experience. It enabled me to determine in broad terms why *G. arborea* tends to produce more biomass and store more carbon and nutrients in mixed forest production systems than in pure stands, regardless of tree density per unit area. In addition, I developed high-precision allometric models that can be used to predict species biomass by indirect methods.

I had the opportunity to work with a team of people, who provided support in the sampling of plantations, including the layout and measurement of biomass and soils by manual and mechanical methods at different depths. This process served to demonstrate that some important forest species make a greater positive contribution to climate-change

1 www.riudg.udg.mx/handle/20.500.12104/84584

Weighty matters: The author (second from the left) and other researchers conduct manual biomass sampling in a mixed plantation of melina, laurel and guayaquil, Santiago Ixcuintla, Nayarit, Mexico. *Photo: B. Ruiz*

mitigation when interacting with laurel (*Cordia alliodora*) and guayaquil (*Pseudosamanea guachapele*) than when planted in monocultures. This finding was pleasing because the plantation owner and his team had previously thought that the plantations were useful only for timber production and that the environmental benefits were likely to be of minimal economic value.

I published two papers in scientific journals—Ruiz-Blandon et al. (2020) and Ruiz-Blandon et al. (2021)—in collaboration with the project director (Dr Eduardo Salcedo Pérez) and my advisors (Dr Efrén Hernández Álvarez, Dr Ramón Rodríguez Macías, Dr Agustín Merino García and Dr Julio Campo Alves).

The financial support provided by ITTO and the University of Guadalajara enabled me to carry out a one-month research internship in 2019 at the Polytechnic University of Madrid, Spain, under the coordination of Dr Ignacio Bobadilla Maldonado. The internship involved the characterization of the physical and mechanical properties of *G. arborea* wood in the plantations under study and their forestry implications.

The COVID-19 pandemic delayed by one year the completion of my PhD, which I finally obtained in mid-2021—better late than never. After that, many opportunities have opened up for me, including the possibility of being an evaluator of high-impact agricultural and environmental projects in Colombia. I have also peer-reviewed several articles submitted to national and international scientific journals.

Dreams do come true—you just have to pursue them, and patience and discipline are the keys to success. My expectations in the short, medium and long term are to undertake a post-doctorate research programme, become a member of Mexico's National Researchers' System (*Sistema Nacional de Investigadores*) funded by the National Science and Technology Council, and be part of the teaching staff at the University of Guadalajara as a full-time or part-time professor. This will ensure a better future for me and my family.

Acknowledgements

I especially thank my daughter, Marilyn Zuleth Ruiz Guzmán, and my son, Lovren Aleksander Ruiz Guzmán (Rest in Peace). I also thank the National Science and Technology Council for awarding me the fellowships to obtain my master's and doctorate degrees in Mexico; ITTO for awarding me an ITTO Fellowship; and the University of Guadalajara for facilitating my post-graduate training. I also thank the many institutions, colleagues and other collaborators that made my work possible.

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Market trends

As shipping companies profit, many small and medium-sized businesses are going under due to a lack of containers

by Mike Adams

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Rough waters for some: A tanker at sea during a storm. *Photo: ksamurkas_POND5*

Trade data for 2021 released in mid-February provide an opportunity to assess how far the recovery from the effects of the COVID-19 pandemic has progressed. Overall, the direction of trade in tropical wood products remained much the same as in pre-pandemic days. What did change, however, was the flow of wood products to Western markets—particularly the United States of America (US)—from China, but this was not the result of the pandemic but rather because of high US import duties on Chinese products.

The most crucial issue in 2020, 2021 and early 2022 has been the drastic rise in shipping costs, which continues to have a damaging impact on trade. The Indonesian Furniture and Crafts Industry Association (HIMKI) has reported that high container shipment costs have become critical for furniture exporters, pushing many small and medium-sized enterprises into bankruptcy. HIMKI estimates that around 25% of its 2500 member businesses have gone bankrupt. (See more on container costs later.)

China and Viet Nam are still major importers of tropical logs, but their imports of tropical sawnwood have also been rising. Japan no longer absorbs significant volumes of tropical logs, and even its preeminent position as an importer of tropical plywood has waned.

The member countries of the European Union (EU), along with the United Kingdom (UK), are significant importers of sawnwood, plywood, veneer and a wide range of processed products, especially wooden furniture, mostly from China and Viet Nam. The US typically imports relatively little plywood from tropical countries, but volumes rose sharply in 2021. Tropical sawnwood imports to the US are well below those of the EU but still important for some tropical sawnwood exporters.

The following analysis of import trends is based on information provided in recent editions of the *ITTO Tropical Timber Market Report*.

European Union

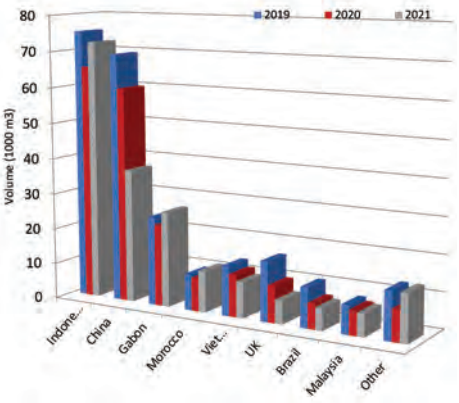
As of mid-February, EU trade data were available for only the first ten months of 2021, but this is sufficient to get a good idea of underlying trends compared with previous years.

The value of EU27 imports of all wood products, including wooden furniture, in the first ten months of 2021 was 40% higher than in the same period in 2020. Import value was up by 23% for all tropical wood products and by 44% for wood products from non-tropical regions. Of the latter, imports were up by 39% from China, 68% from the Russian Federation, 70% from Belarus and 58% from Ukraine.

The 40% increase in the value of EU27 imports from the tropics in the first ten months of 2021 was not mirrored by an equivalent increase in import volumes. The volume shipped from tropical countries during the period was 1.46 million tonnes, only 6% more than in January–October in 2020 and still 7% down compared with the same period in 2019.

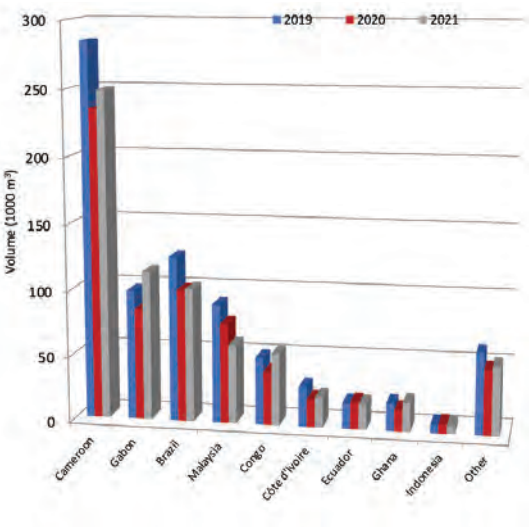
A large part of the gain in the value of tropical imports was due to a significant rise in landed prices, driven partly by rising freight rates, which are at unprecedented levels. FOB prices for tropical wood products were also driven up in 2021 by a sharp increase in global demand at a time when supplies were scarce due to the pandemic and tropical producers continued to operate under extremely challenging conditions. This, in turn, encouraged EU27 importers to buy larger quantities from more accessible suppliers in the European "neighbourhood", continuing the loss of market share for tropical suppliers in the EU market.

Figure 1: EU27 tropical plywood imports by supplier country, January–October, 2019–2021



Data source: ITTO-IMM analysis of Eurostat.

Figure 2: EU27 tropical sawnwood imports, by supplier country, January–October, 2019–2021, by major exporter country



Source: ITTO-IMM analysis of Eurostat.

Tropical log imports

The value of EU27 imports of tropical logs was up by 30% in the first ten months of 2021 compared with the equivalent period in 2020 and 3% higher than in January–October 2019. The import volume (85 800 m^3) was 19% higher than in the same period in 2020 but 6% less than in 2019, year-on-year.

Imports of 37 700 m^3 from the Congo, now by far the largest supplier of tropical logs to the EU, were 37% higher in January–October 2021 than in 2020, year-on-year, and 23% up on the same period in 2019. Imports in the first ten months of 2021 from all other leading supply countries —the Central African Republic (15 400 m^3), Cameroon (12 200 m^3), the Democratic Republic of the Congo (7 200 m^3) and Liberia (6 000 m^3)—were all higher than in the same period in 2020 but down on the level in January–October 2019 (i.e. before the pandemic).

Tropical plywood and sawnwood imports

The value of EU27 imports of tropical plywood was up by 11% in the first ten months of 2021 compared with the equivalent period in 2020 but down by 8% from January–October 2019. The import volume (190 300 m^3) in the first ten months of 2021 was 6% lower than in the equivalent period in 2020 and 22% down compared with 2019, year-on-year.

The EU27's tropical hardwood plywood imports from Indonesia, its largest supplier, reached 72 500 m^3 in the first ten months of 2021, 11% more than in the same period in 2020 but still 4% down compared with 2019, year-on-year.

The EU27's import volume of tropical hardwood-faced plywood from China amounted to 37 300 m^3 in the first ten months of 2021, 38% lower than in the same period in 2020 and 46% down compared with 2019, year-on-year. Import volumes of tropical hardwood plywood from Brazil, Malaysia and Viet Nam all continued to slide in the first ten months of 2021 (Figure 1).

The value of EU27 imports of tropical sawnwood was up by 10% in the first ten months of 2021 compared with the same period in 2020 but down by 7% compared with 2019, year-on-year. The import volume of 700 300 m^3 in January–October 2021 was 8% higher than the same period in 2020 but still down by 11% compared with 2019, year-on-year. For most of the major exporter countries (the exceptions being the Congo, Gabon and Ghana), EU imports of sawnwood increased significantly in 2021 compared with 2020 but failed to exceed the volumes obtained in 2019, before the pandemic (Figure 2).

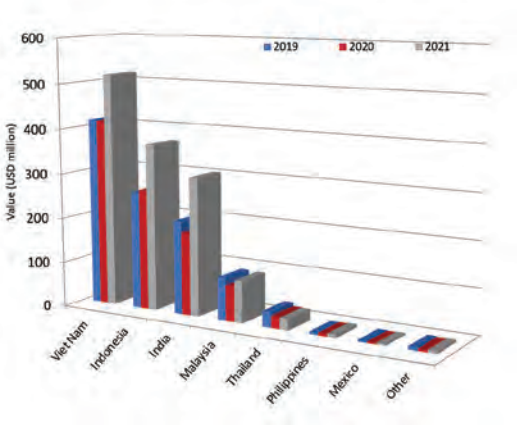
Wooden furniture drives rise in EU27 import values

The value of imports of tropical wood and wooden furniture products into all the largest EU27 destinations was significantly higher in the first ten months of 2021 than in the same period in 2020. Of the largest markets, only in Italy was the import value in the first ten months of 2021 below the value in the same period in 2019.

The value of EU27 imports of wooden furniture from tropical countries in January–October 2021 was 35% higher than in the same period in 2020 and 29% higher than in the first ten months in 2019. For the three leading tropical supply countries of wooden furniture to the EU27, India, Indonesia and Viet Nam, imports were significantly higher in the first ten months of 2021 than in the equivalent period in 2020. EU27 wooden furniture imports from Malaysia were strong in the first half of 2021 but slowed sharply thereafter. The value of imports from Thailand in the first ten months of 2021 was USD 25 million, 3% lower than in the same period in 2020 and down by 27% compared with January–October 2019 (Figure 3).

UK imports of tropical wood and wooden furniture products have mirrored the rollercoaster ride in the wider economy. Total UK tropical wood and wooden furniture imports in the

Figure 3: EU27 imports of wooden furniture from tropical countries, January–October, 2019–2021



Source: ITTO-IMM analysis of Eurostat.

12 months to December 2021 amounted to USD 1.31 billion, 27% higher than in 2020. This followed a 21% decline in 2020 compared with 2019, when supply and demand were severely affected by the pandemic.

Although the value of tropical wood and wooden furniture imports by the UK was up in 2021, it was only a marginal increase compared with 2019 (USD 1.30 billion) and insignificant compared with the average annual value over the last ten years. Moreover, tropical wood and wooden furniture have suffered a general loss of market share in the UK during the pandemic.

United States imports made gains in 2021

The US import volume of sawn tropical hardwood grew by 25% in 2021 compared with 2020 but was 18% below the 2019 volume (Table 1), according to annual data released by the US Department of Agriculture and the US Census Bureau. The data also show substantial gains in 2021 in several hardwood categories. For example, the volume of US hardwood plywood imports rose by 32%, with the import value up by 35% for hardwood flooring (Table 2), by 64% for assembled flooring panels, by 27% (to nearly USD 24 billion) for wooden furniture and by 14.6% for cabinets. In contrast, imports of tropical hardwood veneer fell by 1%.

Tropical sawn hardwood imports

The value of US imports of tropical sawn hardwood grew by 25% in 2021, year-on-year, although this was still well below the value in 2019. The value of US imports rose by 36% for sapelli in 2021 and more than doubled for mahogany and padauk. On the other hand, imports fell by 27% for balsa and by 24% for iroko. US imports of jatoba grew by 77% in 2021; this was by far the most imported tropical hardwood species last year. In second place was ipe, although the import value of this species fell by 6% in 2021 compared with 2020.

Table 1: Volume of US tropical sawn hardwood imports, by exporting country, 2019–2021

Country	2019	2020	2021
	1 000 m^3		
Ecuador	41.7	13.4	9.86
Brazil	57.9	55.1	107
Cameroon	28.6	17.1	19.05
Malaysia	31.1	18.0	17.1
Congo	13.9	11.4	13.7
Peru	0.875	0.615	0.66
Indonesia	21.3	17.1	6.44
Ghana	7.83	6.765	6.44
Côte d'Ivoire	1.73	2.92	2.87
Other	39.0	18.8	18.7
Total	**244**	**161**	**201**

Data source: ITTO-IMM analysis of Eurostat.

Hardwood plywood imports soar

US plywood imports from Indonesia rose by 49% in 2021, year-on-year, as Indonesia emerged as the country's top supplier of hardwood plywood. Imports from Viet Nam (the second-largest supplier) were also up in 2021, by 30%. US hardwood plywood imports increased in volume by more than 10% from all major supplying countries except China, which declined by 1%. Overall, US hardwood plywood imports increased in 2021 by 32% compared with 2020 and by 41% compared with 2019.

Table 2: US imports of hardwood plywood, 2019–2021

Country	2019	2020	2021
	1 000 m^3		
China	161	105	103
Russian Federation	427	442	559
Indonesia	442	601	894
Malaysia	127	138	153
Cambodia	111	107	155
Viet Nam	544	638	826
Ecuador	84.6	115	140
Other	567	476	636
Total	**2462**	**2620**	**3467**

Data source: ITTO-IMM analysis of Eurostat.

US wooden furniture imports jump

The US imported nearly USD 24 billion of wooden furniture in 2021, an average of just under USD 2 billion per month and 27% higher than in 2020 and 28% higher than in 2019. Imports from Viet Nam, the top US trade partner, rose by 23%, while imports from Mexico and India both grew by more than 60%. Imports from every major trading partner grew by more than 10% in 2021 with the exception of Malaysia, where imports rose by only 2%.

Rise in China's log imports in 2021

According to China Customs, China imported 63.6 million m^3 of logs in 2021, up by 6% over 2020. Hardwood log imports grew by 6% in 2021 and comprised 22% of total log imports. The average price for hardwood logs imported into China in 2021 was USD 271 (CIF) per m^3, up by 17% over 2020.

China imported 5.42 million m^3 of tropical logs in 2021 (9% of the country's total log import volume) (Table 3), at a value of USD 1.75 billion; this was a drop of 2% by volume compared with 2020 but an increase of 15% by value.

Table 3: China's log imports in 2021, and change from 2020

Log imports	2021 (million m^3)	% change, 2020–2021
Softwood	49.9	7
All hardwood	13.7	6
Of which tropical	5.42	-2
Total	**63.6**	**6**

Data source: China Customs.

Viet Nam's timber imports

Pine accounted for 21% of Viet Nam's total log and sawnwood imports in 2021, at a volume of 1.31 million m^3 and a value of USD 325 million; this was an increase of 34% in volume and 54% in value compared with 2020. Oak log imports amounted to 301 000 m^3 in 2021 at a value of USD 170 million, up by 1.6% in volume and by 21% in value. Viet Nam imported 258 000 m^3 of eucalypt logs worth USD 55.7 million in 2021, up by 19% in volume and by 25% in value over 2020.

Import volumes of the following species all increased compared with 2020: padouk (up 270%); beech (+29%); teak (+60%); rubberwood (+129%); pyinkado (+60%); and pecan (+270%). In contrast, imports of ash decreased by 4% in volume in 2021 and by 10% in value. Import volumes also fell for poplar, tali, dousse sapele, spruce, walnut and mukulungu.

China was Viet Nam's largest supplier of wood raw material in 2021, up by 29% in volume and by 32% in value compared with 2020. The EU ranked second, supplying 800 000 m^3, up by 3.5% in volume and by 18% in value compared with 2020 and accounting for 12.6% of total imports. In contrast, imports fell from the US by 20% in volume and by 7% in value, year-on-year. Other countries from which import volumes declined in 2021 were Cameroon, Malaysia, New Zealand, Papua New Guinea, the Russian Federation and Thailand.

Container availabilty—a global issue holding back recovery

The cost of shipping has soared during the pandemic. It cost USD 26 000 to ship a 40 ft container from Asia to the US west coast in late 2021, more than three times the price at the corresponding time in 2020. The surge in freight rates is largely the result of a mismatch between soaring demand and reduced supply capacity, plus labour shortages and continued on-and-off-again pandemic restrictions, which disrupt port and transport operations.

The temporary closure of major Chinese ports in 2021 created more pain for the global logistics and cargo industry. A partial shutdown at Shenzhen's Yantian Port for three weeks in late May and June because of COVID-19 outbreaks in Guangdong Province added an additional sting. More disruption followed in August, when China closed a key terminal at Ningbo-Zhoushan, the world's third-busiest port, after a port worker tested positive for COVID-19.

The *ITTO Tropical Timber Market Report*, an output of the ITTO Market Information Service, is published in English every two weeks with the aim of increasing transparency in international tropical timber markets. The report provides market trends and trade news from around the world, as well as indicative prices for over 400 tropical timber and added-value products. Subscription is free at www.itto.int/market_information_service/registration

Tropical and topical

Compiled by Ken Sato

ITTO Executive Director calls for positive messaging on timber

ITTO Executive Director Sheam Satkuru has suggested that international organizations, governments and other stakeholders jointly promote the message that "harvesting timber sustainably is not deforestation" to overcome public misconceptions about the role of the timber trade in tropical deforestation. Speaking at the (virtual) 29th session of the Asia-Pacific Forestry Commission, which convened on 22–25 February 2022, Ms Satkuru said the tropical forest sector can play an important role in a green recovery from the COVID-19 pandemic and should not be adversely affected by misunderstanding of the causes of tropical deforestation.

"We know that the key drivers of tropical deforestation are related to the expansion of agricultural land, especially by large agribusiness," she said. "It is essential, therefore, that we put our collective effort into increasing public awareness that harvesting timber sustainably is *not* deforestation while also stimulating and incentivizing legal and sustainable timber supply chains."

Read this and other ITTO news stories at www.itto.int/news

World-first regional certification endorsed

The world's first regional certification system has been endorsed by the Programme for the Endorsement of Forest Certification (PEFC). The regional system, which encompasses ITTO member countries Cameroon, the Congo and Gabon, stems from nearly two decades of ITTO-assisted work. As reported on the PEFC website, recent work on the Pan African Forest Certification (PAFC) Congo Basin regional certification system was led by Association Technique Internationale des Bois Tropicaux (ATIBT) in collaboration with three national-level organizations—PAFC Cameroon, PAFC Congo and PAFC Gabon—and the agribusiness Olam. Development of the new certification system was initiated in a three-phased regional ITTO project spanning 2003–2016.

Read this and other ITTO news stories at www.itto.int/news

Ecuador's top court rules for stronger safeguards for Indigenous communities

Ecuador's Constitutional Court has ruled that oil projects violated an Indigenous community's right to free, prior and informed consent and called for stronger safeguards to ensure Indigenous communities' rights to decide on extractive projects in their territories, according to Kimberley Brown on news website *Mongabay*. The judges ruled that Indigenous communities must not only be consulted about extractive projects on or near their land, they must also give their consent to such projects. The ruling will have an immediate impact on oil and mining projects across the country because they will now be required to seek the consent of Indigenous communities who may be affected by their activities.

Read the Mongabay article at https://news.mongabay.com/2022/02/ecuadors-top-court-rules-for-stronger-land-rights-for-indigenous-communities

Read a summary (in Spanish) of the ruling at www.corteconstitucional.gob.ec/index.php/boletines-jurisprudenciales/2022-7/marzo-18

Tropical forest carbon loss much higher than previously estimated, according to study

A paper by Feng et al. published in *Nature Sustainability* in February suggests that the carbon loss from tropical forests could have doubled in recent years, from 0.97 gigatonnes per year in 2001–2005 to 1.99 gigatonnes per year in 2015–2019. This is higher than other estimates based on "bookkeeping" models using land-use statistical data. More than 80% of the forest carbon loss has some association with large-scale commodity production or small-scale agriculture, especially in Africa and Southeast Asia.

Read the paper by Feng et al. at www.nature.com/articles/s41893-022-00854-3

Is the Amazon approaching a tipping point?

A study by Xu et al. published in a recent edition of *Environmental Research Letters* used various datasets to examine the impact of deforestation on the hydrological cycle in the Amazon. It has been hypothesized that the Amazon will reach a tipping point at which deforestation slows the hydrological cycle sufficiently that tropical forest ecosystems cannot be sustained, resulting in dramatic ecological change towards more savannah-like vegetation. The study by Xu et al. showed that the reduction in evapotranspiration caused by 20 years of deforestation has exacerbated atmospheric drying over the Amazon's monsoon forests and savannas. Deforestation also reduced the downward mixing of water supplies from the tropical Atlantic that normally moisten Amazonian forests. The authors suggested that the observed severe drying of the atmosphere in the southern and eastern Amazon cannot be compensated by enhanced water supplies from the Atlantic Ocean, "demonstrating an irreversible transition in the Amazon hydrological cycle exacerbated by rapid deforestation". They hypothesized that large-scale forest conservation and restoration could be the last chance to sustain the role of the Amazon in the global carbon cycle and avoid global environmental catastrophe.

Another study in the Amazon, by Boulton et al., published in *Nature Climate Change* in March, used satellite imagery to quantify changes in forest resilience, as measured by several indicators. According to the authors, the study suggests that more than three-quarters of the Amazon rainforest has been losing resilience since the early 2000s, with the fastest loss occurring in regions with less rainfall and in parts of the rainforest closer to human activity. The authors say the loss of resilience risks widespread forest dieback, which would have profound implications for biodiversity, carbon storage and climate change at a global scale.

Read the paper by Xu et al. at https://iopscience.iop.org/article/10.1088/1748-9326/ac4c1d/meta. Read the paper by Boulton et al. www.nature.com/articles/s41558-022-01287-8

Recent editions

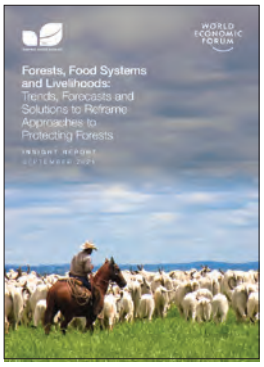
Compiled by Ken Sato

ITTO 2021. *Biennial review and assessment of the world timber situation 2019–2020*. ITTO, Yokohama, Japan.

ISBN 978-4-86507-074-3 (English)

Available at www.itto.int/annual_review

ITTO's *Biennial Review and Assessment of the World Timber Situation* 2019–2020 compiles the most up-to-date and reliable international statistics available on global production and trade of timber for the period 2019–2020, with an emphasis on the tropics. It also provides information on trends in forest area, forest management and the economies of ITTO member countries, as well as an analysis of the impacts of the COVID-19 pandemic in 2020 on the tropical timber sector. The Review is based on information submitted by ITTO member countries through the Joint Forest Sector Questionnaire, supplemented by other sources as necessary. The report is available in English, French and Spanish.



World Economic Forum 2021. *Forests, food systems and livelihoods: trends, forecasts and solutions to reframe approaches to protecting forests*. World Economic Forum, Geneva, Switzerland.

Available at www.tropicalforestalliance.org/assets/Uploads/WEF_Forests_Food_Systems_and_Livelihoods_2021.pdf

This report examines global trends and the supply and demand dynamics of key commodities produced in the tropics—beef, leather, palm oil, soy, wood fibre, coffee and cocoa. It takes a broad perspective: by looking at global trends and the supply and demand dynamics of the commodities driving deforestation, it uses data to paint a detailed picture of the many competing objectives for the same landscapes.

Daemeter & Tropical Forest Alliance 2021. *Decade of progress: reducing commodity driven deforestation in Indonesia and Malaysia*.

Available www.tropicalforestalliance.org/assets/Uploads/TFA_Design_210921-1.pdf

This report examines the significant progress that Indonesia and Malaysia have made in the last decade in slowing deforestation. Based on research undertaken in May–December 2020, the report provides analysis and examples of sustainable interventions that have reduced deforestation, much of it through collaborative efforts and collective actions. Based on interviews, surveys and wider analysis, the researchers found that the actions taken by producer governments was a critical driver of change by setting the policy direction and taking direct action. Alongside government, the private sector and civil-society organizations (CSOs) leveraged the policy environment to achieve impacts on the ground. All three of these actors functioned as primary drivers of progress. The impacts of consumer country governments, the financial sector, and trends in the commodity market were secondary drivers that reinforced changes instigated by governmental, private-sector and CSO action.

Precious Forests Foundation 2021. *Assessing the potential for the development of business in four non-timber forest products from the tropics*. Form International B.V., Hattem, Netherlands

Available at https://precious-forests.foundation/wp-content/uploads/Report-NTFP-study-for-PFF-November-2021-V4.pdf

This report examines the economic potential of four tropical non-timber forest products (NTFPs)—African walnut (*Coula edulis*) (West Africa), aguaje (*Mauritia flexuosa*) (South America), dammar gum (various species) (Southeast Asia) and bush mango (*Irvingia gabonensis*, *I. tenuinucleata*) (Central and West Africa). The report explores the extent to which these NTFPs could be used as additional income streams to strengthen the economic viability of sustainable forest management in the tropics. The report builds on the recent publication by Jürgen Blaser and others (published by ITTO and the Precious Forests Foundation—see TFU 30/2) on the multiple-use management of NTFPs and timber and provides insights into the various aspects and economic prospects of the four identified NTFPs.

Meetings

ITTO meetings

7 June 2022 (to be confirmed)
ASEAN Forest Fire Workshop
Jakarta, Indonesia
TThe aim of the event, which ITTO is co-organizing, is to share knowledge and practices in the design and implementation of early-warning and monitoring systems and promote research and capacity building to prevent and combat forest fires in Southeast Asia.
More: www.itto.int/events

21–23 June 2022
Validation Workshop on Agarwood
Kuala Lumpur, Malaysia
More: www.itto.int/events

5–8 September 2022
4th World Teak Conference: Global Teak Market: Challenges and Opportunities for Emerging Markets and Developing Economies
Accra, Ghana
This conference, which ITTO is co-organizing, will address the most crucial issues facing the global teak sector, including the sustainable management of smallholder teak farming systems to supply markets with high-quality teakwood; improving existing silvicultural systems and practices for better stand management to achieve high-quality teakwood; market structures and value chains for teakwood trading and their impacts on the profitability of teak investments; and evaluating private and public investments in the teak sector and their impacts on socioeconomic conditions and rural livelihoods. The conference will make strategic, conceptual and operational recommendations to support the sustainable development of the teak sector.
More: www.worldteakconference2020.com

7–12 November 2022
58th Session of the International Tropical Timber Council and Sessions of the Associated Committees
Yokohama, Japan
The International Tropical Timber Council is ITTO's governing body. It meets once a year to discuss wide-ranging issues of interest to members, including those related to the legal trade of tropical timber and the sustainable management of tropical forests. Council sessions are open to official delegates and accredited observers.
More: www.itto.int/events

Other meetings

31 May–2 June 2022
Socio-ecological Conflicts in Forest Management: Risks of (not) Adapting?
Nancy, France
More: https://workshop.inrae.fr/iufro-risk-analysis-nancy

1–3 June 2022
ATIBT Biennial Forum, General Assembly and 70th Anniversary of Carrefour International du Bois
Nantes, France
More: www.timbershow.com

26 June–1 July 2022
Foliar, Shoot, Stem and Rust Diseases of Trees
Durham, USA
More: www.iufro.org/science/divisions/division-7/70000/70200/70202

28–29 June 2022
Environmental Forestry 2022
Rotorua, New Zealand
More: https://environmentalforestry.events

Third quarter 2022 (dates to be confirmed)

15th Meeting of the Conference of the Parties to the Convention on Biological Diversity (Part 2)
Kunming, China
More: www.cbd.int/meetings/COP-15

5–9 July 2022
19th Meeting of Parties of the Congo Basin Forest Partnership
Libreville, Gabon (hybrid)
More: https://pfbc-cbfp.org/

17–20 July 2022
5th World Congress on Agroforestry
Quebec, Canada
More: www.agroforestry2022.org

24–27 July 2022
The 19th Symposium on Systems Analysis in Forest Resources
Estes Park, USA
More: https://sites.warnercnr.colostate.edu/ssafr2021

10–15 July 2022
The 65th Society of Wood Science & Technology (SWST) International Convention: A Global Perspective of the Present and Future Utilization of Renewable Materials
Kingscliff, Australia
More: www.swst.org/wp/meeting/2022-international-convention-australia

9–10 August 2022
Carbon Forestry 2022
Rotorua, New Zealand
More: https://carbonforestry.events

12–16 September 2022 (to be confirmed)
ForestSAT 2022: Seeing the Forest and the Trees: Promoting the Application of Spatial Technologies for Forest Observation and Analysis
Krakow, Poland
More: www.forestsat.com

5–7 September 2022
Managerial Forest Economics and Accounting as a Base for Decision Making in a Changing World
Hamburg, Germany
More: www.iufro.org/science/divisionsdivision-4/40000/40500/activities

6–9 September 2022
IUFRO All-Division 7 2022 Conference
Lisbon, Portugal
More: https://iufro-lisbon2022.com

20–24 September 2022
The Society of American Foresters 2022 Convention: "Our Working Mosaic"
Baltimore, MD, USA
More: https://eforester.org/exhibitors/Sign_In.aspx?WebsiteKey=8890405e-f30d-4851-b359-59ab5be81977

3–7 October 2022
26th Session of the FAO Committee on Forestry (COFO 26)
Rome, Italy
More: www.fao.org/unfao/govbodies/gsbhome/committee-fo

26–31 October 2022
IUFRO 3.08.00: Small-scale Forestry International Conference 2022: Progress in Small scale Forestry beyond the Pandemic and Global Climate Change
Okinawa, Japan
More: www.iufro2022okinawa.org

14–25 November 2022
Nineteenth Meeting of the Conference of the Parties to CITES
Panama City, Panama
More: https://cites.org/eng/cop19

7-18 November 2022
2022 UN Climate Change Conference
Sharm el-Sheikh, South Sinai, Egypt
More: https://unfccc.int/calendar/events-list

23–29 June 2024
XXVI IUFRO World Congress 2024
Stockholm, Sweden
More: https://iufro2024.com

Note that the above-listed meetings are all subject to date changes and cancellation in light of the COVID-19 pandemic. Some meetings are yet to indicate decisions on postponement or cancellation, or have not yet rescheduled; please check the contact addresses for the latest information.