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Authors: Luiza Lucena¹, Carlos Estrada Moedano², Mark van Benthem³

¹ PhD Candidate, University of Minnesota – Twin Cities ² Selva Maya Thriving Landscape Lead, Rainforest Alliance ³ Director, Stichting Probos

Cover Photography: Mark van Benthem, Stichting
Probos

Illustration & Layout: Luiza Lucena, University of Minnesota – Twin Cities

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Correspondence: For further information or inquiries regarding this report, please contact: Carlos Estrada <u>cestrada@ra.org.</u>



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1. Executive Summary

The Selva Maya Tropical Timber Trade Mission 2024 aimed to promote the international trade of sustainably sourced tropical timber from forest communities in the Selva Maya region—spanning Petén, Guatemala, and the Yucatán Peninsula, Mexico—while fostering strategic alliances and knowledge exchange along the tropical timber value chain. The mission sought to expand the availability of sustainable timber products in local, regional, and global markets by leveraging their growing environmental and social value. Ultimately, it aimed to encourage forest conservation and restoration through nature-based solutions, improving the livelihoods of both Indigenous and non-Indigenous communities.

This 2024 mission built on the momentum and insights gained from the inaugural 2023 Selva Maya Tropical Timber Trade Mission, a milestone event that strengthened connections between Community Forest Enterprises (CFEs) and responsible timber markets. The 2023 mission provided valuable platforms for dialogue, business matchmaking, and the promotion of sustainable sourcing, laying a strong foundation for deeper market integration. Key partners—including the International Tropical Timber Technical Association (ATIBT), Precious Woods, and Stichting Probos—contributed strategic support by offering technical expertise, promoting lesser-known timber species, and aligning local forestry practices with international standards.

Recommendations from the 2023 mission, especially those from ATIBT—such as enhancing product traceability, standardizing catalogs, clarifying species availability and

physical characteristics, and emphasizing the socioecological value of community forestry—shaped the design of the 2024 event. These recommendations informed the refinement of strategies to build trust and transparency between CFEs and buyers, and to reposition tropical timber not as a driver of deforestation, but as a product of sustainable, traceable, and community-led forest management.

The 2024 trade mission brought together representatives from forest community concessions in Guatemala's Maya Biosphere Reserve, forest ejidos¹ in Quintana Roo and Campeche, non-profit organizations, academic institutions, government agencies, and European timber traders. Organized by the Rainforest Alliance and Stichting Probos, with support from the Forest Stewardship Council™ (FSC) offices in Guatemala and Mexico, the mission facilitated direct engagement between producers and buyers through site visits to CFEs, workshops on market trends, regulations, and certifications, as well as networking sessions. Participants explored operational challenges and opportunities, with a focus on aligning community forestry practices with international sustainability benchmarks such as FSC certification and the European Union Regulation on Deforestation-Free Products (EUDR).

Key outcomes included identifying growing European demand for certified species such as **Big-leaf mahogany** (Swietenia macrophylla) and **Spanish cedar** (Cedrela odorata), alongside increased interest in lesser-known species like **Chicozapote** (Manilkara zapota) and **Tzalam** (Lysiloma spp.), which could serve as sustainable alternatives to species increasingly regulated under the Convention on International Trade in Endangered Species (CITES), such as

¹Ejidos are communal lands collectively owned by local communities. In the context of timber extraction, ejidos can enter into agreements with government agencies or private entities to harvest timber from their lands.

Ley Agraria: Título Tercero, Capítulo II, Sección Quinta. Available at: https://mexico.justia.com/federales/leyes/ley-agraria/titulo-tercero/capitulo-ii/seccion-auinta/

Ipê (Handroanthus, Roseodendron, and Tabebuia spp.) and **Cumarú** (Dipteryx odorata).

Despite these promising developments, several persistent barriers threaten market competitiveness. These include high transportation costs, bureaucratic delays in permitting—particularly CITES approvals in Mexico—and certification costs that often exceed market premiums. The mission highlighted how sustainable forest management and legal timber trade contribute to community livelihoods, biodiversity conservation, and women's inclusion in the workforce, while also serving as a countermeasure to illegal logging.

To address these challenges, key recommendations focused on increasing investments in infrastructure for timber processing and clean energy, enhancing market access through storytelling and niche marketing, strengthening partnerships to streamline permitting processes, and advocating for policy reforms and capacity-building initiatives. These efforts are designed to incentivize sustainable forest management and improve the quality of life for communities that depend on the Selva Maya's forests.

The mission underscored the Selva Maya's potential to become a leading hub for sustainable tropical timber, contingent on coordinated, cross-sector collaboration to overcome trade barriers. By implementing these strategies, stakeholders—from forest community enterprises to timber traders—can secure long-term economic and environmental benefits while meeting the rising global demand for responsible, deforestation-free products.

2. Introduction

2.1. Background

The Selva Maya region, an extensive landscape of over 7 million hectares shared by Mexico, Belize, and Guatemala, has gained increasing attention due to its critical role in climate change mitigation, sustainable forest management, and the livelihoods of forest-dependent communities (Figure 1). It is the second-largest tropical rainforest in the Americas, providing critical ecosystem services such as biodiversity, carbon sequestration, and water conservation.

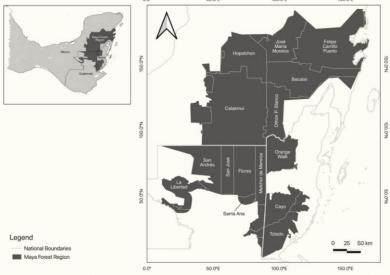


Figure 1. Map of the *Selva Maya Thriving Landscape Programme* of the Rainforest Alliance, illustrating its transboundary expanse across municipalities in Mexico, Guatemala, and districts in Belize. Geospatial data provided by Rainforest Alliance and processed by Luiza Lucena.

²Data retrieved from WSC Human Footprint Tool. Available at: https://wcshumanfootprint.org/map/>

This mega-biodiverse area is home to iconic wildlife, including jaguars, endangered Central American river turtles, and undiscovered plant and insect species. Beyond its ecological importance, the Selva Maya supports the livelihoods of over 900,000 indigenous and non-indigenous communities (Statistical Institute of Belize, 2022; Instituto Nacional de Estadística Guatemala, 2018; INEGI, 2020) and houses some of the most recognized archaeological sites of the ancient Maya civilization.

The Selva Maya rainforest is one of the most critical ecosystems in the Americas, but it is disappearing fast. Between 2000 and 2020, the Selva Maya lost 33% of its forest cover². This alarming rate of deforestation is largely due to weak and ineffective governance structures and destructive practices like slash-and-burn agriculture and illegal cattle ranching. These activities severely diminish the biodiversity of the Selva Maya, resulting in degraded landscapes and making it more challenging for local communities to escape poverty while also increasing their vulnerability to climate change.

For over three decades, the Rainforest Alliance has worked alongside indigenous and non-indigenous communities across the Selva Maya to promote sustainable forest management and counter the threats of forest degradation, illegal logging, and land conversion. In both the forest ejidos of Mexico and the community forest concessions of Guatemala, the organization has worked collaboratively with local stakeholders, government institutions, NGOs, and the private sector to strengthen community governance, provide technical assistance, and improve access to responsible markets. This long-term engagement has been guided by regional forest management guidelines and has

helped build resilient local economies rooted in the conservation of forest ecosystems.

The impact of this long-standing engagement is especially evident in Guatemala's Mayan Biosphere Reserve, where community forest concessions, supported through the collaborative efforts of the Rainforest Alliance, government institutions, NGOs, and the private sector, have achieved outstanding results. Through systemic coordination and shared commitment, these concessions have successfully reduced deforestation and forest fires to nearly zero (Hodgdon et al., 2015; Davis & Sauls, 2017), demonstrating the effectiveness of community-based forest management when backed by inclusive, cross-sectoral partnerships.

These efforts have directly contributed to multiple Sustainable Development Goals (SDGs), including SDG 1 (No Poverty) through income generation for rural communities, SDG 8 (Decent Work and Economic Growth) by creating formal jobs in the sustainable timber trade, SDG 12 (Responsible Consumption and Production) via certification and traceability of forest products, SDG 13 (Climate Action) through emissions reduction, and SDG 15 (Life on Land) by preserving biodiversity and forest cover.

Building on this legacy, the Rainforest Alliance launched its *Thriving Landscapes Programme* through global collaboration with farming and forest communities, government and non-governmental bodies, NGOs, and the private sector. The programme aims to safeguard some of the world's most vital and threatened ecosystems while scaling up integrated, landscape-level interventions. It currently focuses on five priority landscapes across three continents: in the Americas, the *Selva Maya* (spanning southern Mexico, northern Guatemala, and Belize) and *San Martín* in Peru; in Africa, *Mount Kenya* in Kenya and the *Sui*

River landscape in Ghana; and in Asia, North Luwu in Indonesia.

The Selva Maya Thriving Landscape is a defined area within the broader Maya Forest, spanning key municipalities and protected areas across southern Mexico, northern Guatemala, and Belize. As the largest rainforest in Mesoamerica, it covers 7.2 million hectares—about 60% of which lies within officially designated protected areas—and includes priority zones for conservation and restoration. This transboundary region is a critical ecological and economic asset, harboring exceptional biodiversity, including endangered species, and supporting the livelihoods of thousands through community-based forest enterprises. Its strategic importance lies in its role in advancing both conservation goals and sustainable development.

This transboundary landscape is characterized by interconnected ecosystems, biodiversity corridors, and socio-environmental challenges that transcend national borders. It includes high-priority conservation areas and iconic Mayan heritage sites like Calakmul and Tikal—UNESCO World Heritage Sites that reflect the region's unique combination of cultural and natural value. The presence of endangered megafauna further underscores its global conservation significance and the complexity of managing its diverse land uses.

The Selva Maya is internationally recognized for pioneering community forest management models. Through the Thriving Landscapes Programme, the Rainforest Alliance seeks to strengthen community forestry enterprises (CFEs), promote long-term forest stewardship, and improve conservation outcomes at the landscape level. This holistic approach reflects the interconnectedness of ecological health, strong forest governance, and resilient market

systems—ensuring that sustainable livelihoods and land use practices are coordinated and locally appropriate.

Developed in close partnership with forest communities, the Selva Maya Thriving Landscape programme goes beyond individual sectors or supply chains. It unites stakeholders around a shared vision to conserve and restore biodiversity-rich forests, build resilience to climate change, and improve rural livelihoods through inclusive economic opportunities. This collaborative, systems-based approach is designed to maximize positive impact and enable transparent measurement and demonstration of results.

Currently, CFEs in the Selva Maya sustainably harvest timber—some of it FSC-certified—but face significant barriers to accessing high-value markets. These challenges include limited product visibility, weak traceability systems, and insufficient communication of the environmental and social benefits of their work. To address these issues, the Rainforest Alliance is collaborating with the Forest Stewardship Council (FSC) to enhance the visibility of community-sourced tropical timber and strengthen traceability systems, ensuring that the environmental and social credentials of these products are effectively communicated. This partnership aims to expand responsible supply chains, increase market access, and support the scaling of sustainable forestry practices.

Many forest communities continue to sell their products in markets with little awareness of compliance standards, traceability, or the broader social and environmental context of production. Promoting timber from community-managed forests aims to increase the availability of sustainable products in the marketplace while capturing their growing value in local, regional, and international

markets. This approach not only helps tackle deforestation but also enhances community livelihoods—demonstrating how sustainable forest management can deliver both environmental and economic returns.

In 2023, the Selva Maya Tropical Timber Trade Mission³ marked an important step forward in addressing these challenges by connecting CFEs with responsible timber markets. This mission created valuable spaces for dialogue, facilitated business matchmaking, and emphasized the importance of sustainable sourcing from the Selva Maya. Key partnerships, particularly with the International Tropical Timber Technical Association (ATIBT) and Stichting Probos, provided technical insights and strategic support to strengthen the value proposition of lesser-known timber species and ensure alignment with international market expectations.

Drawing on the successes and lessons learned from the 2023 mission, including key recommendations from ATIBT, such as the need to improve product traceability, standardize product catalogs, clarify species availability, and enhance communication about the social and ecological value of community forestry, the 2024 Selva Maya Tropical Timber Trade Mission aimed to deepen these connections. Efforts will continue to foster trust and transparency between CFEs and buyers, with enhanced collaboration and tailored promotion of lesser-known tropical species based on market needs.

ATIBT's observations from the 2023 event emphasized the importance of shifting perceptions of tropical timber, often seen only through the lens of deforestation, toward recognizing the sustainable, traceable, and community-driven forestry model emerging in the Selva Maya. By doing

³ More information about the 2023 Selva Maya Tropical Timber Trade Mission available at: <a href="https://www.atibt.org/en/news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357/the-selva-news/13357

<u>maya-a-community-forest-management-offer-for-responsible-markets-episode-2></u>

so, tropical timber from the region can become a symbol of responsible forest stewardship, biodiversity protection, and climate resilience rather than forest loss. These insights were core to the planning of the 2024 edition, which integrated refined market strategies and expanded outreach.

Tropical timber is often, by default, presented as a problem. Every day, tropical forests are destroyed or degraded by the conversion of forest landscapes and other destructive activities, such as unsustainable forestry. As the forest cover continuously decreases, tropical timber quickly becomes the very symbol of deforestation. But there is more to the story—it is important to understand what drives deforestation and degradation in tropical forests.

Irresponsible or illegal removal of timber from a tropical forest is a small part of the problem. The real problem lies with the competition for land use. The increasing demand for agricultural products, coupled with new infrastructure, city extensions, and the extraction of natural resources, leads to forest degradation and deforestation.

There is substantial evidence that timber can have little impact on the forest ecosystem if managed correctly (Putz et al., 2001; Blanco & González, 2010; Bicknell et al., 2014; Sasaki et al., 2016; Torres-Rojo, Moreno-Sánchez & Mendoza-Briseño, 2016; Ellis et al., 2019; Sullivan et al., 2024). At the same time, it can sustain the local economy. In Guatemala and Mexico, CFEs play a critical role in conserving this precious ecosystem through sustainable forest management. Nearly one million hectares of the region's forests are FSC-certified, a testament to their commitment to responsible forestry practices. Despite this progress, CFEs face significant challenges in accessing markets for their timber products. While species like Big-leaf Mahogany (Swietenia macrophylla) and Spanish cedar (Cedrela odorata) are well-known internationally, the Selva Maya's forests contain a

wealth of lesser-known species with excellent technical qualities that can further support the development of the industry in the region. Expanding markets for these unique species is critical to strengthening biodiversity conservation and improving forest-dependent communities' economic resilience and livelihood.

2.2. Objective of the Mission

The primary objective of the tropical timber trade mission was to promote tropical timber species from CFEs in the Selva Maya to global markets. The mission sought to support CFEs in further developing economically viable and environmentally responsible forestry operations by diversifying market opportunities and raising awareness of the value of sustainably managed forests. This effort is critical in addressing market barriers, conserving biodiversity, and safeguarding the livelihoods of local and indigenous communities.

2.3 Overview of Participants

The trade mission brought together a diverse group of stakeholders involved in the tropical timber trade, including timber buyers, university representatives, non-profit organizations, government agencies, and community members. A detailed list of participants is available in **Appendix A**.

The inclusion of multiple stakeholders aimed to provide a comprehensive and multidimensional understanding of the key challenges and opportunities within the tropical timber trade in the Selva Maya region. Through collaborative discussions, the mission fostered an environment where participants could exchange ideas, expand their networks, and establish shared goals for sustainable forest management and trade practices.

3. Mission Objectives and Scope

The Selva Maya Tropical Timber Trade Mission was organized by the Rainforest Alliance and Stichting Probos, with support from FSC Mexico and Guatemala. The mission took place in November 2024, aiming to foster connections among key stakeholders in the tropical timber value chain and promote responsible sourcing practices. The mission's scope included:

- Engagement with key actors: Participants met with a diverse range of CFEs, from well-established enterprises to those in earlier stages of development, gaining insight into their operations, challenges, and market opportunities.
- Exploration of timber supply opportunities: The mission facilitated direct interactions between potential buyers and FSC-certified or soon-to-be FSC-certified forest communities, strengthening trade relationships.
- First-hand exposure to the timber production chain:
 Through site visits in Mexico and Guatemala, participants observed various stages of the timber production process, including sustainable harvesting, processing, and trade practices.
- Impact on local communities: The mission emphasized how responsible sourcing supports the livelihoods of forest-dependent communities and contributes to the long-term conservation of the Selva Maya ecosystem.

The mission fostered collaboration, knowledge sharing, and market linkages by providing an in-depth perspective on the tropical timber trade, reinforcing the importance of sustainable forest management in the region.

4. Activities

4.1 Selva Maya Trade Mission Kick off: Insights, Markets, and Opportunities.

4.1.1 Welcome and Mission Context

Rainforest Alliance

- Alejandro Santos, Director in Guatemala, welcomed participants to the trade mission.
- Carlos Estrada, Selva Maya Thriving Landscapes Lead, outlined the challenges and opportunities in timber commercialization and presented the mission agenda.
- Reyneer Morales, Sustainable Value Chains specialist, introduced the participants.

4.1.2 Community Forest Management in the Selva Maya

Rainforest Alliance

 José Román Carrera, Director of Forest Alliances and Development, presented Rainforest Alliance's forest management strategy and partnerships with the private sector.

Association of Forest Communities of Petén (ACOFOP)

 Presented the community forest management model within the Maya Biosphere Reserve, highlighting a new contract ensuring timber availability for the next 25 years.

4.1.3 Timber Markets

Stichting Probos

 Mark van Benthem, Stichting Probos Director, provided insights into the European tropical timber market.

FSC Guatemala

 Luis Guillen from FSC Guatemala presented the EUDR⁴, a policy designed to combat deforestation and forest degradation. He also discussed how FSC certification aligns with EUDR requirements, ensuring compliance and promoting sustainable forest management.

World Forest ID

 Alfredo Rodríguez, Collections Coordinator, demonstrated how scientific verification of forest resource origins facilitates responsible trade.

<u>Community Forestry Services Enterprise (FORESCOM) & Forest</u> Concessions, Guatemala

 Glyde Marquez showcased the available timber species and final products, including FSC and Madera Justa certifications. Information on the 2025 Annual Operating Plans (POAs) was also shared.

4.2 Workshops and Discussions

4.2.1 Constellation of Priorities

<u>Center for Integrated Natural Resources and Agricultural</u> Management (CINRAM), University of Minnesota

An important activity during the trade mission was a focus group workshop led by Luiza Lucena, a doctoral student from the University of Minnesota. This workshop utilized the United Nations Trade and Development (UNCTAD) Constellation of Priorities Model⁵ to explore stakeholders' perspectives on voluntary sustainability standards with a particular focus on the FSC certification. The model facilitated an in-depth examination of priorities related to FSC certification in the Maya Forest region.

The focus group brought together 37 stakeholders from diverse sectors of the value chain, including:

- 5 participants from the private sector;
- 22 representatives from CFE;
- 9 members from NGOs;
- One representative from a government agency.

The diversity of perspectives provided a high-level understanding of the dynamics influencing sustainable forest management, tropical timber trade, and certification. Stakeholders provided insights into the economic, social, and environmental aspects of FSC certification.

⁴European Commission, "Regulation on Deforestation-free Products,. Available at:

https://environment.ec.europa.eu/topics/forests/deforestation/regulation-deforestation-free-products_en.

⁵ United Nations Trade and Development (UNCTAD) Voluntary Sustainability Standard Assessment Toolkit - Constellation of Priorities Model: https://unctad.org/system/files/information-document/VSS-Assessment-Toolkit interview guidelines.pdf

4.2.2 Roundtable Discussion

A discussion was held on the commercial impact of timber from the Maya Biosphere Reserve, bringing together concession holders and timber traders. The conversation explored market prospects for lesser-known timber species, strategies for their introduction into international markets, and the behavioral attributes needed from consumers and suppliers to foster strategic market partnerships. Additionally, participants identified opportunities to improve the tropical timber trade in the region.

4.3 Networking Events

The mission featured a full day of networking sessions on November 18, 2024, at Hotel Villa Maya in Petén, Guatemala. This event facilitated connections between CFEs, international timber buyers, NGOs, and government representatives. Discussions focused on building partnerships to improve market access and promote certified timber products globally.

4.4 Site Visits

The 2024 Selva Maya tropical timber trade mission included visits to sawmills and five CFE across the Maya Biosphere Reserve and the Yucatán Peninsula, providing insights into the operational processes and sustainable practices employed in the region. The following list summarizes the field visits and activities during the trade mission:

4.4.1 Mayan Biosphere Reserve, Petén, Guatemala

Uaxactún (OMYC)

Participants toured the community's forest management unit, observing low-impact logging techniques

and the 25-year sustainable harvest contract with Guatemala's National Council of Protected Areas (CONAP). Discussion included CFE efforts to balance timber production with non-timber forest products (e.g., chicle, ramon seeds) and tourism to diversify livelihoods.

Árbol Verde

Participants observed the value-added processes for FSC-certified timber products, emphasizing their market potential.

FORESCOM Processing Unit

Participants explored the centralized sawmill serving multiple forest concessions, featuring:

- Value-added timber products (see FORESCOM's timber catalog).
- Production of timber and non-timber forest products.
- Chain-of-custody systems for FSC traceability.
- Challenge: Buyers identified opportunities to improve log sorting efficiency to meet EU specifications.

4.4.2. Yucatán Peninsula, Quintana Roo, Mexico

In Mexico, visits to Ejidos Noh Bec and Petcacab y Polinkin in Quintana Roo demonstrated sustainable techniques to harvest and process tropical timber (see **Appendix B**). These site visits emphasized diversifying timber products, including lesser-known species.

Ejido Noh Bec

 Participants were introduced to Noh Bec's governance model. The ejido's assembly system ensures transparent resource allocation, with elected

- representatives overseeing forestry operations, revenue distribution, and social investments.
- Youth involvement in forestry management was emphasized, including apprenticeship programs to sustain traditional knowledge and technical skills.
- A 25-year rotation cycle for Big-leaf mahogany and Spanish cedar, combined with enrichment planting of lesser-known species to maintain biodiversity.
- Designated conservation zones and monitoring of jaguar corridors, supported by camera traps and partnerships with research institutions.
- A program to ensure year-round access to forests, critical for fire prevention and timely timber transport.
- Participants toured production facilities and observed nurseries and sawmills.

Ejido Petcacab y Polinkín

- Highlighted community-led conservation, with 30% of forests set aside as biodiversity corridors.
- Buyers explored the multiple lesser-known species applications with eiido members.
- Tour to the sawmill and the fine wood furniture exhibition.

4.5 Demonstration of Timber Species

Participants were introduced to various timber species from the Selva Maya, including the well-known Bigleaf mahogany (Swietenia macrophylla) and Spanish cedar (Cedrela odorata), as well as lesser-known species with exceptional technical qualities, such as Chicozapote (Manilkara zapota), Tzalam (Lysiloma spp.), Pucté (Terminalia buceras), Manchiche (Lonchocarpus castilloi). The following

species available in the Selva Maya with trading potential in the European markets (Van Benthem, 2024):

information provides an overview of these four lesser-known

Chicozapote6

Scientific name: Manilkara zapota. The species is closely related to Massaranduba (Manilkara bidentata) and has very similar applications.

Common applications: Marine constructions, tool handles, furniture, parquets, cabinets, turning work, musical instruments. Responds well to indoor and outdoor use.

Estimated annual harvest volumes in the area: 12,700 m³. Available in both Mexico and Guatemala, with the majority of the volume available in Mexico.

Tzalam⁷

Scientific name: Lysiloma latisiliquum; L. bahamensis

Common applications: Prefabricated parquet, sliced decorative veneers, sporting goods, door and window frames, interior and exterior construction, carpentry and fine furniture, molding products, flooring, handicrafts, and turned products.

Estimated annual harvest volumes in the area: 8,400 m³. Available in both Mexico and Guatemala, with the majority of the volume available in Mexico.

Pucté^{8,9}

Scientific name: Terminalia buceras, formerly Bucida buceras

Common applications: Heavy outdoor construction, posts, piles, bridges, railroad ties, vehicle platforms, ship parts, firewood, and coal. In addition, it can be effective for industrial and prefabricated flooring, parquet, stairs,

⁶Chicozapote | The Wood Database (Hardwood) (wood-database.com)

⁷Izalam | The Wood Database (Hardwood) (wood-database.com)

⁸ Pucté | The Wood Database (Hardwood) (wood-database.com)

⁹ Pucté | (cirad.fr)

table tops, knife handles, and drum sticks.

Estimated annual harvest volumes in the area: 3,700 m³. Available in both Mexico and Guatemala, with the majority of the volume available in Guatemala.

Manchiche^{10,11}

Scientific name: Lonchocarpus castilloi

Common applications: The wood is highly valued in Mexico for its use in medium draft boats. Although veneer can be obtained from it, its properties are not suited for this use. It is also used for firewood, fence posts and pickets, general home use, flooring, parquet, furniture and cabinets, fine furniture, boards and veneers, decorative veneer, turning, pallets, packaging, light packaging, musical instruments, handicrafts, as well as other uses.

Estimated annual harvest volumes in the area: 3,500 m³. Available in both Mexico and Guatemala, with the majority of the volume available in Guatemala.

Presentations highlighted these species' potential uses in international markets, such as furniture, decking, and construction materials, focusing on diversifying demand for FSC-certified products.

4.6 Government and NGO Involvement

The Rainforest Alliance shared strategies for sustainable forest management and private-sector engagement, while the FORESCOM emphasized the economic impact of community-led forestry. The FSC representative outlined the implications of the EUDR, helping

stakeholders navigate compliance challenges and opportunities.

4.6.1 Systemic Collaboration Advancing Sustainable Community Forest Management and Timber Trade in the Selva Maya

The Selva Maya Trade Mission highlights ongoing efforts to strengthen collaboration among government institutions, NGOs, forest communities, and the private sector to support sustainable tropical timber production and trade. Across the Yucatán Peninsula, stakeholders are working to develop a forest economy that is economically viable, ecologically resilient, and socially inclusive.

A key milestone in this collaborative agenda was the Selva Maya Conservation Timber Summit, held in Playa del Carmen in June 2023 and convened by the Rainforest Alliance and Pilot Projects. Nearly 100 participants—from government bodies, forest ejidos, NGOs, and private sector entities—gathered to examine current challenges in the regional timber economy and define coordinated actions. These included strengthening forest governance, improving commercial infrastructure, implementing traceability systems, and advancing regulatory streamlining for legal and sustainable timber trade (Partner Forests, 2023).

The Secretaría de Desarrollo Económico de Quintana Roo (SEDE) leads regional efforts to support economic development for forest communities through initiatives such as Integrated Collective Enterprises, which aim to improve the competitiveness of community forest enterprises and facilitate their access to higher-value markets. This work is part of the Nuevo Acuerdo por el Bienestar y Desarrollo de Quintana Roo, which promotes inclusive economic

¹⁰ Manchiche | The Wood Database (Hardwood) (wood-database.com)

¹¹ Manchiche | (cirad.fr)

development and sustainability in rural forested regions (Gobierno del Estado de Quintana Roo, 2023).

A relevant initiative aligned with these priorities is *Madera Cero Deforestación*, led by ATIBT and Minka Dev, with support from SEDE and funding from the AL-INVEST Verde program. AL-INVEST Verde is a European Union-funded initiative to promote sustainable growth and employment in Latin America. Under this framework, the *Madera Cero Deforestación* project supports the development of traceable, legal, and sustainable timber value chains in the Selva Maya. Implemented in the ejido of Petcacab, the project integrates a digital traceability tool developed by Minka Dev to help community forest enterprises comply with the EUDR. It combines technological tools with capacity-building activities to improve forest governance and facilitate access to international markets (AL-INVEST Verde, 2023).

The Nature Conservancy (TNC) contributes to sustainable forest management across ejidos in Quintana Roo and Yucatán through technical support for management plans, reduced-impact logging (RIL-C), fire prevention, enrichment planting, and soil conservation. These interventions have helped improve the profitability and diversification of community forestry operations, while contributing to landscape restoration and regional goals to reduce deforestation and recover degraded land (TNC México, 2024; The Nature Conservancy, 2020).

CONAFOR has also played a key role in strengthening community forest enterprises in Quintana Roo by providing technical assistance, financial resources, and market access support. Since 2017, public funding has been allocated to enhance productive infrastructure, training, and certification in municipalities such as Othón P. Blanco, Bacalar, and Felipe Carrillo Puerto (CONAFOR, 2017). Initiatives such as

participation in MEM Industrial trade shows have supported the commercialization of timber products from responsibly managed forests (CONAFOR, 2019).

Notable examples include Lol Koópte' Muebles, a women-led Maya enterprise supported by CONAFOR that transforms forest residues into certified FSC furniture (Portal Ambiental, 2019). Other certified ejidos, such as Noh Bec and Petcacab, have positioned their timber in specialized markets (CONAFOR, 2019). In parallel, CONAFOR has collaborated with the **United Nations Development Programme (UNDP)** and the **Global Environment Facility (GEF)** on the project Biodiversity in Production Forests and Certified Markets, which integrates biodiversity management into forestry practices and supports differentiated markets for certified wood (CONAFOR, PNUD, GEF, 2020).

Despite these advances, challenges remain—particularly related to limited access to financing, bureaucratic hurdles, and competing land-use pressures. In response, mechanisms like the National Forestry Fund (Fonafor) and the Forest Investment Program (Proinfor), developed in collaboration with the Trust Funds for Agricultural Development (FIRA), aim to expand financial inclusion in the forest sector (El Economista, 2020). However, organizations such as the Mexican Civil Council for Sustainable Forestry (CCMSS) have documented that some communities have shifted to leasing models due to these barriers, reducing community control over forest resources (CCMSS, 2022).

At the national level, CONAFOR's broader programs, such as Manejo Forestal Comunitario and Apoyos para el Desarrollo Forestal Sustentable, continue to provide critical support for planning, certification, and fire prevention efforts across the region.

Regionally, GIZ is implementing the second phase of its Cooperación Regional para la Protección de la Selva Maya (2024–2027), aimed at strengthening tri-national cooperation between Mexico, Guatemala, and Belize. The project focuses on improving forest governance, enhancing biodiversity monitoring, supporting climate adaptation and restoration strategies, and engaging the private sector in conservation-linked value chains. It also facilitates intergovernmental coordination through platforms such as the Grupo Estratégico de Coordinación (GEC) and supports regional policy alignment through the Central American Integration System (SICA) (GIZ, 2025).

Within this framework, **GIZ** is also contributing directly to the enabling conditions for forest community enterprises. By advising public institutions on conservation policy, supporting ecological monitoring, and promoting restoration strategies such as forest landscape restoration and sustainable land use, GIZ strengthens the foundation for long-term forest management. Additionally, it supports the integration of community enterprises into legal and biodiversity-friendly value chains by facilitating private sector engagement and supporting sustainable product marketing. These actions contribute to improving the sustainability and competitiveness of community forestry in the region (GIZ, 2025).

This evolving collaborative framework—driven by institutional leadership, coordinated funding, and regional governance—is shaping a more structured and integrated model for sustainable community forest management and timber trade in the Selva Maya. Initiatives such as the Madera Cero Deforestación project, the Selva Maya Conservation Timber Summit, and the active roles of SEDE, CONAFOR, GIZ, TNC, and community forest enterprises demonstrate the importance of aligning technical innovation, financial mechanisms, policy support, and market engagement. These

efforts are further supported by key partners including Rainforest Alliance, ATIBT, Minka Dev, and international cooperation programs such as AL-INVEST Verde, the UNDP-**GEF** biodiversity and certified markets initiative, and financing instruments developed in collaboration with FIRA. At the same time, civil society actors like the CCMSS have provided critical insights into the structural challenges facing forest communities. While meaningful progress has been achieved—particularly advancina in traceability, certification, and enterprise development—ongoing constraints such as limited access to finance, complex regulatory environments, and competing land-use pressures underscore the need for continued cross-sector collaboration and stronger incentives for community-led forestry. Moving forward, scaling up regionally coordinated strategies, strengthening local capacities, and deepening integration with regulated markets—especially under frameworks like the EUDR—will be essential for positioning the Selva Maya as a reference point for inclusive, biodiversityconscious forest governance and sustainable rural development in Mesoamerica.

5. Key Findings and Insights

5.1 Market Potential

The global market for tropical timber species presents strong demand, particularly in European niche sectors like outdoor furniture, public spaces, and premium building materials. Certified timber from the Selva Maya region aligns well with international sustainability and responsible sourcing expectations. Species such as Big-leaf mahogany (Swietenia macrophylla) and Spanish cedar (Cedrela odorata) remain highly demanded, while lesser-known species like Chicozapote (Manilkara zapota), Tzalam (Lysiloma spp.), Pucté (Terminalia buceras), Manchiche (Lonchocarpus

castilloi), and Santa María (Calophyllum brasiliense) have untapped market potential.

The production of tropical timber in Mexico is reflected in recent trends (Figure 1). While commercial timber dominates overall production, tropical timber has gained significance, particularly in years with notable peaks, such as the substantial increase in 2017, reaching over 1.2 million cubic meters produced. This suggests that tropical timber, including species from the Selva Maya, has the capacity to expand its market share if sustainable management and certification efforts continue to align with international demand.

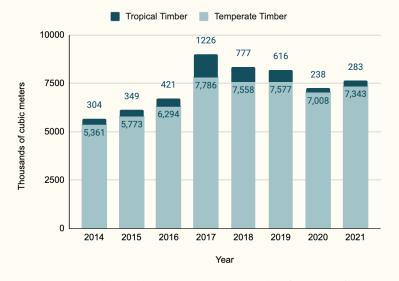


Figure 1. Trends in forest timber production in Mexico (2014–2021). Source: The authors processed data from SEMARNAT (2014–2021). In the figure, Tropical Timber represents the total production of common tropical timbers and precious timber, while Temperate Timber is the total production of Pine (*Pinus* spp.), Oyamel (*Abies religiosa*), Oak (*Quercus oleoides*), and other conifers and broadleaved.

In Mexico, the relatively stable production levels of temperate timber indicate an established industry, but the volatility of tropical timber production highlights market inefficiencies and an opportunity for further development, particularly for lesser-known species. In Guatemala, tropical timber production between 2014 and 2020 remained marginal within the country's broader forestry sector, accounting for just 2.6% of total industrial output (**Figure 2**).

Precious species like Big-leaf mahogany (Swietenia macrophylla) and Spanish cedar (Cedrela odorata) dominated this category but experienced severe declines. While Teak demonstrated growth as a commercially viable tropical species from plantations, tropical species from natural forests showed erratic production patterns, reflecting shifting market demands and ecological constraints. The sector's minimal output highlights structural challenges. These trends underscore how Guatemala's timber industry remains highly dependent on temperate species, with tropical varieties from natural forests playing only a specialized, shrinking role despite their ecological and artisanal value.

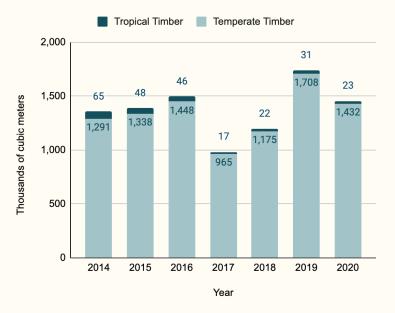


Figure 2. Trends in forest timber production in Guatemala (2014–2020). Source: The authors processed data from SEINEF (2020). In the figure, Tropical Timber represents the total production of common tropical timbers and precious timber, while Temperate Timber is the total production of Pine (*Pinus spp.*), Oak (Quercus oleoides), and other conifers and broadleaved. **Note:** The data represents the volume (m³) of inflows in the forest industry by the most commonly used species. Due to data availability limitations, production from lesser-known species is not included.

The data in **Appendix C** reveals distinct timber extraction trends between Petén, Guatemala, and Quintana Roo, Mexico. While Guatemalan forest concessions will primarily harvest precious and semi-precious woods (with several reporting no activity) in 2025, Mexican operations in Quintana Roo recorded substantially higher volumes, particularly in exotic woods. This divergence likely reflects differences in 2025 market demands, forest management policies, or the composition of commercial species in each region's forests. The complete dataset in **Appendix C** allows

for further comparative analysis of these 2025 production patterns.

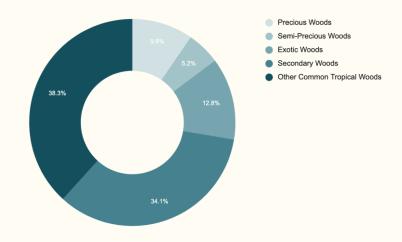


Figure 3. Distribution of authorized tropical timber supply in Guatemala and Mexico in 2025. Source: The authors processed data from FORESCOM and CONAFOR (n.d.).

The pie chart (**Figure 3**) illustrates the distribution of timber production by wood type in 2025. Precious Woods accounts for 9.6% of the authorized total supply, while Semi-Precious Woods comprises 5.2%. Exotic Woods represents the largest share at 38.3%, followed by Other Common Tropical Woods at 34.1%. Secondary Woods comprise the smallest portion at 12.8%. This breakdown highlights a heavy reliance on Exotic and Other Common Tropical Woods, contributing over 72% of the total timber supply. The relatively small shares of Precious and Semi-Precious Woods suggest either limited availability or selective harvesting practices for these higher-value species.

Leveraging storytelling about these sustainable timbers' ecological and cultural heritage can improve their appeal to eco-conscious buyers and consumers.

Additionally, aligning regional certifications with the EUDR opens opportunities in European markets.

5.2 Challenges Faced

Selva Maya serves as the economic backbone of rural communities, with timber playing a critical role in the regional economy. Promoting sustainable management and using timber from sustainably managed forests is critical to protect the Selva Maya ecosystem. To further sustain the community forest management in the Selva Maya and protect it from external pressures, there is an urgent need to diversify the market for timber species from FSC-certified community forests by commercializing new species and timber products. These products range from roundwood and solid wood boards to decking and exterior and interior furniture. Well-known species that local communities harvest and export include Big-leaf mahagany (Swietenia macrophylla) and Spanish cedar (Cedrela odorata). However, the untapped potential of the rainforest is significant as it contains dozens of other tree species that are lesser-known to international markets but have excellent technical specifications (see Selva Maya Timber Species Catalog).

Developing markets for these unique species creates new opportunities that support biodiversity and economic resilience for forest-dependent communities. Market access is the main barrier faced by CFEs. However, during the mission, several other challenges that compound market access were identified:

 Limited capacity: A major issue is the knowledge gap, as many CFEs lack expertise in marketing strategies, export regulations, and multilingual communication, restricting their ability to engage with international buyers. Additionally, processing constraints, such as reliance on mobile sawmills and inadequate access to advanced machinery or drying facilities, limit their production efficiency and product quality. Furthermore, CFEs often operate with small volumes, making it challenging to meet bulk demand and reducing their competitiveness in mainstream markets.

- Over Reliance on Timber Sales: Around 90% of income is tied to timber, making CFEs susceptible to market fluctuations.
- Logistical challenges: High transportation costs, lengthy transit times, and bureaucratic delays from the Mexican <u>Secretariat of Environment and Natural</u> <u>Resources</u> (SEMARNAT) in obtaining harvesting and transportation permits often jeopardize operational efficiency.
- **CITES** permits: The lengthy and complex process of obtaining CITES permits for protected species such as Big-leaf mahogany and Spanish cedar (CITES, 2025) creates a trade barrier for timber producers in Mexico. While CITES regulations are critical for promoting and guaranteeing the sustainable trade of endangered species, the bureaucratic delays and administrative inefficiencies, such as slow permit approvals, which one CFE member noted can take up to a year, often hinder legal timber operations. Producers face prolonged waiting times for permit approvals, leading to shipment delays, financial strain, and lost market opportunities. These obstacles erode the competitiveness of CFEs in Mexico, suppress tropical timber exports, and inadvertently push producers into informal trade channels. Over time, these compounded inefficiencies undermine conservation efforts and sustainable forest management initiatives. In Guatemala, the National

<u>Council of Protected Areas</u> (CONAP) processes CITES in approximately two weeks for certified CFEs within the Maya Biosphere Reserve. A similar approach could be implemented in Mexico by SEMARNAT to streamline the process for FSC-certified CFEs.

5.3 Insights from the Constellation of Priorities activity

In Guatemala, forest communities and CFEs receive no tax incentives or benefits beyond the concession permit for adopting FSC certification and sustainable practices. The lack of regional awareness about certification leads buyers to pay regular prices for certified timber instead of a premium. Furthermore, CFEs often mention that certification costs are high compared to the benefits, compounded by additional expenses like hiring compliance personnel and purchasing safety equipment. CFEs feel that this voluntary scheme is de facto mandatory due to an imposition from the Guatemalan government.

Based on the discussions raised during the mission, there is a consensus among forest communities and NGOs that certification should guarantee market access for producers. However, this alignment has only been very limitedly achieved to date. While some companies value FSC certification when sourcing timber, broader market access remains uncertain.

5.4 Community Benefits

Sustainable timber production through CFEs generates numerous benefits:

- Job creation and income generation improve local economies.
- Conservation efforts, deeply rooted in community traditions, ensure the conservation of biodiversity and natural resources and livelihood improvement.

- Women are involved in leadership roles.
- The youth generation has access to education.
- The generation of economic opportunities and employment reduces the chance of narcotraffickers in the area and emigration.
- Initiatives like value-added processing (e.g., carpentry and chicle production), tourism, and nontimber forest products diversify economic activities and create resilience against market fluctuations.

5.5 Sustainability Considerations

Timber harvesting practices in the Selva Maya region demonstrate alignment with international standards for responsible sourcing. Practices such as low-impact logging ensure natural resource conservation and forest regeneration. However, challenges persist in scaling the utilization of lesser-known species and ensuring consistent compliance with certification criteria. Community-driven conservation ethics and intergenerational stewardship highlight the region's commitment to sustainable forestry. Investments in infrastructure, such as modernizing sawmills and introducing renewable energy, could further improve the sustainability of timber operations.

6. Outcomes of the Mission

The 2024 Selva Maya Tropical Timber Trade Mission facilitated engagement between CFEs, international buyers, and key stakeholders, resulting in outcomes across business partnerships, capacity-building, and policy engagement.

6.1 New Business Partnerships

The mission fostered direct connections between CFEs and an international buyer. A European timber company expressed interest in sourcing container loads of

certified tropical timber from two CFEs in Petén, Guatemala, and Quintana Roo, Mexico...

6.2 Strengthened Capacity

The mission provided critical knowledge-sharing opportunities:

- Stichting Probos's session on niche marketing in Europe equipped CFEs with strategies to tailor their messaging for eco-conscious buyers.
- FSC Guatemala's session on aligning FSC certification with EUDR provided key insights into compliance and market readiness.
- During the networking event, international speakers presented various market access strategies, offering insights into global trade dynamics and potential opportunities for forest communities in the tropical timber sector.

6.3 Policy Engagement

- Four government representatives, two from each country, actively participated in the mission, documenting discussions and assessing potential implications for the region's tropical timber trade.
- Luiza Lucena, PhD candidate at the University of Minnesota–Twin Cities, participated in the mission and interviewed CFEs, timber buyers, NGOs, and government agencies as she is currently developing her research on the challenges and opportunities of the tropical timber trade in the Selva Maya of Mexico. The outcomes of her research have the potential to culminate in actionable recommendations for NGOs and policymakers in the region.

7. Challenges and Lessons Learned

7.1 Logistical Barriers

One of the primary logistical challenges identified during the mission was the high transportation costs and complex logistics involved in exporting Selva Maya timber. The competition with more established timber markets, such as those in Brazil and Congo, places Selva Maya producers at a disadvantage regarding pricing and market access. Additionally, transportation inefficiencies, such as the high cost of regional logistics and inconsistent infrastructure, further strain the ability of producers to compete effectively.

7.2. Market Limitations

Selva Maya timber market faces significant challenges related to market access and the inconsistent pricing of certified timber. In Guatemala, although FSC certification is present in several communities, the financial pressure to sell timber as non-certified due to pricing disparities undermines the economic incentives of maintaining certification. Mexico faces challenges similar to Guatemala. However, only four ejidos in the Mexican part of Selva Maya are certified. This creates a tension between achieving short-term financial goals and disseminating sustainable practices. Market limitations also stem from weak commercial alliances and inconsistent product quality, limiting producers' access to regional and international markets. However, the demand for certified timber in niche markets, particularly for products like outdoor furniture and in response to regulations like the EUDR, presents an opportunity. Framing Selva Maya timber as a premium product through storytelling and emphasizing the region's unique ecological and cultural significance could improve market appeal and pricing.

7.3 Bureaucratic Barriers

In Mexico, specifically, another significant challenge is the long waiting times for export permits and the complex documentation processes required for timber exportation. Delays in permit issuance and bureaucratic challenges add additional costs and reduce the timeliness of market access, impacting overall efficiency and profitability. To mitigate these barriers, suggestions included the creation of region-specific subsidies or shared logistics platforms that could reduce costs and improve competitiveness for local producers. Furthermore, improving infrastructure, particularly roads, could allow for year-round access and better fire prevention, ensuring more stable timber production and marketing. Streamlining the permitting process and reducing administrative delays would also be important in allowing more efficient and competitive export operations.

7.4 Technical and Operational Challenges

Operational challenges were also evident in the timber processing sector. The limited processing capacity and equipment at some sawmills jeopardize the ability to supply larger volumes of timber or process lesser-known species, such as Santa Maria (Calophyllum brasiliense), Manchiche (Lonchocarpus castilloi), and Tzalam (Lysiloma spp.), and Pucté (Terminalia buceras), which do not yet have established markets. Improving equipment and introducing more efficient processing methods could help reduce costs and improve operational capacity. Furthermore, increasing the diversity of timber species harvested and processed would provide greater market access and increase the economic viability of forest concessions.

7.5 Cultural and Social Challenges

Cultural and social considerations played a role in the mission, particularly regarding the perspectives of local

communities toward timber trade and conservation. In certain regions, there is a strong conservation ethic and a desire to integrate sustainable forest management with community development. However, these goals are often at odds with immediate financial needs, as seen in the sale of certified timber as non-certified to meet short-term revenue goals. Cultural values around conservation and sustainable management often clash with the commercial pressures producers face. Understanding these social dynamics fosters effective partnerships between stakeholders, including government agencies, NGOs, and local communities. Another notable cultural and social challenge observed in the sawmills was the reluctance to adopt protective equipment. In some cases, workers were not using safety gear consistently, and when they did, the equipment was often not suited for the region's high temperatures. This lack of proper adaptation to local conditions, combined with cultural resistance to adopting safety measures, poses a significant challenge to guaranteeing the health and wellbeing of workers. The issue stems from the discomfort of using ill-suited gear in hot climates and a cultural mindset where safety protocols may not be prioritized due to long-standing work practices or the perception that such measures are unnecessary.

This challenge directly impacts certified sustainable forest management, as worker health and safety are core requirements under most certification schemes, such as FSC. The consistent use of inappropriate protective gear, coupled with cultural resistance to safety protocols, could be considered a serious non-compliance issue. If an audit finds these conditions persist without corrective measures, it could result in a Major Corrective Action Request (CAR), requiring immediate changes to maintain certification.

8. Recommendations

8.1 Improved Market Access

To improve market access for community timber producers, targeted marketing campaigns should highlight Selva Maya timber's unique ecological and cultural heritage, emphasizing sustainability and storytelling to resonate with eco-conscious buyers and consumers. Developing partnerships with international buyers, especially in niche markets such as outdoor furniture and public spaces, could create consistent demand for certified timber. Additionally, supporting producers in obtaining or maintaining timber certifications like FSC and aligning them with global standards and regulations, such as the EUDR, can improve their competitiveness in premium markets. Overcoming pricing disparities between certified and non-certified timber through financial incentives or market mechanisms will encourage the long-term dissemination of sustainable practices.

8.2 Focus on Conservation Timber

Focus on high-value wood sourced from FSC-certified, community-managed forests, promoting environmental conservation and local economic development. Successful initiatives highlight its potential, such as Rotterdam's Cities4Forests project, which integrates Pucté (*Terminalia buceras*) wood into urban infrastructure, and FORESCOM in Guatemala, which exports decking and garden products to European markets like Leroy Merlin (Van Benthem, 2024). Expanding this model, CFEs can develop premium products such as outdoor furniture, eco-tourism structures, and artisan crafts with traceability tags that emphasize their sustainable origins. Collaborating with ethical brands like Patagonia or IKEA could strengthen market opportunities by aligning with

global sustainability narratives and consumer demand for responsible sourcing.

8.3 Strengthening Partnerships

Collaboration between the private sector, government, and NGOs should be prioritized to build a robust framework for sustainable forestry. NGOs can play a critical role by shifting focus from training alone to investing in the value chain, including tangible improvements in production capacity. The private sector can help foster commercial alliances and provide market intelligence, while governments can facilitate smoother bureaucratic processes for permits and certifications. Regular multi-stakeholder dialogues can help bridge communication gaps, align priorities, and create shared strategies for sustainable timber trade.

8.4 Capacity Building

Capacity-building initiatives should provide local communities with advanced training in forest management, timber processing, and marketing strategies. These programs should emphasize the diversification of species utilization, enabling producers to capitalize on lesser-known species, such as Pucté (Terminalia buceras), Santa Maria (Calophyllum brasiliense), Tzalam (Lysiloma spp.), and Manchiche (Lonchocarpus castilloi). Furthermore, equipping communities with skills to develop value-added products, such as carpentry items or sustainable building materials, can expand economic opportunities. Tailored workshops addressing specific challenges, such as developing communication strategies with buyers and creating export networks, would also improve community resilience and market readiness.

8.5 Policy Support

Policy support from the Mexican and Guatemalan governments is critical for advancing sustainable forest management and certification programs. Governments should streamline bureaucratic processes to reduce delays in timber permitting and export approvals. Introducing subsidies or financial support for certified timber production can help address the pricing challenges producers face. Policies that incentivize investments in infrastructure, solar energy, and tourism within forest communities will contribute to their long-term sustainability. Collaborative frameworks, where governments actively engage with communities, NGOs, and private sector stakeholders, can ensure the effective implementation of such policies.

8.6 Infrastructure Development

Improved infrastructure is critical for improving timber production and trade in the Selva Maya region. Investments in transportation networks, such as roads, can guarantee year-round access to remote communities, reducing logistics costs, preventing delays, and reinforcing conservation efforts by enabling better resource management.

8.7 Expand Scientific Data on and Demonstration Projects for Lesser-Known Species

Finally, improving the marketability of lesser-known species requires expanding scientific data on these species and initiating pilot projects in Western and European markets. Comprehensive research into the technical properties, durability, and potential applications of such species is essential for building confidence among manufacturers and consumers (Stichting Probos, 2021). For instance, a study shows that limited knowledge about the profitability and transformation of lesser-known species poses a significant barrier to commercialization (ATIBT, n.d.; ATIBT, 2024a). By

conducting detailed analyses and disseminating findings, stakeholders can better understand and utilize these species.

Pilot projects are practical demonstrations of lesser-known species viability, showcasing their performance in real-world applications and generating market interest. The Conservation Timber Initiative notes that pilot projects can create reference cases, effectively communicating the potential of lesser-known species throughout the tropical timber value chain (Hennekes, 2021). Such initiatives not only validate the technical attributes of these species but also help identify and overcome logistical and perceptual challenges associated with their adoption.

Collaborative efforts involving researchers, industry players, NGOs, local government, and communities are critical (Stichting Probos, 2021). By pooling resources and expertise, these partnerships can facilitate the collection of robust scientific data and the successful execution of pilot projects, ultimately leading to the integration of lesser-known species into mainstream markets and promoting sustainable forest management practices.

9. Conclusion

The Selva Maya Trade Mission 2024 advanced its goal of promoting sustainable timber trade from the Selva Maya region, strengthening connections between local communities, governments, and international buyers. By fostering direct engagement between producers and markets, the mission highlighted the economic and environmental value of sustainably sourced timber while addressing key challenges in the sector.

The mission highlighted the significant potential of well-known species, such as Big-leaf mahogany and Spanish cedar, and lesser-known timber varieties, which can diversify market opportunities, improve biodiversity conservation, and improve the business case for sustainable forest management. Through site visits, workshops, and networking sessions, participants gained firsthand insights into community-led sustainable forestry, reinforcing the importance of certification programs like FSC in meeting international demand for deforestation-free products (EUDR compliance).

However, persistent barriers, such as limited capacity, high transportation costs, bureaucratic delays in permits (especially CITES in Mexico), and certification expenses, remain obstacles to market competitiveness. The mission also emphasized the social benefits of sustainable timber trade, including job creation, women's leadership, youth opportunities, and reduced illegal activities, demonstrating how responsible forestry supports livelihoods and conservation.

Moving forward, collaborative efforts among governments, NGOs, and the private sector will be essential to:

- Promote lesser known species by supporting market research, technical training, and design innovation to unlock their commercial potential.
- Streamline regulatory processes and reduce administrative burdens in Mexico.
- Expand market access through storytelling, niche marketing, and value-added products.
- Invest in infrastructure and capacity-building to improve efficiency and sustainability.

By addressing these challenges, stakeholders can solidify Selva Maya's position as a global hub for sustainable timber, ensuring long-term economic resilience for forest communities while preserving one of the world's most vital ecosystems. The mission's outcomes set a strong foundation for future initiatives, proving that responsible trade can drive both environmental and social progress when supported by partnerships and policy reforms.

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11. Appendices

Appendix A. Participants and Stakeholders Involved in the 2024 Selva Maya Tropical Timber Trade Mission

Stakeholder Type	Organization	Participants	Country
	Forest Pact	2	PAN
Private Sector	Wennerth Wood Trading	2	DNK
	Harwest	1	GUA
	Izabal Woods	1	GUA
	Minka-Dev	1	MEX
University	University of Minnesota	1	USA
	Rainforest Alliance Mexico	4	MEX
	Rainforest Alliance Guatemala	3	GUA
	The Nature Conservancy	1	GUA
NGO	Stichting Probos	1	NDL
	World Forest ID	1	USA
	FSC Mexico	l	MEX
	FSC Guatemala	l l	GUA
Government	National Institute of Forests (INAB)	1	GUA
	National Forestry Commission (CONAFOR)	2	MEX
	Asociación de Comunidades Forestales de Petén (ACOFOP)	1	GUA
	Asociación Forestal Integral Cruce a la Colorada (AFICC)	2	GUA
	Asociación Forestal Integral San Andrés, Petén (AFISAP)	2	GUA
	Sociedad Civil para el Desarrollo Arbol Verde	2	GUA
	Asociación de Productores Agropecuarios y Forestales Selva Maya (ASO SELVAMAYA)	2	GUA
	Asociación Bio-Itzá	2	GUA
CEE	Custodios de la Selva, Sociedad Civil	1	GUA
CFE	Empresa Comunitaria de Servicios del Bosque S.A. (FORESCOM)	2	GUA
	Sociedad Civil Laborantes del Bosque	3	GUA
	García, Barillas, Luna, Herrera, Lopez, Recinos, Trujillo, Sociedad Civil (OMYC)	2	GUA
	Sociedad Civil Amigos del Bosque	2	GUA
	Sociedad Civil Selva Maya del Norte	2	GUA
	Cooperativa Integral de Comercializacion Carmelita R.L.	1	GUA
	Sociedad de Productores Forestales Ejidales de Quintana Roo	2	MEX
	Ejido Botes	1	MEX
Ejido	Ejido Noh Bec	10	MEX

Stakeholder Type	Organization	Participants	Country
	Ejido Petcacab y Polinkin	2	MEX

Appendix B: Photos of the 2024 Selva Maya Tropical Timber Trade Mission



Photo by Mark van Benthem



Photo by Mark van Benthem







Photo by Mark van Benthem



















Photo by Mark van Benthem





Photo by Mark van Benthem





Photo by Luiza Lucena

Appendix C: Authorized volume (m³) of tropical timber supply in 2025.

Country	CFE	Log Volume (m³)				
		Precious Woods	Semi-Precious Woods	Exotic Woods	Secondary Woods	Other Common Tropical Woods
Petén, Guatemala	S.C. OMYC	0	0	0	0	
	S.C. ARBOL VERDE	2,148.24	2,177.84	146.7	185.98	
	S.C. LAB.DEL BOSQUE	439.81	118.66	36.79	16.54	
	S.C. CUSTOSEL	1,090.57	558.73	187.99	86.12	
	S.C. IMP.SUCHITECOS	354.4	359.11	8.64	60.6	
	S.C. EL ESFUERZO	0	0	0	0	

	S.C. AMIGOS DEL BOSQUE	404.65	131.97	96.51	24.81	
	COOP. CARMELITA	1,947.69	1,120.25	298.67	348.86	
	AFISAP	1,189.33	332.46	78.29	1,253.48	
	AFICC	363.87	427.39	179.1	109.41	
	ASOSELVA MAYA	1,587.24	1,021.42	270.75	48.15	
	BIOTIZA	1,090.57	558.73	187.99	86.12	
	S. C. SELVA MAYA DEL NORTE	643.55	249.83	136.1	547.67	
Quintana Roo, México	PETCACAB	1,501.55	76.30	10,203.20	19,891.50	24,517.84
	NOH-BEC*	430.28	3.99	5,826.81	24,235.17	28,059.94

Source: FORESCOM (unpublished) and CONAFOR (n.d.). Data processed by the authors.

* The potential supply volume for Noh-Bec refers to 2024, as data for 2025 is not yet available.

Appendix D: Relevant Resources and Market Information

<u>Timber Species Catalog July 2023 Edition (Spanish Only)</u>

<u>Annual Forestry Statistics of Mexico</u>