2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

24 October 2023, Seoul

AFoCO
Asian Forest Cooperation Organization

Food and Agriculture Organization of the United Nations

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Tuesday, 24th October 2023 | 3F. Conference Hall, Yeouido Post Tower, Seoul

TIME	PROGRAM
10:00–10:40	Opening & Introduction
10:40–11:20	Session A: Setting the Scene
11:20–11:40	Coffee Break : Rm. 311
11:40–12:20	Session B : Improved and Increased Production
12:20–13:20	Lunch
13:30–14:30	Session C : Sustainable Production
14:30–15:20	Session D : Sustainable Wood in the Context of Climate Change Mitigation/ Adaptation and Improved Economic Development
15:20–15:45	Coffee Break : Rm. 311
15:45–16:30	Session E : Mobilizing Investment and Finance in Support of Restoration, Sustainable Production and Processing
16:30–17:00	Next Steps and Ways Forward
17:00–17:15	Survey & Closing Remarks
17:30–20:30	Welcome Reception (Promenade, FKI Tower)

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Regional Dialogue in Asia

Seoul, Republic of Korea

24 October 2023

1. Background

The Annual Thematic Dialogue is a dialogue session and platform for forward-looking discussions among Asian Forest Cooperation Organization (AFoCO) and its member countries to inform the strategic planning process and programming for the coming years. This activity also aims to harvest the interest of member countries to facilitate achieving AFoCO's regional and global responsibilities, engage diverse stakeholder groups to make AFoCO's operation relevant to on-going policy processes and contexts in the member countries. This will be organized as an annual event with a theme-based discourse on strategically timely and relevant topics. The theme for 2023 session is **"Sustainable wood for a sustainable future"** and it will be organized jointly with the Food and Agriculture Organization (FAO) of the UN this year to seize synergies with relevant requests by FAO member in recent governing and statutory bodies, including the Asia-Pacific Forestry Commission (APFC). Noting that the 30th Session of the APFC is taking palce prior to AFoCO's Annual Thematic Dialogue, the Dialogue can provide an opportunity to review and build on the relevant APFC30 outcomes as part of its discussions.

2. Relevance of the theme

As global consumption of all materials is expected to rise to meet the needs of a growing population, the world will need more renewable resources. The region accounts for a major share of global forest product production, consumption and trade and continues to be one of the most dynamic and rapidly developing regions in the world. Sustainably produced, wood products can be a reliable source of renewable carbon-neutral material, offering solutions across multiple value chains, including construction, furniture, packaging, renewable energy, biomaterials for clothing, and bio-chemicals. Sustainable wood value chains can also contribute to the Sustainable Development Goals in a variety of ways, most noticeably generating employment and income, including in remote rural areas, contributing to eradicating hunger as a source of fuel for cooking, increasing the offer of clean energy, and presenting an option to enhance the alignment of environmental and socioeconomic objectives in conservation, restoration, and expansion of forest cover, including through protection of biodiversity.

3. The objectives of the 2023 session of the Annual Thematic Dialogue are:

- To explore and discuss the challenges to sustainable wood production and use;
- To collectively identify and prioritize actions required to promote sustainable wood production and use; and
- To share emerging opportunities from the private sector and other resource partners and discuss ways for collaboration.

Food and Agriculture Organization of the United Nations

AFoCO

4. Targeted Participants (approx. 50 pax.)

- Delegations of Parties [1] and Observers to the AFoCO Assembly & other countries in Asia, including Central Asia countries *(Bhutan, Brunei Darussalam, Cambodia, Indonesia, Kazakhstan, Kyrgyzstan, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Republic of Korea, Singapore, Thailand, Timor-Leste, Vietnam)*; DG/Director level government focal points
- Partner organizations and potential partner countries from beyond Asia

5. Date and Time

The dialogue will be held on **24 October 2023, 10:15 – 17:30 Seoul time (GMT+9)**.

6. Venue & Meeting Tool

The event will be an in-person meeting and the participants will join in person.

- Venue: 3rd Floor, Yeouido Post Tower
  (Yeouido Post Tower, 60 Yeoui-naru-ro 60, Yeongdeungpo-gu, Seoul)

7. Tentative Programme

(Seoul Time)	Agenda/Presentation Topics	Session format and moderator
10:00-10:40 (40 mins)	***1) Arrival (10:00-10:15)-15 mins*** **2) Opening & Introduction to the agenda -25 mins** **Opening Remarks** (3 mins) - **Dr. Chongho Park, Executive Director, AFoCO Secretariat** **Welcome Remarks** (3 mins): - **Mr. Tang Shengyao, FAO Representative and Head of FAO Partnership and Liaison Office-Seoul** **Congratulatory Remarks** (5 mins): Delivering the APFC30 outcomes - **Mr. Keiran Andrusko, Chairperson of the Asia Pacific Forestry Commission (APFC),** video message **Keynote Remarks** (10 mins): Role of sustainable wood for SFM, good governance, economic development and climate action. Mention WFC XV ministerial call on sustainable wood - **Dr. Eunsik Park, Director General, International Affairs Bureau, Korea Forest Service** **Introduction of the agenda/programme** (1 mins) - **Ms. Sooyeon Laura Jin**, Forestry Officer (Policy & Governance), Forestry Division, FAO **-Group Photo** (3 mins)	<u>**Session moderator**</u>: Dr. Kikang Bae Team Leader, Strategic Planning Team, AFoCO

[1] 10 ASEAN countries are included.

10:40-11:20 (40 mins)	**A. Setting the scene** 1) **Trends of Global Timber Trade: Challenges of Legal and Sustainable Supply Chains in the Tropics** (15 mins) - Dr. Hwan-Ok Ma, Officer-in-Charge, Division of Forest Management, ITTO 2) **The potential of sustainable wood value chains for circular bio-economy, climate action and achieving Global Forest Goals (15 mins)** - Ms. Thaís Linhares-Juvenal Team Leader (Sustainable Forestry, Value Chains Innovation & Investments) Secretary of the International Commission on Poplars and Other Fast-Growing Trees Sustaining People and the Environment – IPC Forestry Division, FAO 3) **Q&A from the floor (10 mins)**	**Session moderator:** Dr. Kikang Bae Team Leader, Strategic Planning Team, AFoCO
11:20-11:40 (20 mins)	**Coffee/ Break**	
11:40-12:20 (40 mins)	**B. Improved and increased production** **1) Community forestry for better tenure and improved livelihoods (15 mins)** "Improved tenure, community and smallholder involvement, diversification of rents (products and PES) from forests, to forest-based benefits and livelihoods of forest-dependent people" - Mr. Ronnakorn Triraganon, Senior Strategic Advisor, RECOFTC **2) Forest restoration for increased supply (15 mins)** "Community-level perspective on agroforestry benefits, non-timber forest products, wood energy" - Dr. Pham Duc Chien, Director of Project and Program Division, AFoCO **3) Q&A from the floor (10 mins)**	**Session moderator:** Dr. Kikang Bae Team Leader, Strategic Planning Team, AFoCO
12:20-13:20 (70 mins)	**Lunch Break (lunch box)** - Informal exchange of ideas, networking etc.	
13:20-13:30 (10 mins)	**Arrival to the meeting room for the afternoon session** -videos, free interaction	
13:30-14:30 (60 mins)	**C. Sustainable production** **1) Assurance systems to governance and demonstrate sustainable production for improved market access** (10 mins) - Mr. Bruno Cammaert, Forestry Officer (EU-funded Forest Governance and Value Chains Programme Manager) Forestry Division, FAO **2) National timber legality assurance system of Indonesia (SVLK)** - (15 mins) - Mr. Kris Sugiyanto, Director of Forest Processing and Marketing, Ministry of Environment and Forestry, Indonesia	**Session moderator:** Ms. Sooyeon Laura JIN, Forestry Officer (Policy & Governance), Forestry Division, FAO

	3) Important Role of Forest Certification for Sustainable Wood Production (10 mins) - Ms. Cindy Cheng, Regional Director, FSC- Asia -Pacific FSC **4) PEFC Certification: Creating value for sustainable forests** - Ms. Siti Syaliza Mustapha, Deputy Secretary General/ COO, PEFC International **(10 mins)** **5) Q&A from the floor (15 mins)**	
14:30-15:20 (50 mins)	**D. Sustainable wood in the context of climate change mitigation/adaptation and improved economic development** **1) Wood utilization model for enhanced carbon stock** (15 min) - Dr. Myungkil KIM, Director / Wood Industry Division, Forest Products and Industry Department, National Institute of Forest Science (NIFOS), Rep of Korea **2) Factors influencing sustainable wood industry** *(prerecorded video presentation)* (15 min) - Prof. Francisco X. Aguilar, Ph. D., Professor, Department of Forest Economics, Swedish Univesity of Agricultural Sciences **3) Increasing value addition in Central Africa** (10 mins) "Practices from the region to promote and stimulate for legal and sustainable wood, add value/create jobs and mobilize finance and responsible investments" - Mr. Benoit Jobbé-Duval, ATIBT **5) Q&A from the floor/ free-style discussions (10 mins)**	**Session moderator:** Ms. Sooyeon Laura JIN, Forestry Officer (Policy & Governance), Forestry Division, FAO
15:20-15:45 (25 mins)	**COFFEE BREAK**	
15:45-16:30 (45 mins)	**E. Mobilizing investment and finance in support of restoration, sustainable production and processing** 1) **Lessons learned from GCF Projects on SFM and ways forward (how to best link sustainable wood use to GCF funding opportunities)** (15 mins) - Mr. Ben Vickers, Land Use, Forests and Ecosystems Senior Specialist, GCF 2) **The Power of Partnership - Forests for Global Net-Zero** - Mr. Hyungsoo Kim, CEO of TreePlanet (15 mins) 3) **Q&A from the floor (15 mins)**	**Session moderator:** Ms. Sooyeon Laura JIN, Forestry Officer (Policy & Governance), Forestry Division, FAO

16:30-17:00 (30 mins)	**F. Next steps and ways forward** **1) Recap and feedback of afternoon sessions/ Quick group exercise to write down key challenges and opportunities** [2] (10 mins) **2) PROPOSED NEXT STEP** (20 mins)	**Session moderator:** Ms. Sooyeon Laura JIN, Forestry Officer (Policy & Governance), Forestry Division, FAO
17:00-17:15 (15 mins)	**G. Closing** **1) Survey (5 mins)** **2) Closing remarks (5-10 mins)** - AFoCO	

8. Expected outputs

The results of the thematic dialogue (including a set of recommendation for AFoCO and FAO) will be summarized and published in a report to inform the AFoCO's and FAO's future planning and programming process.

9. Expected outcomes

- Improved awareness and recognition by participants of the important contributions of sustainable wood value chains to sustainable development, the current challenges
- Identification of opportunities for international, regional, and South-South cooperation and resource mobilization
- Interest and momentum built among participants to take action for promoting sustainable wood production and use in the region, based on agreed priorities

[2] Create a shared file for the participants to provide inputs throughout the day as we move on different sub-themes online – to save the time.

v. 10.10.2023

Background Note

"Sustainable Wood for a Sustainable Future"

I. Introduction

1. Asia and the Pacific[1] is covered by 740 million hectares of forests, accounting for 26 percent of the region's land area, and 18 percent of global forest cover. On a per capita basis, Asia-Pacific is the least forested region in the world. An annual regional loss of over 0.7 million hectares of forests from 1990 to 2000 has reversed to an annual increase of 2.3 million hectares during 2000 to 2005. Between 2005 and 2010, the rate of increase declined to under 0.5 million hectares per year. Notwithstanding the positive trend in expansion of planted forests, forest degradation and declining health and vitality remain the hidden problems confronting Asia-Pacific forests.

2. Forests provide sources of livelihoods to hundreds of millions of people in Asia and the Pacific. They are also generators of national wealth and economic advancement: the annual value of trade in primary forest products in the region exceeds US$90 billion (Joshi, 2022).

3. Community-based forestry provides a social and economic safety net during disasters or crises (RECOFTC, 2021). Across 16 countries in the Asia-Pacific region for which data are available, a total of 185 million hectares of forest land are currently held under community forestry (CF) management regimes, accounting for 34 percent of total forest land in those countries. In Southeast Asia, as of 2020 nearly 14 million hectares of forest are managed under various forms of community forestry – nearly doubling since 2010. ASEAN member states collectively aim to achieve a 500 percent increase by 2030 (RECOFTC, 2020).

4. As global consumption of all raw materials is expected to rise to meet the needs of a growing population, the world will need more renewable resources. Sustainably and legally produced, wood products can be a reliable source of renewable carbon-neutral material, offering solutions across multiple value chains, including construction, furniture, packaging, renewable energy, biomaterials for clothing, and bio-chemicals. Sustainable wood value chains can also contribute to the Sustainable Development Goals in a variety of ways, most noticeably generating employment and income, including in remote rural areas, contributing to eradicating hunger as a source of fuel for cooking, increasing the offer of clean energy, and presenting an option to enhance the alignment of environmental and socioeconomic objectives in conservation, restoration, and expansion of forest cover, including through protection of biodiversity.

5. Despite only accounting for 18 percent of the world's forest area (FAO, 2019), the Asia Pacific region has become a prominent producer of essential wood products, including roundwood, woodfuel, sawnwood, wood-based panels, pulp for paper, and paper and paperboard. Over recent decades, the region's production share has seen a consistent increase across all product categories, with wood-based panels and paper, and paperboard experiencing particularly remarkable growth. As far as consumption is concerned, while the use of woodfuel is on the decline, there is a noticeable rise in demand for industrial wood products. In terms of trade, the Asia-Pacific region has assumed a significant role as a major importer of industrial roundwood and sawnwood, while also becoming an exporter of wood-based panels[2].

[1] As defined by FAO regional grouping: https://www.fao.org/asiapacific/countries/en/

[2] (FAO, 2019) Production of key wood products, world and Asia-Pacific region, 1990, 2010 and 2017, Page 58, Table 3.1 https://www.fao.org/3/ca4627en/ca4627en.pdf

6. Further below, this paper describes the situation of region's forest sector in terms of i) sustainable wood value chains - production, consumption and trade; ii) Innovative technologies for the forest sector; iii) sustainable wood energy; and iv) importance of the forest sector for livelihoods. It will then outline the main opportunities and ongoing initiatives in support of sustainable wood value chains in the region.

II. Sustainable Wood Value Chains - Production, Consumption, and Trade

7. A sustainable value chain is defined by FAO as being profitable throughout all of its stages (economic sustainability), providing broad-based benefits for society (social sustainability), and having a positive or neutral impact on the natural environment (environmental sustainability). Value chains are not only related to primary production, but their sustainability also involves actions related to responsible production and consumption. Sustainable wood value chains can meet these standards if effective sustainable management of natural and planted forests is in place and is encouraged by a business model with higher value addition and more equitable production and trade systems, which include smallholders and SMEs.

8. In most Asian countries wood is still the most economically important forest product. It has three main sources: natural forests; intensively managed planted forests; and trees outside forests. There is lack of data on the relative importance of these sources as national statistics do not disaggregate wood quantities from these sources and often fail to fully capture wood production in farm woodlots and private plated forests (FAO, 2019). However, there are some indications that countries increasingly recognize trees outside forests as valid timber sources.

9. For instance, "Homegardens", which are privately owned, mostly by smallholders, are an important land use in several humid tropical areas in the Asia-Pacific region, especially in Bangladesh, Indonesia, Malaysia, the Philippines, Sri Lanka and the Indian states of Karnataka and Kerala. Several species grown in monocultures or with other species (e.g. areca palm, coconut, durian, jack, mango, mangosteen, rambutan, rubber and tamarind) are also important sources of wood and other products. In several countries in the region, wood from rubber and coconut plantations supports thriving furniture industries. Trees grown primarily for wood production in diverse farm-forestry systems are becoming increasingly important in the region. In recent decades there has been rapid growth in on-farm tree planting, especially using eucalypt, acacia, poplar and teak. (FAO, 2019).

10. While the supply of wood from natural forests remains important in some countries, the share of wood production from planted forests is increasing[3]. The logging of natural forests, although declining in importance in the region, remains the dominant wood production system in several forest-rich countries, including Cambodia, Indonesia, Malaysia, Papua New Guinea and the Solomon Islands, generating substantial income for governments through royalties and export taxes.

11. Between 1990 and 2017, several countries in the Asia-Pacific region banned or scaled down logging in natural forests. The overall share of wood production from natural forests declined, with most of the increase in production coming from planted forests (including farm forestry) and increased logging in a few countries still relying on natural forests (FAO, 2019).

[3] Globally, there has been a significant increase in planted forest area in the past 30 years. Since 1990, the world's total area of planted forests has increased from 170.1 million hectares, to 292.6 million hectares in 2020. In APFC member countries, the area of planted forests has also expanded rapidly; from 73.2 million hectares in 1990 to 134.4 million hectares in 2020, an increase of 83.6 percent. A significant proportion (45.9 percent) of the world's planted forests are located in APFC member countries. FRA 2020 differentiated between two sub-categories of planted forests; "plantation" and "other planted" forest. Plantation forest is defined as a kind of planted forest, characterized by intensive management, regular tree spacing and one to two species per management unit. This division into sub-categories provides additional data for, among others, wood supply analysis. Plantation forests in APFC member countries totaled 79.9 million hectares in 2020, accounting for 59.5 percent of planted forests.

12. Planted forests are becoming the major source of wood supply in the Asia-Pacific region, although there is a lack of reliable data on their share of wood production. Most of the initial development of industrial-scale planted forests involved long-rotation hardwoods such as teak or softwoods such as radiata pine, grown primarily for saw and veneer logs. Later, the development of the region's pulp- and paper industry shifted attention to fast-growing species, particularly acacias, eucalypts and tropical pines. Developments in wood-processing technologies (e.g. spindleless lathes that can peel small-dimension logs) are increasingly enabling the use of plantation-grown, small-dimension timber for most end uses and significantly shortening rotation lengths (FAO, 2019).

13. Despite the Asia Pacific region accounting for only 18 percent of the world's forest area, it has emerged as a leader in the production of certain important wood products, such as roundwood, woodfuel, sawnwood, wood-based panels, pulp for paper, paper and paperboard. The region's share of production has increased in recent decades for all product categories, but the most remarkable growth has been in wood-based panels and paper and paperboard. China, Indonesia and Viet Nam have provided significant incentives for investment in forest industries, especially those two product categories, and this has led to the rapid expansion of production capacities. The production of wood-based panels increased more than eightfold in the region between 1990 and 2017 and the production of paper and paperboard grew more than threefold, making Asia-Pacific the major producing region of these (FAO, 2019).

14. According to FAOSTAT data, in 2021 East Asia accounted for 32% of global industrial roundwood production, largely from China. Southeast Asia also contributed to 11% of global roundwood production – more than the contributions of either North or South America to global production. In total, the Asia-Pacific region produced nearly 74 million m3 of industrial roundwood, accounting for 46% of global production.

15. The Asia-Pacific region has emerged as a large producer of wood furniture. Globally, gross value added in the wood-furniture sector declined from USD 145.3 billion in 1990 to USD 128.5 billion in 2011 (FAO, 2014). In the same period, however, gross value added in wood furniture production in Asia, increased from USD 27.4 billion to USD 40.0 billion. In Asia, lower wages (especially in China) have encouraged the rapid growth of furniture production, most of which is exported to Europe and the United States of America (FAO, 2019).

16. Consumption is declining for woodfuel but increasing for industrial wood products. Total roundwood consumption – industrial roundwood plus woodfuel – in the Asia Pacific region remained largely unchanged between 1990 and 2015 at about 1.2 billion m3, but the proportions of the two components changed significantly. In 1990, industrial roundwood accounted for 26 percent of total roundwood consumption (the rest being woodfuel). This proportion had grown to 41 percent by 2017, with a corresponding decline in the woodfuel component (FAO, 2019). Several factors determine wood consumption stemming largely from rising incomes and increasing urbanization and the resultant increased access of people to commercial sources of energy, especially liquefied petroleum gas and electricity.

17. As far as trade of wood and wood products is concerned, the Asia-Pacific region has become a major importer of industrial roundwood and sawnwood and an exporter of wood-based panels. The major trade flows of wood products in the region consist broadly of: i) exports of industrial roundwood and sawnwood from resource-rich countries in the region (e.g. Australia, Cambodia, Indonesia, Malaysia, Myanmar, New Zealand, Papua New Guinea and the Solomon Islands); ii) imports of industrial roundwood and sawnwood by countries with high demand but limited resources – key importers are China, Japan, the Republic of Korea and, more recently, India and Viet Nam, which increasingly are sourcing wood from outside the region, including from Canada, the United States of America, Australia, New Zealand and the Russian Federation. This list does not include importation of illegally logged timber, or other source regions where volumes are lower but the trade remains significant. While sources vary in estimates of trade volumes, they generally agree that in region such as Africa, the majority of all timber production was destined for China (Weng et al. 2014) while at the same time African timber imports constitute a small proportion of China's imports by volume (Sun, 2014). The

share of tropical timber imports is therefore declining; iii) exports of processed products – such as wood-based panels, pulp, paper and paperboard, and wood furniture – made from domestically produced or imported wood (e.g. China and Viet Nam); iv) imports of processed products by countries with limited ability to invest in processing.

18. Most notably, China has emerged as a major importer of roundwood and sawnwood and an exporter of value-added wood products. China's wood product imports were worth USD 5.4 billion in 1990, which was less than 5 percent of the global value (USD 113 billion) in that year. In 2017, China imported wood products worth USD 51.3 billion, which was 20 percent of the global value of such imports (FAO, 2019). In contrast, South Korea imported USD 3.84 billion of wood products, the majority of which came from Viet Nam, China and Indonesia – for plywood, wood pellets and particle board (EFI, 2021).

19. Ensuring positive outcomes from the increased wood use and trade depends on sustainable provision of raw material, on wood value chains that are sustainable, legal, and transparent, and the enabling environment that can support integrated policy and investments measures. The adoption of innovative technologies and upscaling sustainable wood use for the achievement of carbon-neutral and resilient economies can be possible with adequate policy and legal frameworks and by fostering research and development.

III. Innovative Technologies for the Forest Sector

20. The use of innovative technologies – including digital, biological and processing technologies, new wood-based products, social innovations and innovative finance mechanisms – is revolutionizing forest management and forest value chains. Digital technologies and remote sensing data support policy-making and provide for more efficient implementation, monitoring, and enforcement. Advances in earth observation technologies, high-resolution satellite imagery, remote sensing and mobile electronic devices are revolutionizing forest management and the environmental monitoring of forests and landscapes. Much of this is detailed in a joint FAO and CIFOR study, "Asia-Pacific roadmap for innovative technologies in the forestry sector" (Roshetko et al. 2022) which outlines barriers and opportunities for the widespread option of these technologies.

21. FAO hosts a suite of free, open-source software tools to facilitate flexible and efficient data collection, analysis and reporting, including the System for Earth Observations, Data Access, Processing and Analysis for Land Monitoring (SEPAL) and the Open Foris toolkit. In the Asia-Pacific region, these tools have been used widely by forest administrations, including in Bangladesh, Bhutan, Mongolia, Myanmar and Papua New Guinea, to assist in the development of national forest inventories (NFIs) and in the interpretation and analysis of NFI data.

22. The application of these open-source tools and platforms is further explored through the Global Forest Observation Initiative, bringing together FAO, academic and research institutions, governments and private bodies with a shared interest in improving the quality of, access to, and use of, data related to forests. For example, SERVIR, a partnership between the United States Agency for International Development and NASA, aims to build on SEPAL's existing capabilities to coordinate the interpretation of forest data by environmental decision-makers in developing countries at a regional level, working, for example, in the Himalayan and Lower Mekong subregions.

23. Dissemination of these technologies among forest producers including smallholders, forest communities and indigenous peoples, aligned with stronger enforcement, can curb illegality and increase productivity. However, the adaptation of these innovative technologies to smaller scales, local needs and priorities, have to be coupled with dissemination, training and access to finance, in order to make the production of small and medium forest enterprises more efficient, sustainable, and legal.

24. The development of IT-based traceability systems is gaining momentum in the Asia-Pacific region as a way of ensuring traceability of timber from stump to final product, while also generating real-time

data on production that can be used to generate statistics and improve collection of taxes and royalties. Several systems have emerged specifically to assist with traceability from smallholder-sourced timber – a traditionally difficult timber source to track and trace. Thailand's e-Tree platform allows smallholders to self-register their trees and generate documents needed for timber transport; as of June 2023, nearly 440,000 trees had been registered with e-Tree. FAO previous supported the extension of Viet Nam's intelligent timber tracking system (iTwood) to include household plantations. Thailand, Cambodia and Myanmar have also requested assistance from FAO in conducting feasibility assessments for timber traceability system development, signaling acceptance that supply chain transparency and tracking will be a future pre-requisite for market access and there is a need to begin developing systems now, in a way that can include smallholder-sourced timber.

25. Besides IT-based traceability systems, DNA technologies have emerged as indispensable innovations that use cutting-edge genetic testing to identify and document the geographic origin of a biological sample. DNA identification, also called DNA tracking, profiling or fingerprinting, enables the accurate traceability of forest products and improves the governance of their value chains, contributing to the prevention and prosecution of illicit trade. DNA profiling technology is frequently used in the trade of premium tropical timbers and can be applied to either natural forest or plantation-grown timber. DNA fingerprinting at the forest origin and DNA testing along the value chains can help verify documentation that accompanies timber consignments in the Asia-Pacific region and globally. The establishment of origin-specific genetic datasets can support this process. In particular, The Forest Research Institute Malaysia (FRIM) has developed comprehensive DNA profiling databases for several important tropical timber species for timber tracking, namely N. heimii, G. bancanus, S. platyclados, Intsia palembanica and Aquilaria malaccensis (Ng et al. 2022). Fingerprinting helps timber suppliers, traders and buyers confirm the integrity of the value chains and satisfy the import regulations of the European Union (EU), North America, and Australia (Roshetko et al., 2022).

26. Product innovation has opened new perspectives for the development of sustainable wood value chains. Mass timber and engineered wood products in construction, synthetic cellulose fibre for textile production, and more modern forms of wood for energy can favor large-scale substitution of non-renewable materials (FAO, 2022a). Expansion of sustainable wood construction value chains can be particularly important in view of the rapid urbanization around the globe.

27. The emergence of cross-laminated timber (CLT) and its applications in construction has created an opportunity to lower the carbon footprint of the building sector (Dodoo et al., 2022) while creating possibilities for new production arrangements. Global CLT production is dominantly from softwood and operated by northern industries at a large scale. However, the alliance between architects, engineers and forest producers, including communities, has generated experiments in CLT production on a smaller scale by using local wood resources, as well as it has increased awareness of other wood-base construction materials (Held et al., 2021). CLT markets in Australia and New Zealand, although small now, are expected to grow strongly in the next five years as demand increases in residential and non-residential construction. CLT is also gaining popularity in Singapore for its cost-effective and low-carbon benefits; the Singapore Civil Defence Force revised its fire codes to allow the use of CLT in structural building components (FAO, 2019).

28. The technological progress in cellulose pulp production brought fresh air to the pulp industry. In fact, it can provide low-carbon alternatives to fossil-based materials, such as polyester with man-made cellulose fiber, and can diversify the linkages with the rest of the economy, for instance through increased participation in the food industry with products such as xylitol (Cai et al., 2014; FAO 2022).

29. Emerging technologies such as blockchain, machine learning, artificial intelligence, the Internet of Things and fifth-generation wireless systems, which are being adopted in various countries in the Asia-Pacific region (e.g. Australia, China, Japan and the Republic of Korea), are beginning to influence the online business environment, lowering transaction costs, improving the targeting of advertising and increasing data collection. For instance, Sensor Networks are groups of spatially dispersed and

dedicated sensors for monitoring and recording the physical environment conditions and reporting the collected data at a central location.

30. Such networks can provide real-time data on many topics including soils, climate, flora, fauna, sound and pollution levels. They have been deployed in parks in Singapore to monitor tree tilting and movement to evaluate risk of uprooting and collateral damage. These data flows can feed integrated models using the internet of things, big data analysis, AI and machine learning (Roshetko et al., 2022). Such technological developments and trends could be immensely significant for the forest sector, potentially enabling small and medium-sized enterprises (SMEs) in particular, to overcome long-standing barriers to expansion and innovation. SMEs play crucial roles in the processing, transport and marketing of wood and non-wood products in many parts of the region, but they are often isolated from markets and key services and dependent on locally sourced, low-value raw materials and unskilled labour (FAO, 2019).

31. Developments in microfinancing and financial technology may also increase the access of SMEs, women's groups and entrepreneurs to finance through, for example, crowdfunding and the use of branchless banking technologies such as Internet banking. Another emerging financial service, mobile payments, could be used to disburse payments in certain payment schemes for ecosystem services (FAO, 2019). In Cambodia, RECOFTC has piloted the concept of "community forest development funds" in which each community forest manages its own credit scheme and mini-trust fund with seed funding provided by donors. The credit schemes are used to make loans to individual members, offering favorable interest rates that protect members from entering predatory loan-debt traps, and the mini-trust funds generate interest used for conducting patrols and other forest management activities. Between 2016-2021, over 200 credit schemes/trust funds were established, holding over USD 1.2 million. This represents a model for sustainable financing of forest management activities at the community level, which can be replicated or scaled-up in other contexts.

32. The COVID-19 pandemic spurred the embrace of video-conferencing platforms, leading to the rollout of remote training and increasing the number of enterprises trained at a lesser cost. It also accelerated the development of e-marketing for wood products, enabling companies and MSMEs to sell their products in the virtual marketplaces. Of the world regions, Asia Pacific is the fastest growing region in this field and cross-border e-commerce is also expected to rise rapidly. Australia, China, New Zealand, the Republic of Korea and Singapore are among the region's biggest users of cross-border e-commerce (FAO, 2019). Such virtual marketplaces have been launched with FAO support in Indonesia and Viet Nam, as well as other countries in Africa and Latin America. These digital platforms can equalize access to national and international clients when opportunities for physical trading are reduced, and simplify the supply chain by enabling companies to reach consumers directly.

IV. Sustainable Wood energy

33. Global consumption of wood fuel from forests in 2050 is estimated at between 2.3 billion and 2.7 billion cubic metres compared to 1.9 billion cubic metres in 2020, a rise of between 11 and 42 percent. According to the Forest Sector Outlook 2050, wood fuel will remain the main energy source for many households in emerging economies until 2050, but many scenarios suggest consumption growth rates will slow down. In 2020, there were still 2.3 billion people relying on wood fuel as their primary source of energy for cooking and heating. Reliance on woodfuel is highest in Africa (63 percent of households, followed by Asia and Oceania (38 percent) and Latin America and the Caribbean (15 percent).

34. The Asia Pacific region's woodfuel consumption declined from 896 million m3 in 1990 to 721 million m3 in 2017; however, more than three quarters of all wood production in the Asia-Pacific region is used as fuel. There were differences between subregions: consumption declined by nearly 40 percent in East Asia between 1990 and 2017 (from 295 million m3 to 179 million m3), and there was also a slight decrease in Southeast Asia despite the reality that woodfuel usage remains important in Cambodia and Myanmar; in South Asia, on the other hand, woodfuel consumption continued on an upward trajectory until 2010, when it peaked at 390 million m3 and declined slightly thereafter to 2017 (the latest year for which data are available) (FAO, 2019).

35. In major Asian economies, wood biomass for energy has seen growing interest over recent years. The bioenergy policies in China, Japan and the Republic of Korea are pursuing a fuel switch strategy of their coal-fired energy infrastructure drawing on imported biomass (i.e. wood pellets). The bioenergy policies in Malaysia and Indonesia are putting emphasis on agricultural residues and, to a minor extent, on wood biomass (Junginger, Koppejan and Goh, 2020). In general, the future supply of wood biomass in the region will be subject to high levels of uncertainty, including questions about how reliable import streams will be in the long run (e.g. from Northern America) and whether future sourcing areas may shift to other world regions (e.g. Latin America and the Caribbean) (FAO, 2022b).

36. To meet additional wood fuel requirements by 2050, a mix of agroforestry and energy woodlots would be required. A comprehensive set of policies, strategies, regulations, management measures and financial resources will be required to meet the demand of increasing biomass production in 30 years. It will also be key to ensure that such additional biomass production is sustainable and does not cause economic, social, or environmental harm, such as the loss of soil quality and biodiversity.

V. Importance of the forest sector for livelihoods

37. In the period 2017– 2019, 33.3 million persons were employed in the forest sector globally. This equates to 1 percent of total global employment (Lippe et al., 2022). Most recent ILO data show the highest employment in forestry and logging in Asia (around 6 million) and Africa (around 2 million). These figures include formal and informal employment as recorded by the ILO (Lippe et al., 2022). Generally, informal jobs are the main source of employment in the forest sector, especially in developing countries. Of the 33.3 million people worldwide working in the forest sector, it is estimated that nearly a quarter (23 percent) are informal, a figure that can reach as high as 90 percent in some countries (Lippe et al., 2022). In Africa, Asia and Oceania, the share of informal employment is above 80 percent of total forest-related employment (Lippe et al., 2022).

38. In India an estimated 73 percent of the forest sector workforce are informally employed. The share is even higher in the case of the wood industry, in which 90 percent of Indian wood industrial workers have informal jobs. The forest-related industry in India is highly diverse, covering a wide range of services and entrepreneurs from individuals working informally to small and medium forest enterprises (SMFEs) with more formal working relationships (Dubey, 2008). In the case of Viet Nam, informality is prevalent in the forestry and wood industry subsectors. The shares of informal employment are above 80 percent of the total employment for both subsectors. The national Labour Force Survey indicates that as of 2018, there were around 470 000 workers in the forest product processing industries, of which about 77 percent were in informal household and household business units (FAO and EFI, 2021).The wood processing sector in Viet Nam has experienced considerable growth over the last decade, particularly in wood products such as particle board, flooring and furniture, which support employment and livelihoods (Sadanandan Nambiar, 2021). However, most plantation smallholders or woodworking enterprises in Viet Nam still remain informal due to lack of incentives and lack of understanding about the advantages of formalization (EU FLEGT Facility, 2019).

39. For the wood manufacturing subsector, the proportion of female workforce in total employment is approximately 21 percent in the 63 countries for which data were available in 2017–2019, which span multiple regions. Globally, Asia boasts the highest share of female workers employed in the wood industry subsector, including high proportions in Viet Nam, India and Bangladesh. In the paper manufacturing subsector, the proportion of employed women is approximately 28 percent of total employment. The region of Asia, based on 17 countries with available disaggregated gender data, holds the largest proportion of women employed in this subsector, mainly in India and Viet Nam (Lippe et al., 2022).

40. A growing body of research and country cases has focused on the optimization of socioeconomic benefits from restoration and involvement of smallholders in restoration projects. Rebuilding the forest resource base and restoring forest ecosystems is likely to encompass relatively employment-intensive activities, whilst at the same time enabling increased productivity and resilience, and in the longer

term proving a critical means for addressing major global challenges; from climate change and food insecurity to biodiversity loss and desertification.

41. A variety of well-established techniques could be scaled up and accelerated as part of the green recovery to expand and restore forest resources, both in rural and urban areas, including through planting trees, assisted natural regeneration (ANR), agroforestry and urban forestry. In terms of short-run benefits, the forestry sector has a proven track record in employment-generation due to the combination of labor-intensive work and relatively low capital investment requirements. Some countries have already begun addressing COVID-related unemployment by pledging to create new jobs in afforestation, reforestation and agroforestry.

VI. Opportunities and ongoing initiatives in support of sustainable wood value chains

42. The Ministerial Call for Sustainable Wood, one of the outcomes of the XV World Forestry Congress in 2022, invites countries to promote sustainable wood products as part of national strategies, supporting their multiple socioeconomic and environmental benefits in achievement of the Sustainable Development Goals (SDGs), and to include them, in the nationally determined contributions and strategies, plans, and projects of the UN Decade on Ecosystem Restoration.

43. The 30th Session of the Asia-Pacific Forestry Commission included a recommendation to expand the FAO-led "Sustainable Wood For a Sustainable World" (SW4SW) Initiative further, uscaling its market development initiatives and other activities in the Asia-Pacific region The SW4SW initiative which spearheads FAO's work on sustainable wood, engaged with the Asia-Pacific region through two policy dialogues held in China in 2019. The Policy Dialogue, "Harnessing sustainable wood production and trade contributions to sustainable development" on 23-25 November, in Nanning City, was a South-South exchange, which gathered governmental authorities and private sector to discuss South-South cooperation for improved legality and sustainability of timber production and trade. Representatives from fifteen countries attended the Dialogue including Bolivia, Cameroon, Cambodia, China, Indonesia, Lao PDR, Madagascar, Malaysia, Mozambique, Myanmar, Philippines, Namibia, Solomon Islands, Thailand and Viet Nam, as well as members of several international organizations. The meeting report presents recommendations to strengthen the sustainability of the international timber trade and improve the generation of benefits in producer countries. The SW4SW is also engaging with the private sector on dialogues on wood in the bioeconomy, and is working with partners to produce indicators associated with wood value chains, indicators on employment, revenue, labour incomes, outlook scenarios, and carbon content of wood products. The SW4SW is increasingly focused in its support to forest restoration, contributions to climate change and livelihoods, in alignment with the new FAO strategic framework.

44. Through the Asia-Pacific component of Phase III (2016-2021) of the FAO-EU Forest Law Enforcement, Governance and Trade Programme, FAO supported nine tropical timber producing countries to strengthen legality frameworks, legality assurance systems and legality compliance in support of a more sustainable and transparent timber sector and improved market access. This Programme enabled the development of timber legality standards in Papua New Guineau and key infrastructure for timber legality assurance systems in Indonesia, Lao PDR, Thailand and Viet Nam – while building the capacity of private sector associations, government institutions and civil society who now possess expertise and experience that can benefit future partnerships with FAO-led initiatives. The work begun under the FLEGT Programme will continue in the new EU-funded Forest Governance and Value Chains Programme (2023-2028) which continues to focus on promoting trade in legal and sustainable timber products and developing sustainable, inclusive and economically viable forest-based value chains. In Asia, the new Programme will only work in Mongolia starting in 2024, but more countries may be added in future years.

45. Between 2020-2023, UN-REDD Programme initiative for "Sustainable Forest Trade in the Lower Mekong Region" (UN-REDD Mekong Initiative) has been implemented in five Asia-Pacific countries

(Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam). The initiative focuses on addressing illegal logging through the development of national standards, systems and capacities for verification of legal and sustainable timber including through forest certification. It also supports the increased participation of community forestry and other social forestry models in legal and sustainable wood supply chains, and developed a training curriculum for integrating smallholders into certified timber supply chains. Through partnerships with PEFC and FSC, they strengthened national forest certification systems in Cambodia, Lao PDR, Thailand and Vietnam and launched an Asia-Pacific Sustainable Tropical Timber Network and InfoHub, designed to link producers and buyers of certified timber and timber products. The Programme's imminent closure at the end of 2023 is expected to conclude with the definition of future work on addressing deforestation and degradation caused by the cultivation of agricultural commodities.

46. FAO's forest restoration activities in Asia and the Pacific are implemented in the framework of the "Regional Strategy and Action plan for Forest and Landscape Restoration in the Asia-Pacific Region" approved in 2017 by the Asia-Pacific Forestry Commission. At the global level, FAO has co-leadership (with UNEP) of the UN Decade on Ecosystem Restoration. Under the Forest and Landscape Restoration Mechanism (FLRM), restoration activities advanced in several countries (including Pakistan, Cambodia, Philippines, Fiji and Vanuatu). The 30th Session of the Asia-Pacific Forestry Commission invited FAO to promote an informal network of FLR practitioners for technical knowledge exchange and building synergies, and continue, subject to the availability of extra-budgetary resources, to develop tools and approaches, and enhance capacities for upscaling FLR. A regional Technical Cooperation Project (TCP) is being implemented to support member countries in the development of national landscape restoration plans, foster capacities, create regional communication platforms and establish a regional consortium on forest and landscape restoration. The Third Asia-Pacific Urban Forestry Meeting was organized by FAO with the support of UNEP, UN-Habitat, IUCN, and the Bangkok Metropolitan Administration in October 2021 to advance the Seoul Action Plan. The regional Technical Cooperation Project (TCP), "Scaling-up agro-forestry in the ASEAN Region for food security and environmental benefits" was implemented between 2019-2021 to support member countries in further development of agroforestry. Technical assistance was provided to national TCP projects in agroforestry (e.g. India) and urban forestry (e.g. Cambodia).

47. There are opportunities for community forests and smallholders to respond to the growing demand for legal and sustainable timber on both domestic and export markets. Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, Thailand and Viet Nam all have legal frameworks allowing commercial production form community forests. This is especially true in countries that are heavily reliant on timber imports to meet domestic demand, like Cambodia and the Philippines. The development or strengthening of nationally appropriate assurance systems in timber producing countries offers opportunities to promote community forests as a source of legal and sustainable timber. Doing so could help communities and smallholders move from 'informal' and "subsistence" timber harvesting towards officially recognized timber production that can be incorporated into domestic and export wood value chains and yield significant economic benefits. Towards this goal, FAO has supported pilot legal timber harvests in community forests in Cambodia and Myanmar, and worked to clarify and simplify the procedures for communities to engage in legal timber harvests.

48. Fast-growing trees (FGTs) will play a key role in fulfilling the growing demand for wood products in the context of an increasing global population. They will be critical in the transition towards a carbon-neutral economy as they provide low-carbon renewable products, which can be substituted for carbon-intensive products. FGTs also recently gained recognition for the multiple ecosystem services they can provide, including erosion control, soil fallow, carbon sequestration and freshwater flow protection (Isebrands et al., 2014). Fostering the sustainable management of FGTs to meet the needs of sustainable urban and rural landscapes is the mission of the International Commission on Poplars and Other Fast-Growing Trees Sustaining People and the Environment (IPC), which seeks to contribute to the 2030 Agenda and the Global Forest Goals, the United Nations Decade for Family Farming and the United Nations Decade on Ecosystem Restoration, as well as the Paris Agreement. In 2019, the mandate of the IPC was expanded to all FGT species that sustain people and the environment. In alignment with this mandate, the IPC now has an even broader geographical, biological and technical

scope, as recognized in its recently adopted strategy for 2022–2032, offering a good opportunity for Asia Pacific countries to participate in global research, knowledge exchange, and policy recommendations. As an example of the IPC work, in 2022, FAO, the IPC and the TreeDivNet network organized a workshop at FAO headquarters to address the knowledge gap on mixed-species planted forests, and enable sustainable planted forests expansion through new management models.

49. The European Union's Deforestation Regulation (EU Regulation 2023/1115) represents a major impetus towards the development of sustainable wood value chains, by forbidding the placement of any timber products on the EU market which are associated with deforestation. Its requirement for the provision of geolocations for the point of harvest is anticipated to drive private sector investment in traceability technologies and tools for achieving greater supply chain transparency. The EUDR may drive the adoption of similar legislation in other consumer countries (Lobdell, K. 2023), further compounding the demand for assurance systems and technologies necessary to demonstrate sustainability along the supply chain. EUDR compliance will particularly affect the Asia-Pacific region, given the region's role as a major timber processing hub.

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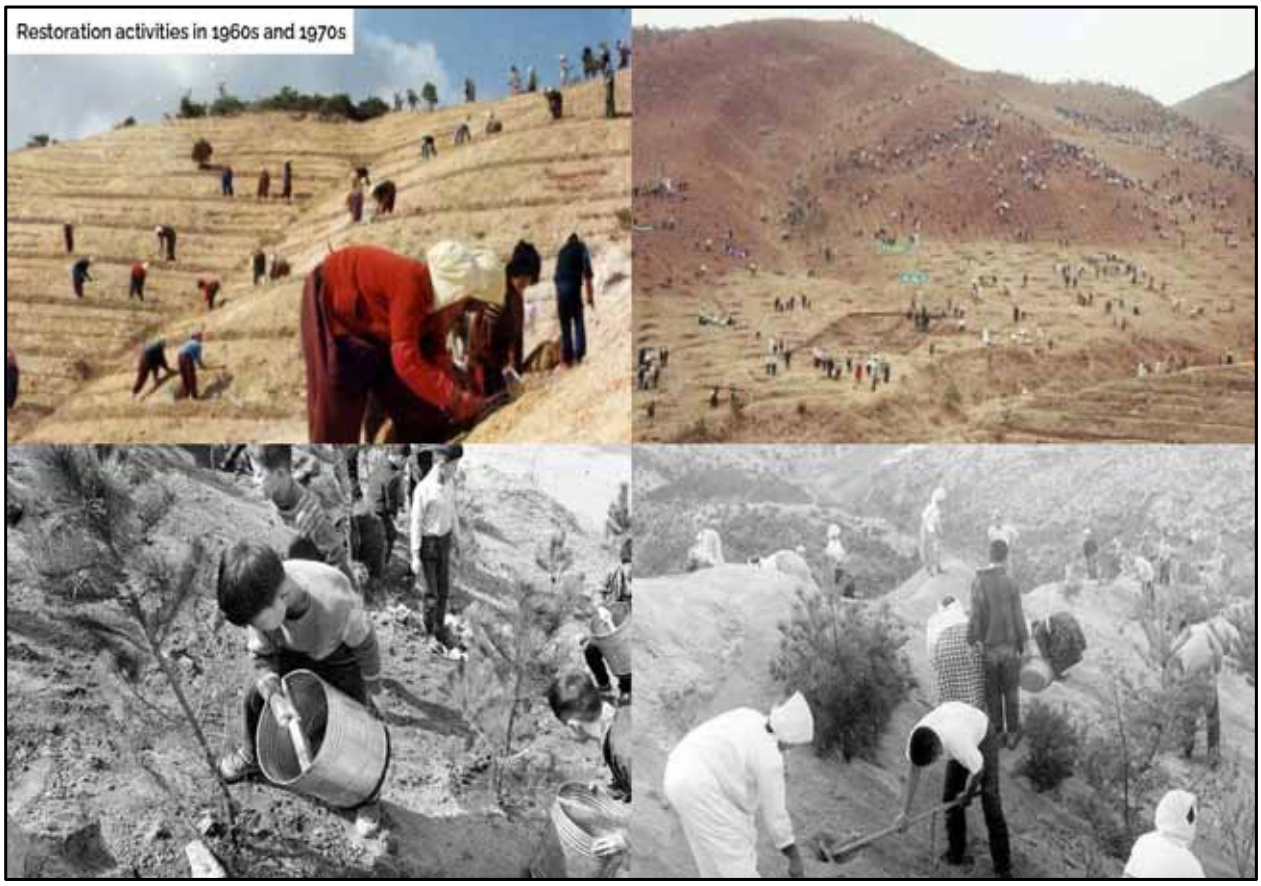
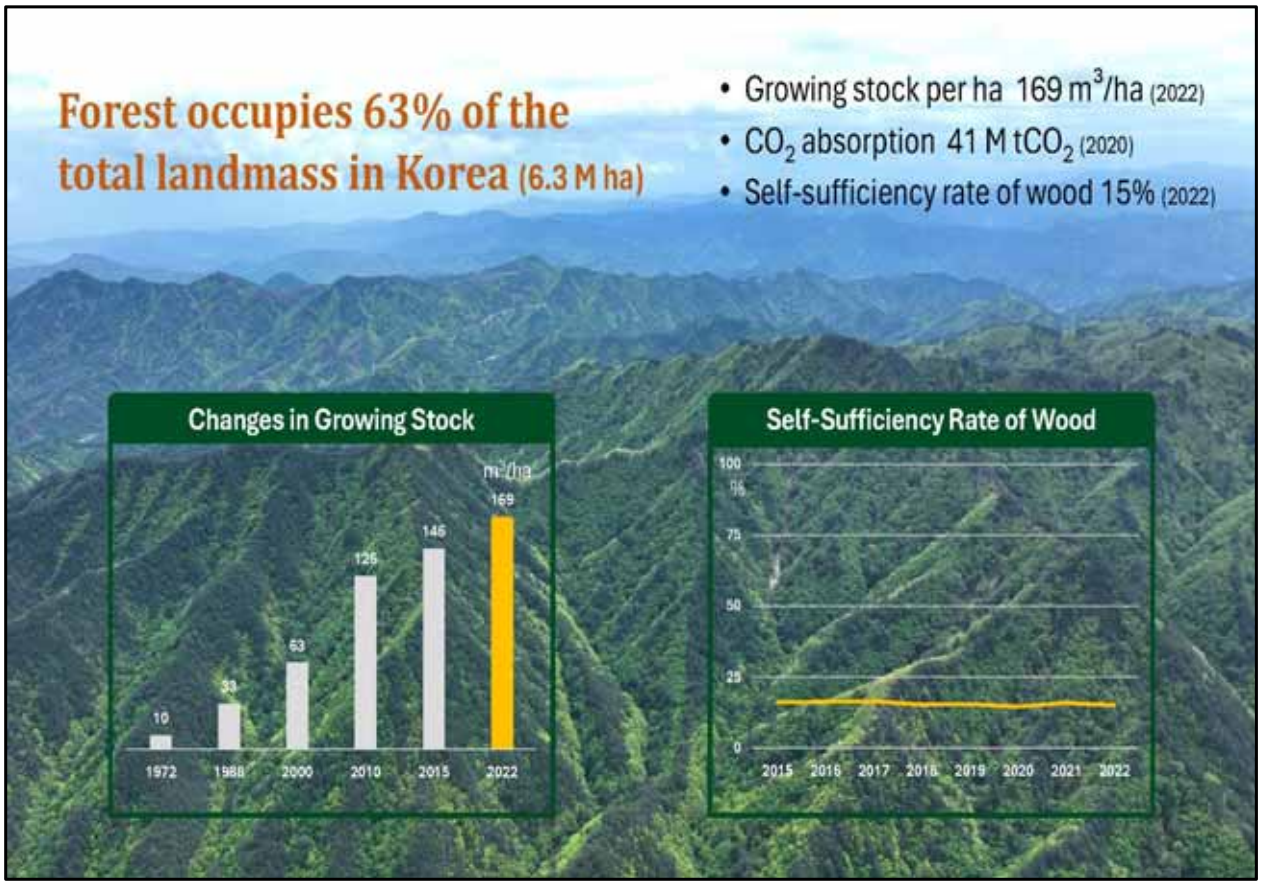
2023 Thematic Dialogue
Sustainable Wood for Sustainable Future

Korea's Strategies for Sustainable Wood

Dr. PARK Eunsik
Director General, International Affairs Bureau

Korea Forest Service


Restoration activities in 1960s and 1970s


Forest occupies 63% of the total landmass in Korea (6.3 M ha)
• Growing stock per ha 169 m³/ha (2022)
• CO2 absorption 41 M tCO2 (2020)
• Self-sufficiency rate of wood 15% (2022)
Changes in Growing Stock
m³/ha
10
33
63
126
145
169
1972
1988
2000
2010
2015
2022
Self-Sufficiency Rate of Wood
100
%
75
50
25
0
2015
2016
2017
2018
2019
2020
2021
2022

Where Should We Go Beyond Forest Restoration?

The KFS is building a circular forest economy through sustainable forest management and sustainable wood use.

Creating a Circular Forest Economy


XV WORLD FORESTRY CONGRESS
Building a Green, Healthy and Resilient Future with Forests
XV WORLD FORESTRY CONGRESS
XV WORLD FORESTRY CONGRESS
XV WORLD FORESTRY CONGRESS
Building a Green, Healthy and Resilient Future with Forests
Ministerial Call on Sustainable Wood
Sustainable production and consumption of wood promotes forest conservation, enhances the value of forests and mitigates climate change. Building and living with wood responds to an increased demand for renewable materials and provides impetus for green recovery. Sustainable wood offers solutions across multiple value chains, including construction, furniture, packaging, renewable energy, biomaterials for clothing and biochemicals.
Scaling up bio-economies by using sustainable wood replacing carbon-intensive materials has high potential to become a cost-effective and innovative contribution at scale to achieve carbon neutrality and build more resilient economies.
Sustainable wood-based solutions build synergies with broader aims for economic recovery, growth of rural areas and circular economy innovation. Sustainable wood-based solutions need to build on sustainable forest management and address risks of trade-offs with the multiple other roles of forests, such as carbon storage in forests, loss of biodiversity and of other essential forest services, including through enhanced management, restoration and afforestation efforts.
Building on our national policy experiences and commitments to use wood resources sustainably, and conscious of the need for cost-effective and equitable solutions at scale for value-added and carbon-neutral products, we have come together in the Ministerial Forum on Sustainable Wood to call for scaling-up sustainable wood-based pathways:
– to address the lack of awareness of their potential;
– to enhance global and regional policy dialogues on pathways and related synergies and trade-offs and ways to strengthen investments;
– to improve modalities to promote technical exchange, sharing of experiences and learning in order to drive innovations, from sustainable forest management and efficient wood value chains to sustainable wood use;
– to significantly increase the use of sustainable wood-based solutions within Nationally Determined Contributions by 2030.
We also commit to join forces together to promote enhanced policy and technical dialogue and exchange among producer and consumer countries and key stakeholders to develop the necessary momentum and actions at scale, and invite the Food and Agriculture Organization of the United Nations and members of the Collaborative Partnership of Forests (CPF) to support our efforts.
We are convinced that mobilizing the full potential of sustainable wood will enable us to build more carbon-neutral and resilient economies and progress towards more sustainable societies.
wfc2021korea.org


Four Strategies for Sustainable Wood Use in Korea
1 Policy Initiative
Government's Supporting Wood-friendly Society
2 Community Engagement
Raising Public Awareness on Wood Use
3 Market Opportunities
Vitalizing Wood Industry and Developing New Wood Products
4 Innovative Technology
Developing New Excellent Technologies and Enhancing Timber Legality

1 Policy Initiatives on Sustainable Wood Use

- 'Act on the Sustainable Use of Timber' was enacted in 2012
- 'The Master Plan on Sustainable Wood Use' is established every 5 years.
- The government formulates and enforces various policies for wood production, distribution, and usage in Korean society.
- The central government supports to local governments, industries, and private organizations to encourage the utilization of wood resources


Construction of public buildings using wood
National Institution of Forest Science

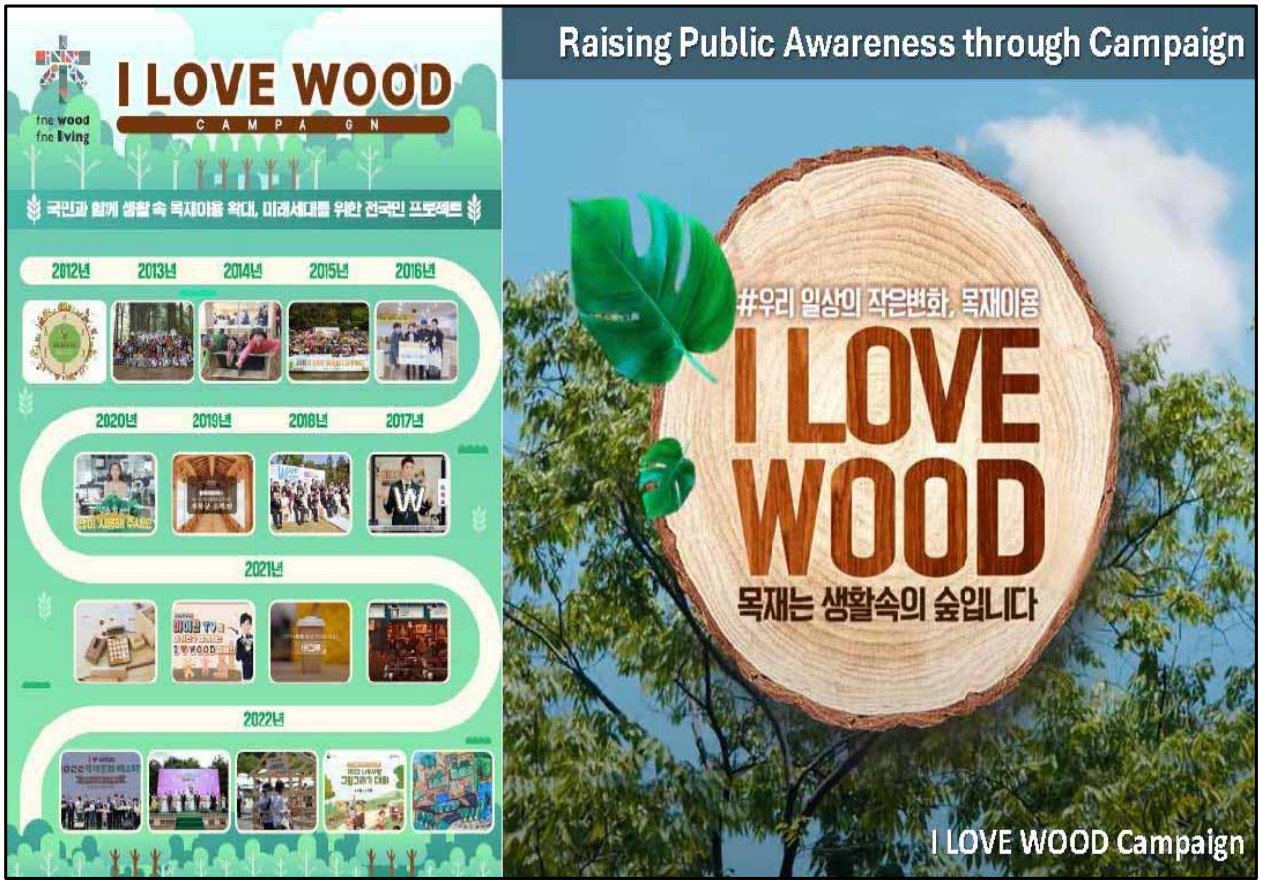

Construction of public buildings using wood
Hangreen Wooden Building


Construction of public buildings using wood
Supporting the renewal of Kindergarten Interior using wood


Construction of public facilities using wood
Wood-friendly City Project : Chuncheon Youth Rest Stop

2 Raising Public Awareness on Wood Use through Community Engagement

- The 'I LOVE WOOD' campaign started in 2012.
- The Wood Culture Festival aimed at promoting wood use of the public.
- The Tree-Loving Art Contest designed to educate children about the benefits of wood.
- The woodworking classes and the wooden playground for children are introduced for public to gain experience with wood use."


I LOVE WOOD
CAMPAIGN
fine wood
fine living
국민과 함께 생활 속 목재이용 확대, 미래세대를 위한 전국민 프로젝트
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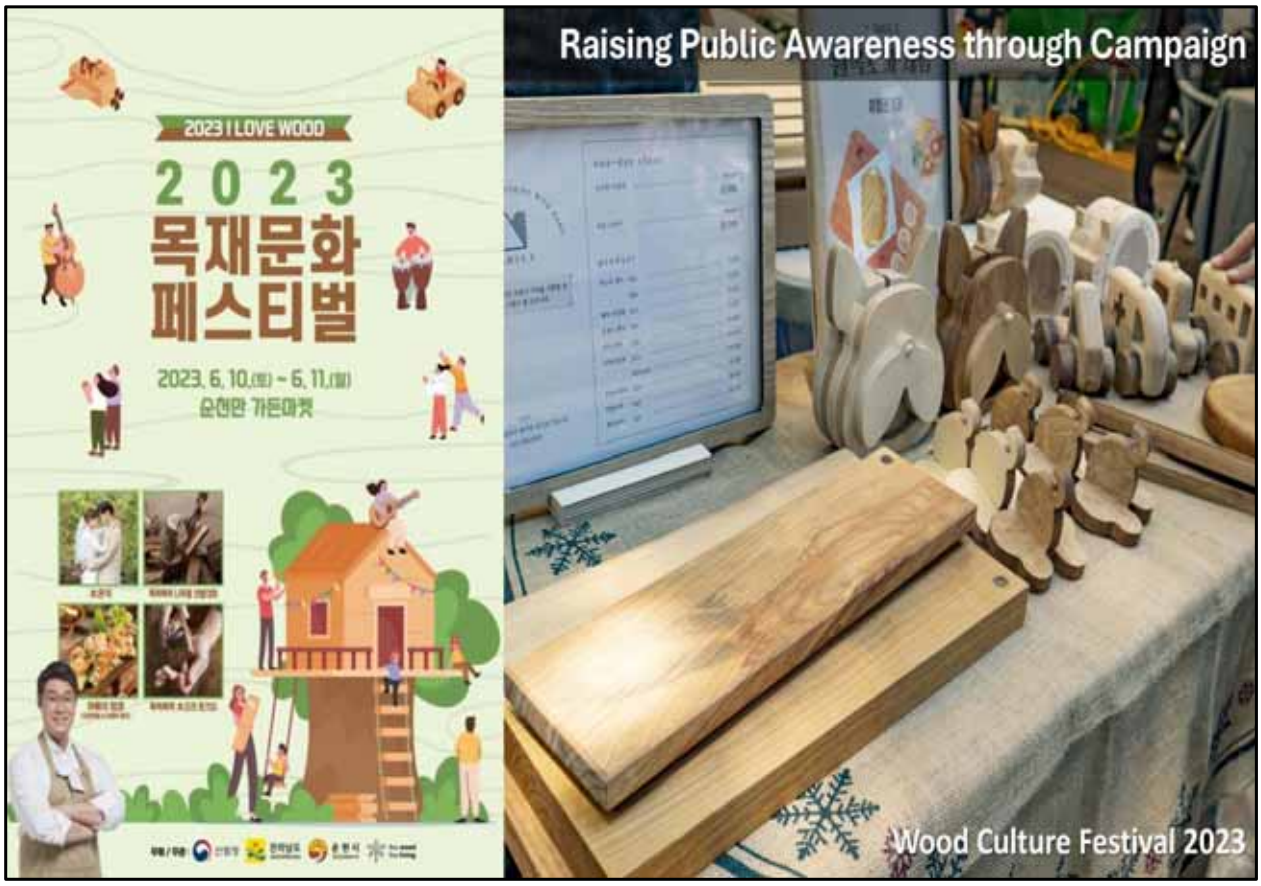
2021년
2022년
Raising Public Awareness through Campaign
#우리 일상의 작은변화, 목재이용
I LOVE WOOD
목재는 생활속의 숲입니다
I LOVE WOOD Campaign


2023 I LOVE WOOD
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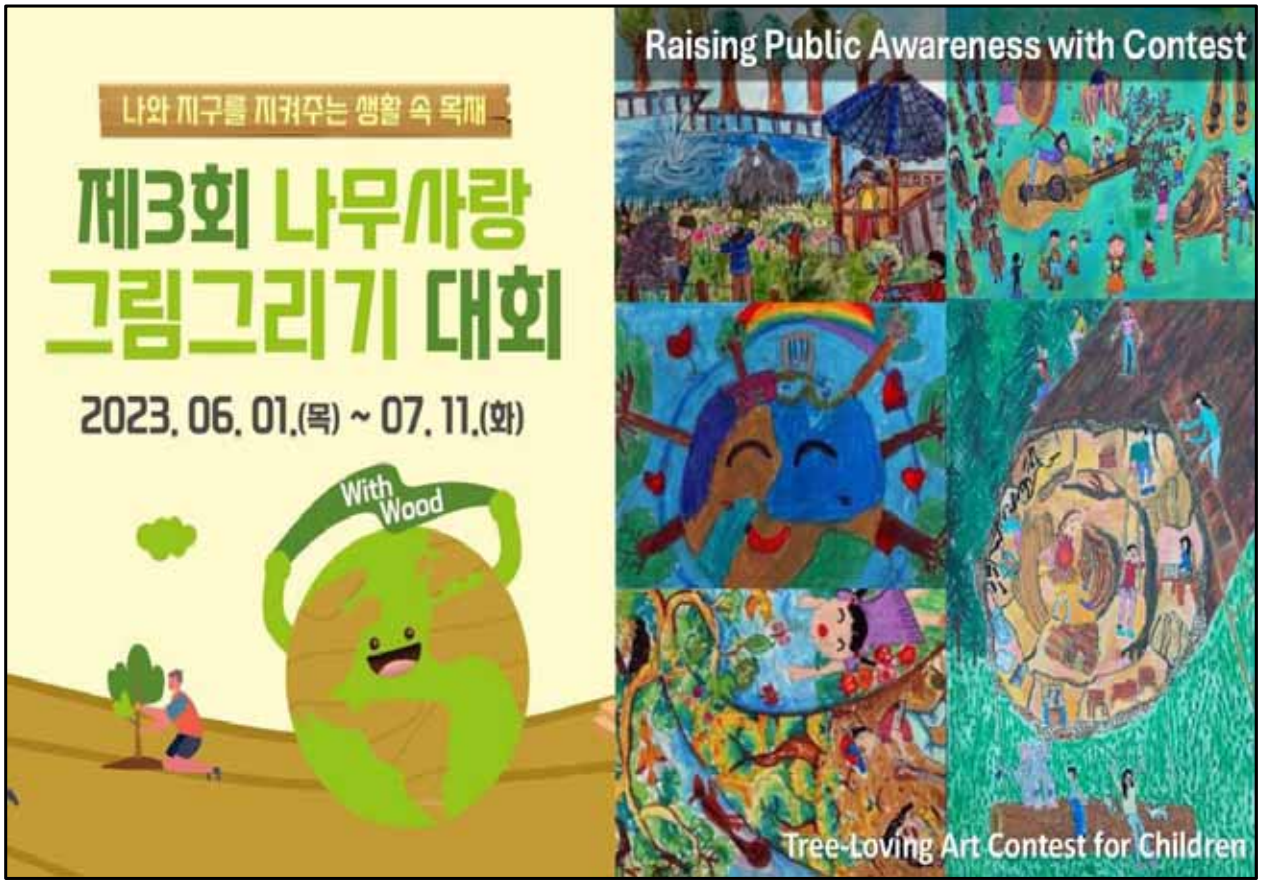
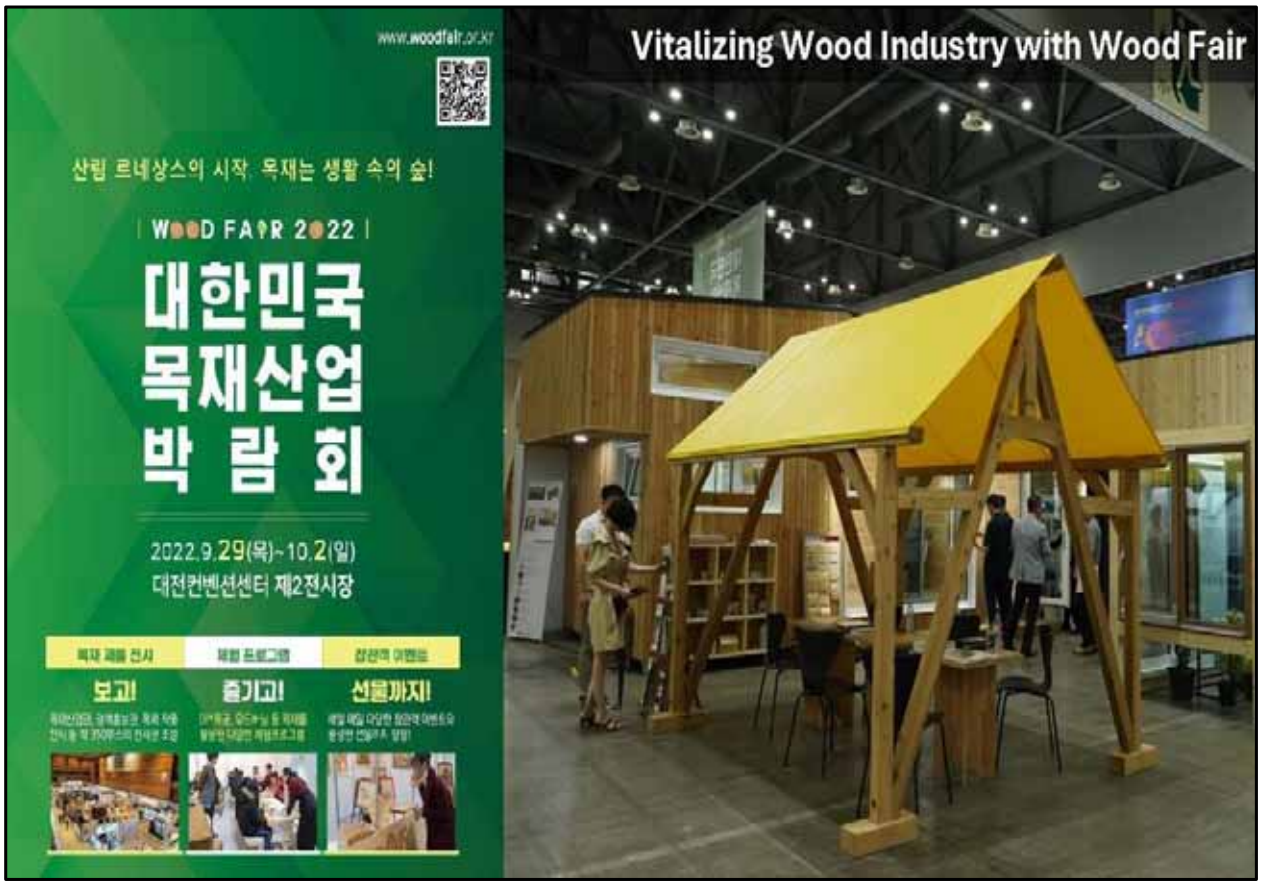
Raising Public Awareness through Campaign
Wood Culture Festival 2023


나와 지구를 지켜주는 생활 속 목재
제3회 나무사랑
그림그리기 대회
2023. 06. 01.(목) ~ 07. 11.(화)
With Wood
Raising Public Awareness with Contest
Tree-Loving Art Contest for Children


Raising Public Awareness through Woodworking Classes
Wood Culture
Experience Center

3 Expanding Market Opportunities for Wood Products

- Organizing a wood industry fair for the trading of wood products
- Supporting wood companies for their entry into online marketplaces
- Hosting competitions to develop wood products replacing plastic
- Facilitating the contests for the development of new wooden products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대전컨벤션센터 제2전시장
목재 제품 전시
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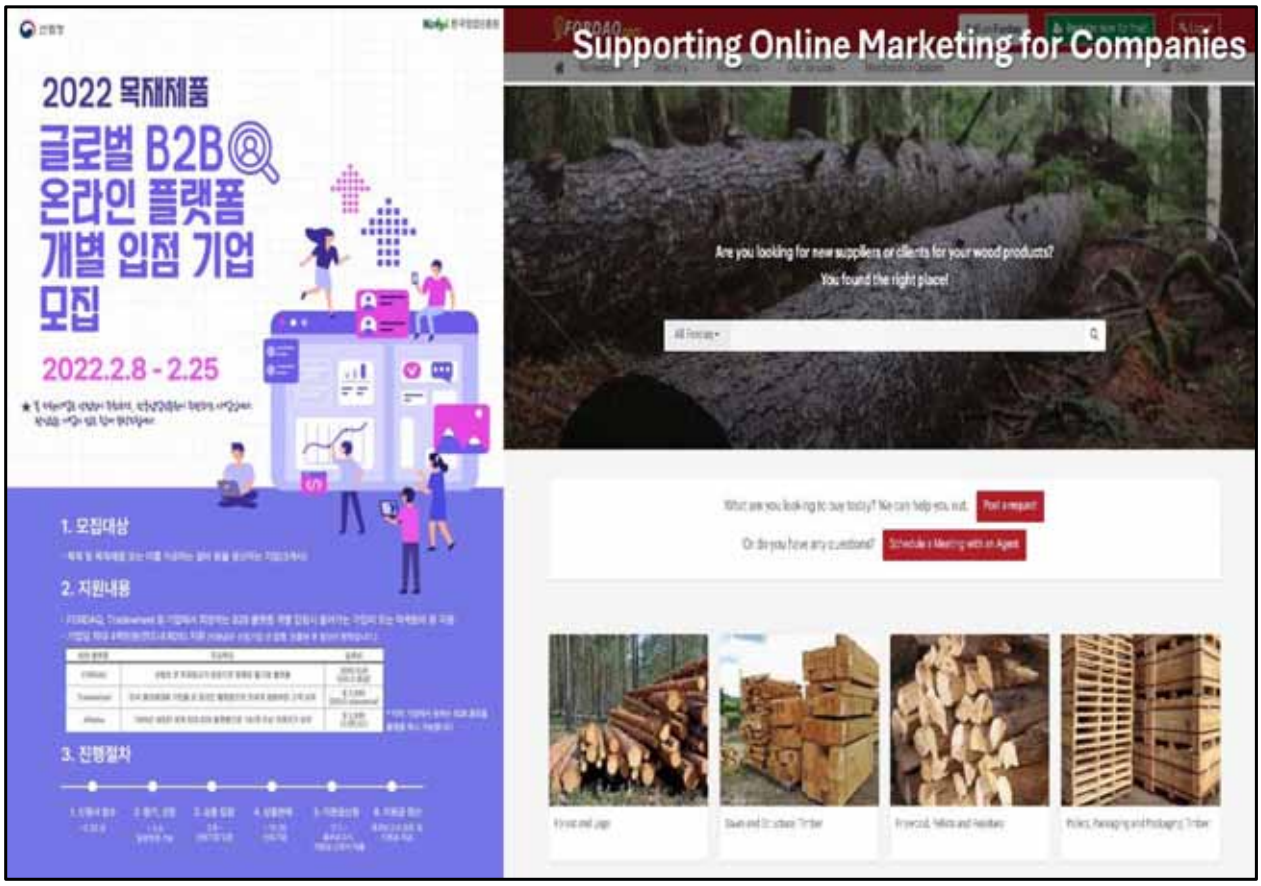
선물까지!
Vitalizing Wood Industry with Wood Fair


2022 목재제품
글로벌 B2B
온라인 플랫폼
개별 입점 기업
모집
2022.2.8 - 2.25
1. 모집대상
2. 지원내용
3. 진행절차
Supporting Online Marketing for Companies
Are you looking for new suppliers or clients for your wood products?
You found the right place!

Idea and Design Contest on Wooden Products Replacing Plastic Products

Vitalizing Wood Industry through Wooden Interior Contest

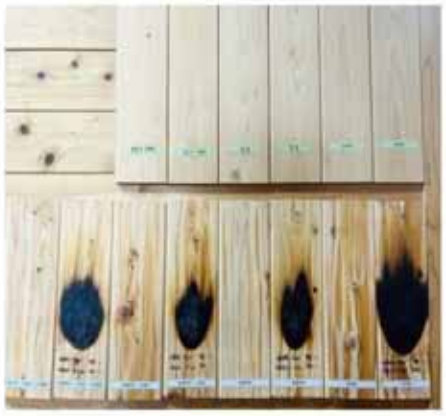
Signature Kitchen Suite in Cheongdam (Award-winning Piece)

4 Embracing Innovative and Eco-friendly Technologies in Wood Use

- Strengthening the reliability of wood products through the development of quality standards using advanced technology
- Operating New Excellent Technology (NET) designation system in the wood sector
- Expanding the verification of timber legality and developing science based system

Designating New Excellent Technology in Wood Industry

Semi-Carbonized Fuel



Fire-Resistant Wood

Enhancing Timber Legality through Advanced Technologies

Expanding verification of timber legality target items from 2023

Items regulated since 2018

Wood (HS 4403)

Sawn wood (HS 4407)

Preservative Wood (HS 4407)

Fire-retardant wood (HS 4407)

Laminated wood (HS 4407)

Plywood (HS 4412)

Pallets (HS 4401.31)

Items newly added since 2023

Sheets (HS 4409)

Shaped wood (HS 4409)

Particle board (HS 4410)

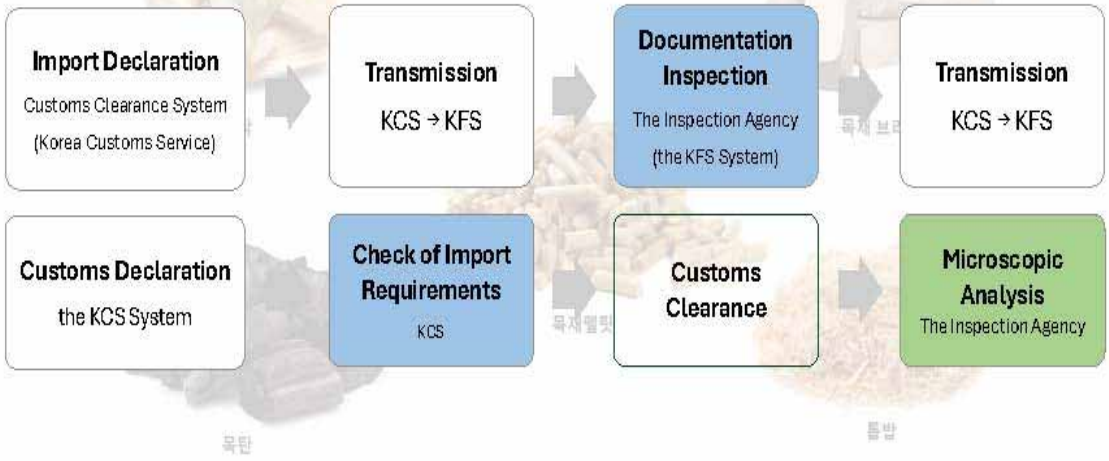
Firberboard (HS 4411)

Wood pulp (HS 4701~5)

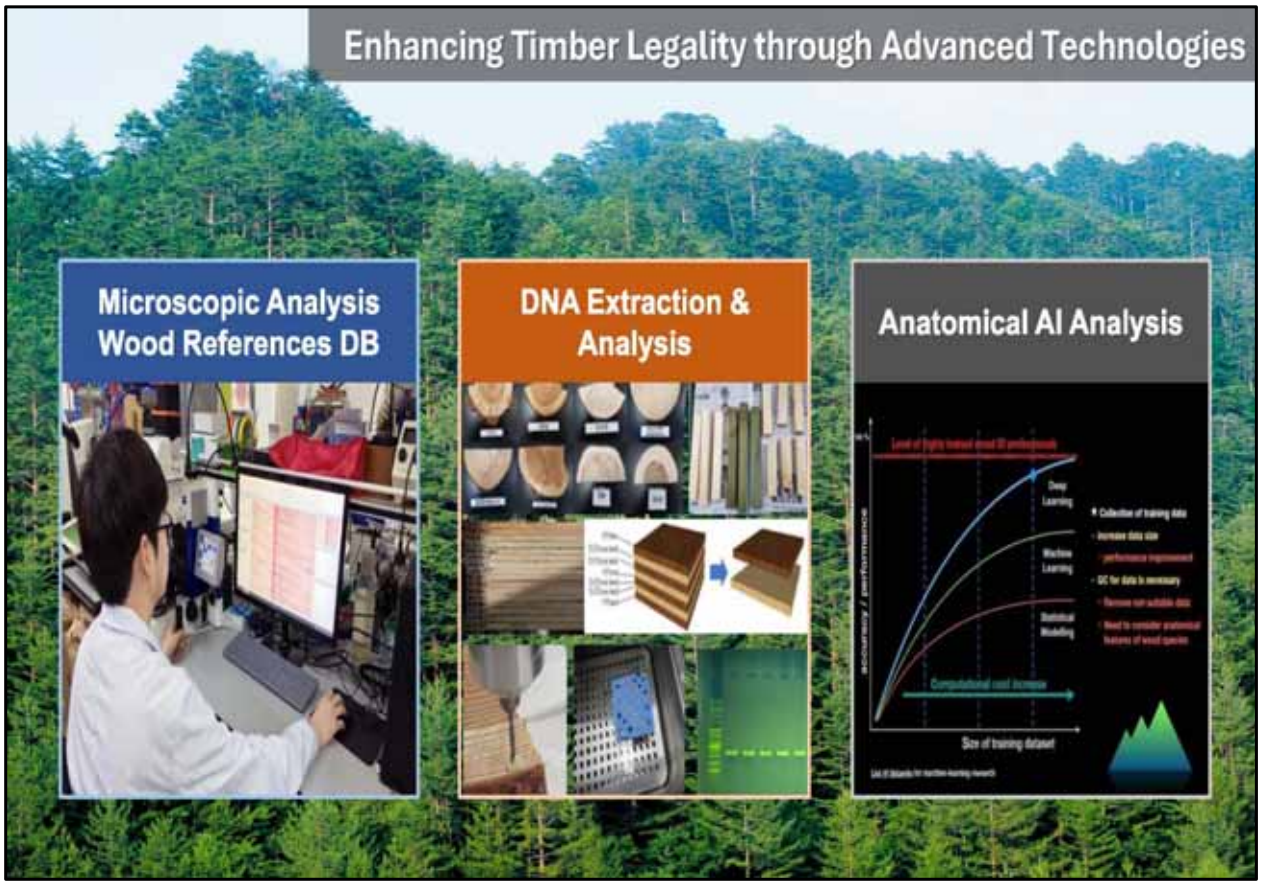
Enhancing Timber Legality through Advanced Technologies

Before customs clearance : import declaration by importers → documentation inspection

After customs clearance: wood identification (anatomical analysis)



Enhancing Timber Legality through Advanced Technologies




Sustainable wood plays a pivotal role in advancing the circular forest economy for a sustainable future.
Thank you

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Session A :

Setting the Scene

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Trends of Global Timber Trade: Challenges of Legal and Sustainable Supply Chains in the Tropics

Dr. Hwan-Ok Ma,

Officer-in-Charge, Division of Forest Management, ITTO

AFoCO 2030 Annual Thematic Dialogue

Seoul, Korea, 24 October 2023

Trends of Global Timber Trade: Challenges of Legal and Sustainable Supply Chains in the Tropics

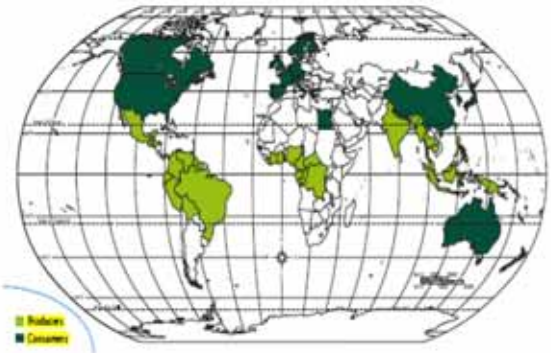
Dr MA Hwan-ok
Forest Management Division
ITTO

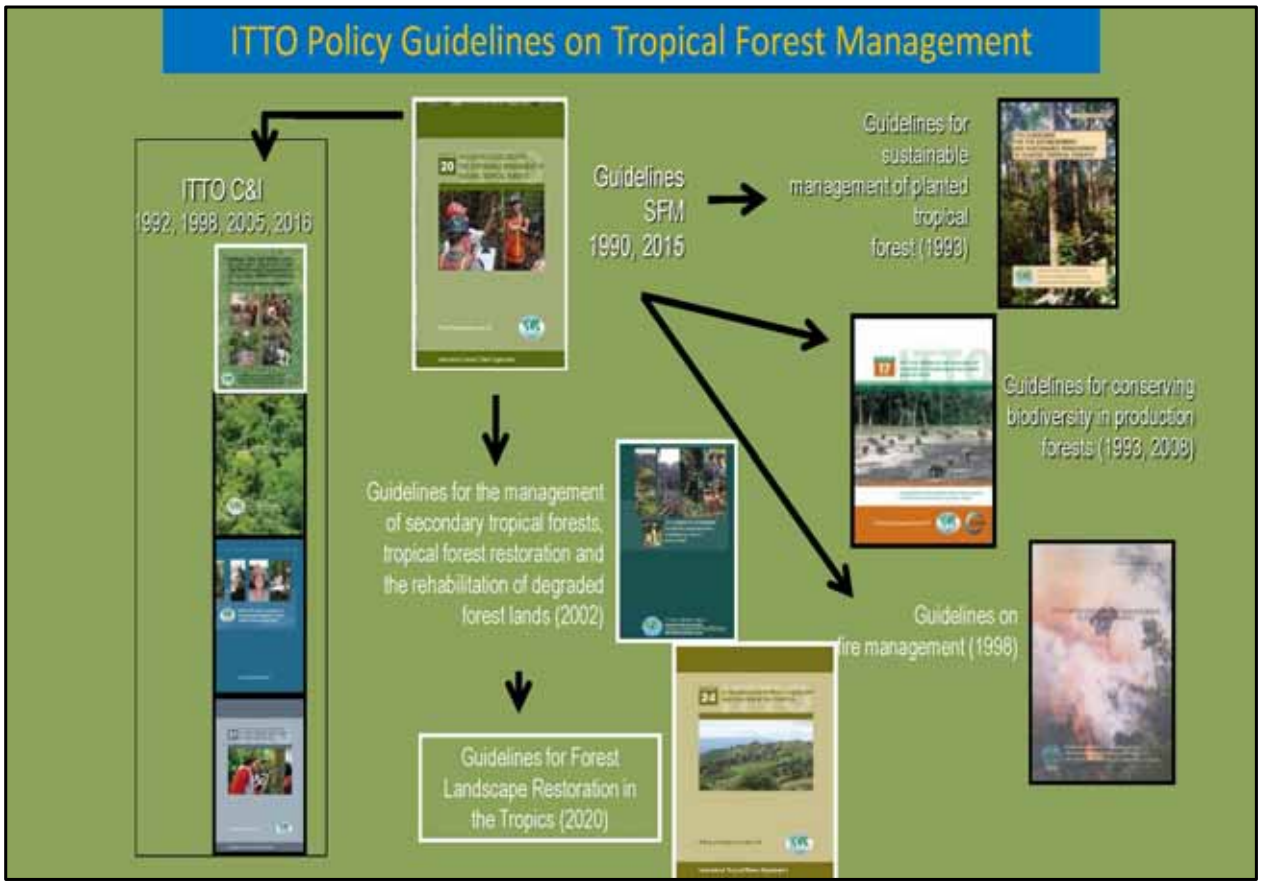
SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD
GLOBAL FOREST GOALS

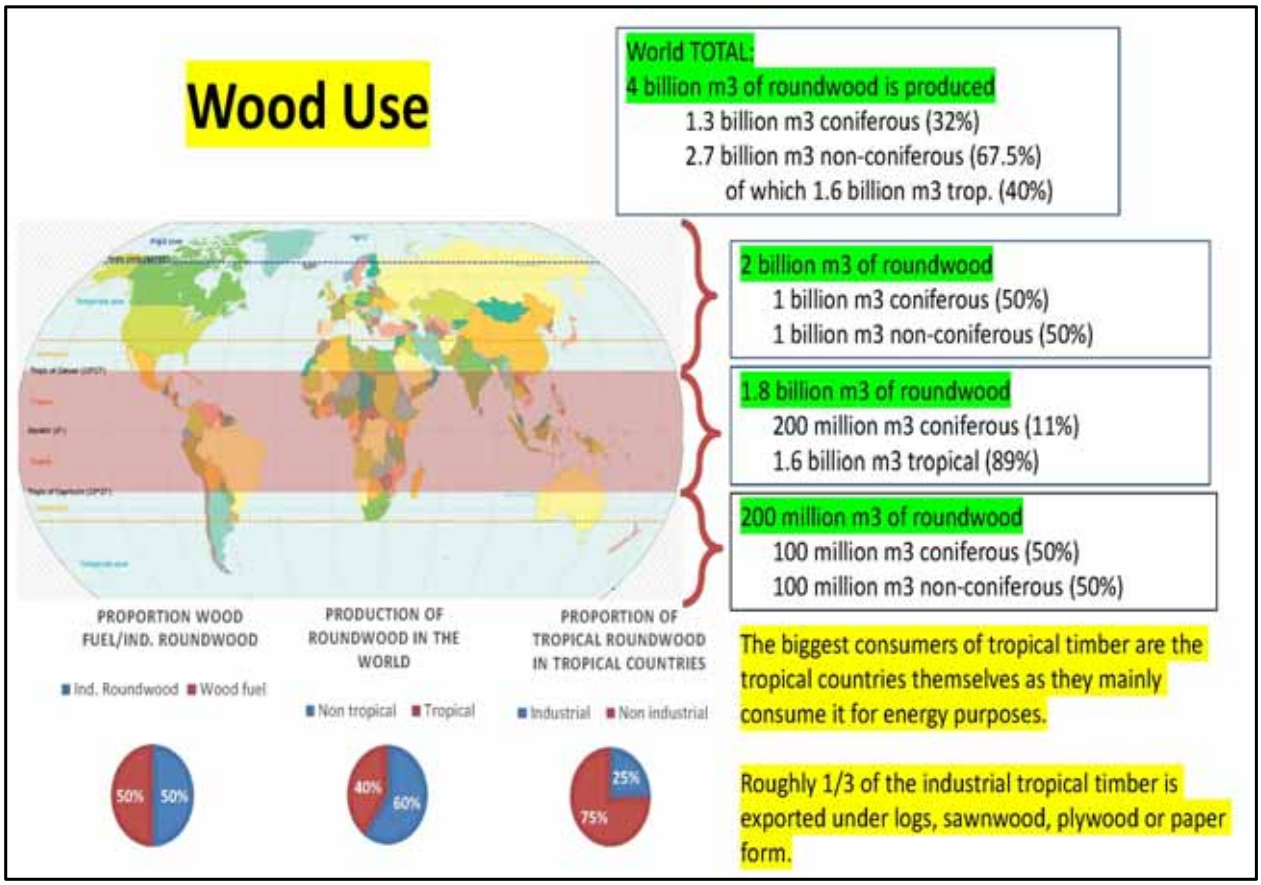
INTERNATIONAL TROPICAL TIMBER ORGANIZATION (ITTO)

The International Tropical Timber Organization (ITTO)

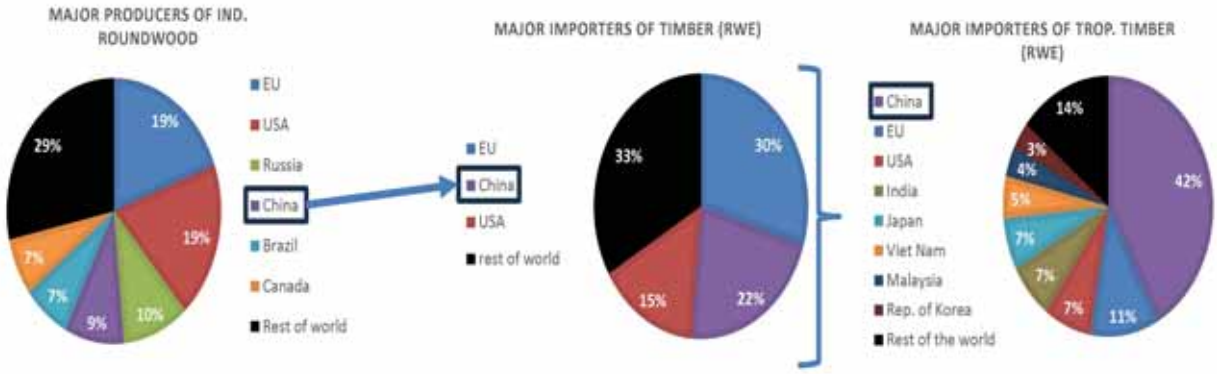
- An intergovernmental organization established in 1986; 73 members – consumer and producer memberships ; HQs – Yokohama, Japan; 30 Staff members
- Promoting the conservation and sustainable management, use and trade of tropical forest resources – Policy & Project Work




ITTO Policy Guidelines on Tropical Forest Management
ITTO C&I
1992, 1998, 2005, 2016
Guidelines
SFM
1990, 2015
Guidelines for
sustainable
management of planted
tropical
forest (1993)
Guidelines for conserving
biodiversity in production
forests (1993, 2008)
Guidelines for the management
of secondary tropical forests,
tropical forest restoration and
the rehabilitation of degraded
forest lands (2002)
Guidelines on
fire management (1998)
Guidelines for Forest
Landscape Restoration in
the Tropics (2020)


Wood Use
World TOTAL:
4 billion m3 of roundwood is produced
1.3 billion m3 coniferous (32%)
2.7 billion m3 non-coniferous (67.5%)
of which 1.6 billion m3 trop. (40%)
2 billion m3 of roundwood
1 billion m3 coniferous (50%)
1 billion m3 non-coniferous (50%)
1.8 billion m3 of roundwood
200 million m3 coniferous (11%)
1.6 billion m3 tropical (89%)
200 million m3 of roundwood
100 million m3 coniferous (50%)
100 million m3 non-coniferous (50%)
PROPORTION WOOD FUEL/IND. ROUNDWOOD
Ind. Roundwood
Wood fuel
50%
50%
PRODUCTION OF ROUNDWOOD IN THE WORLD
Non tropical
Tropical
40%
60%
PROPORTION OF TROPICAL ROUNDWOOD IN TROPICAL COUNTRIES
Industrial
Non industrial
25%
75%
The biggest consumers of tropical timber are the tropical countries themselves as they mainly consume it for energy purposes.
Roughly 1/3 of the industrial tropical timber is exported under logs, sawnwood, plywood or paper form.

Biggest producers and importers of Ind. roundwood



Global demand for timber is concentrated on a few countries. International trade and demand are therefore and before all dependent on the economic situation of these consumer countries.

Case: China. Major prod of roundwood but still imports more than 22% of the timber in the world. Dependence is even stronger on tropical primary products.

Future demand for timber

Region	Production (m^3, RWE)			
	IRW		Woodfuel	
	2015	2050	2015	2050
Sub-Saharan Africa	65 442 700	78 049 330	589 613 500	251 641 817
Latin America and Caribbean	226 641 900	282 664 300	262 105 900	340 440 300
Southeast Asia	136 945 700	173 305 498	154 302 200	126 730 200
Subtotal (tropical regions)	**429 030 300**	**533 019 128**	**1 005 921 600**	**718 812 317**
China	268 066 600	327 863 100	174 309 100	163 582 100
Europe	568 543 500	918 743 200	146 345 500	153 780 000
North America	311 471 000	286 943 500	47 322 800	49 573 600
India	46 642 600	97 331 200	303 968 200	236 886 700
Rest of South Asia	9 582 500	11 212 155	79 182 500	92 147 962
Rest of world	111 118 600	152 821 630	78 706 400	67 286 218
Total (world)	**1 944 656 100**	**2 829 833 883**	**1 835 758 100**	**1 449 158 897**

Industrial roundwood consumption, 2050

Figure 8: Per-capita consumption of industrial roundwood and woodfuel in 2015 and 2050, by selected world region

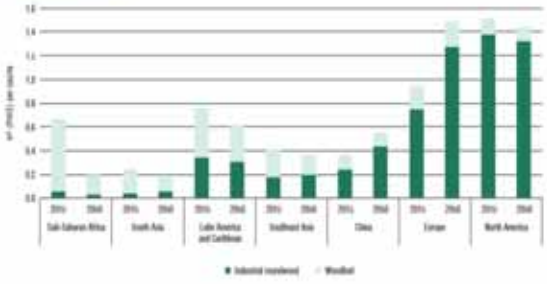
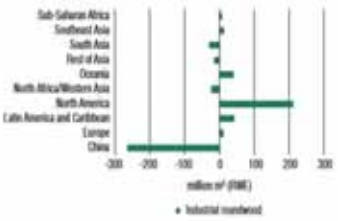
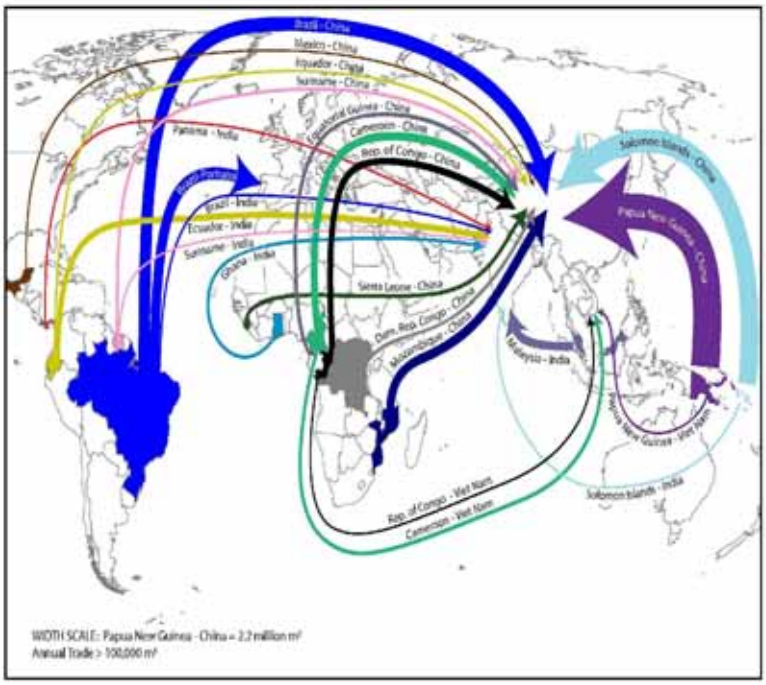


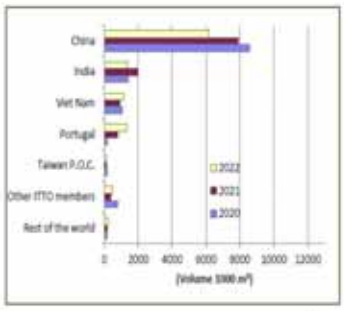
Figure 9: Trade balance of industrial roundwood in 2050, by selected world region



Major Trade Flows: Tropical Industrial Roundwood in 2021 (million m3)



Major Tropical Log Importers



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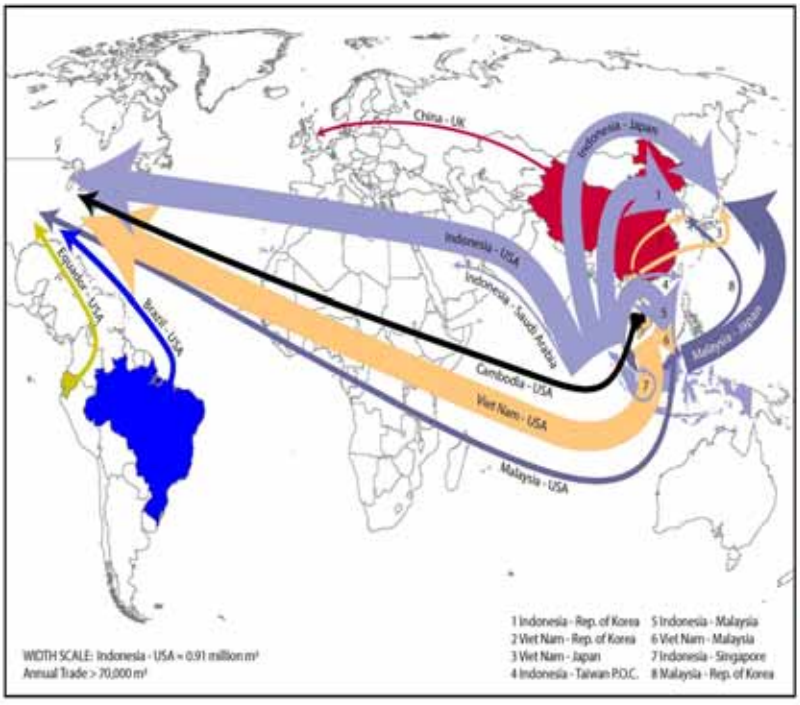
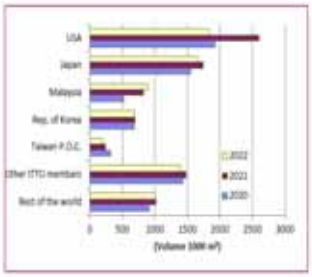
Major Trade Flows: Tropical Plywood in 2021 (million m3)

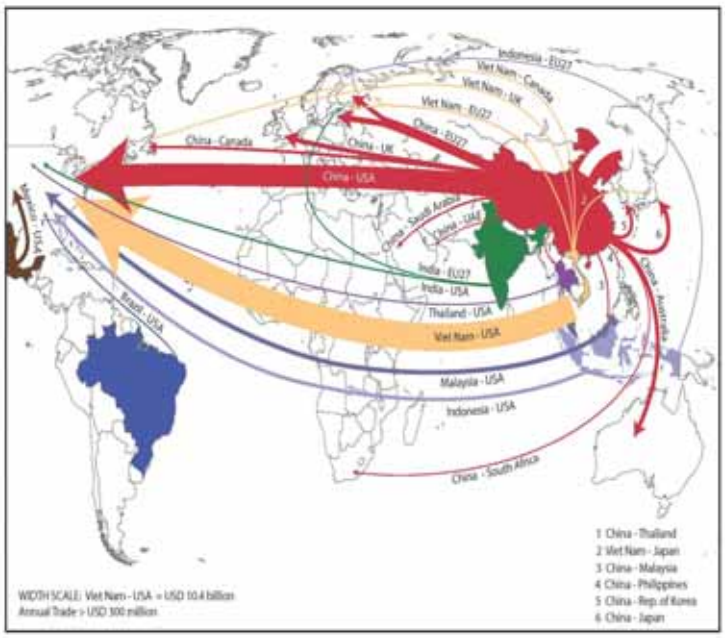


Major Tropical Plywood Importers

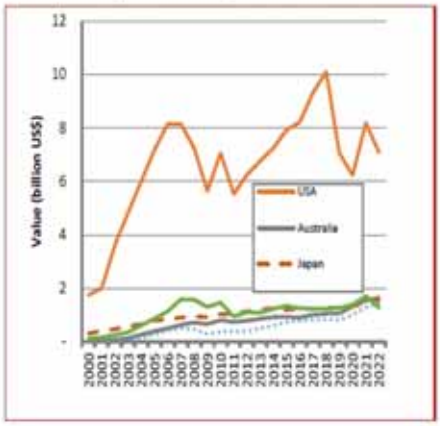


8

Major Trade Flows: Wooden Furniture from China and ITTO Producer Countries, 2021 ($ billion)



China exports of wooden furniture, by major importing country, 2000-2022 (billion US$)



9

What is Forest Certification?

Photos: ITTO

- Forest certification is a voluntary process whereby an independent third party (the "certifier") assesses the quality of forest management and production against a set of requirements ("standards") predetermined by a public or private certification organization (FAO 2020).
- Forest certification is a way of informing consumers about the sustainability of the forests from which wood and other forest products were produced.
- Two types of forest certification

  1. **Certification of forest management**, which assesses whether forests are being managed according to a specified set of standards;

  2. **Certification of the chain of custody** (sometimes referred to as CoC certification), which verifies that certified material is identified or kept separate from non-certified material through the production process, from the forest to the final consumer.

Timber Supply Chains

The concept of supply chain comprises the organizations, activities and processes associated with all stages of the business processes involving planning, sourcing, processing, manufacturing and delivering goods and services.

Figure - Main Flows of a Timber Supply Chain

Source: Prepared by STCP (2020).

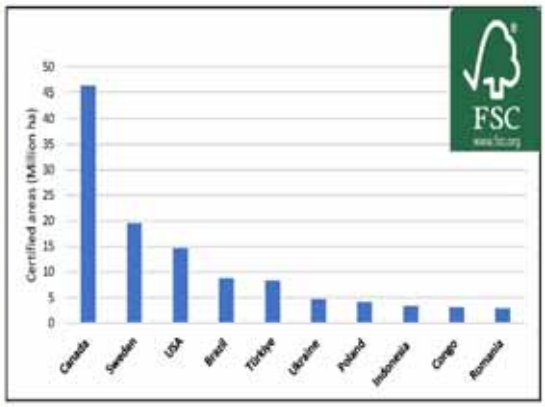
Current logging regulations in concession areas in Brazil:

Mean logging intensity of 15–20 $m^3.ha^{-1}$, a harvest cycle of 35 years

Certified forest areas in the world - FSC

- 10 principles and 70 criteria
- The top ten countries with certified forest management areas are distributed in North America, Europe and Asia.
- Canada (46.3 million ha), Sweden (19.5 million ha) and USA (14.6 million ha) are the countries with the largest FSC certified areas, representing almost 39% of the FSC certified areas, followed by Brazil, Türkiye, and Ukraine

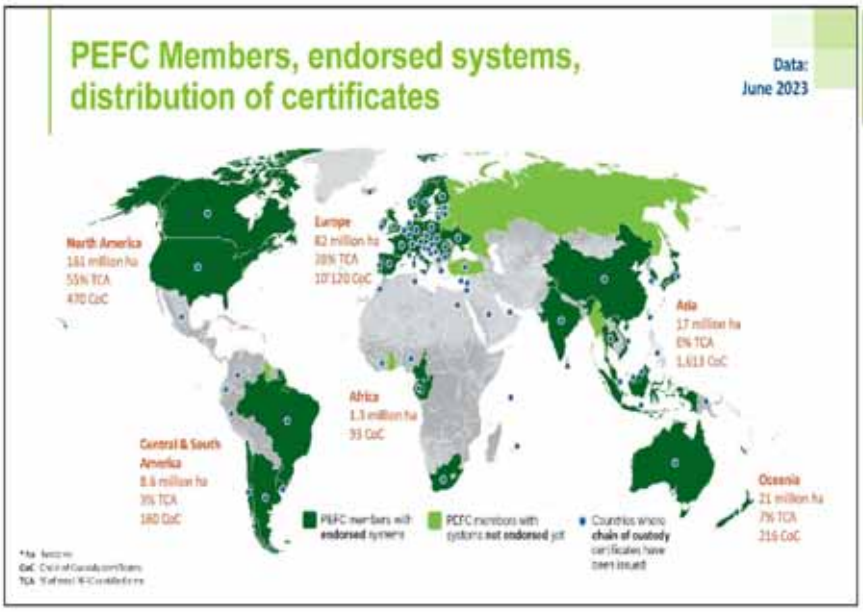
FSC region	Forest area	FM certificate	CoC certificate
Africa	10,047,657	61	378
Asia-Pacific	9,268,370	365	29302
CIS	9,268,370	98	377
Europe	56,598,084	456	22520
Latin America	18,376,797	401	2083
North America	60,900,734	139	2511



Source: https://connect.fsc.org/impact/facts-figures

Certified forest areas in the world - PEFC

7 Criteria; currently the largest certification system in the world
As of June 2023, it covers 291.2 million ha of certified forests, covering almost 60% of globally certified forest areas, and supplying more than 12,000 CoC certified companies (PEFC Council, 2023).



Leading countries: Canada (126.7 million ha), USA (34.5 million ha), Australia (20.4 million ha), and among the tropical countries, Malaysia (6.1 million ha)

Source: PEFC (2023)

National Forest Certification Schemes and Systems

Brazil	Brazilian Forest Certification Program (CERFLOR)	2005	It originated from the demand of the Brazilian forest-based productive sector as a requirement, mainly from the foreign market, for the need of a green seal for raw materials and products from planted and native forests. It is a national forest certification initiative, whose standards were developed within the scope of the Brazilian Association of Technical Standards (ABNT). CERFLOR has been internationally recognized by PEFC (INMETRO, 2020; WWF, 2020). See more: http://inmetro.gov.br/qualidade/cerflor.asp
Indonesia	Lembaga Ekolabel Indonesia (LEI)	1993	Indonesia developed its own certification scheme, the Lembaga Ekolabel Indonesia (LEI) in 1993. In 1998, LEI was officially established as a foundation and since then has conducted several certification assessments. In 2000, LEI and FSC developed a Joint Certification Protocol obliging accredited certifiers from both schemes to use both LEI and FSC criteria and indicators in natural forest management operation assessment (Muhtaman & Prasetyo, 2006). See more: https://lei.or.id/
Malaysia	Malaysian Timber Certification Council (MTCC)	1999	It started operation in January 1999 as an independent organization to develop and operate the Malaysian Timber Certification Scheme (MTCS). As a voluntary national scheme, MTCS provides for independent assessment of forest management practices and audit of timber product manufacturers or exporters to ascertain that the timber products manufactured or exported are sourced from sustainably managed forests. MTCS has been endorsed by PEFC scheme since 2009, although the system joined PEFC in 2002. MTCS is the first tropical timber. See more: https://mtcc.com.my/

International Timber Trade Policies

US Lacey Act Amendment (2008)
- 1900 US law that bans trafficking in illegal wildlife; Amended in 2008 to include plants and plant products, such as timber and paper
- Required specification of timber species origin and scientific name of any species used

European Union Timber Regulation (EUTR) (2010)
- Prohibition of illegally harvested timber and associated products in the EU market

European Union Deforestation Regulation (EUDR) (2024) (or 30 June 2025 for micro or small businesses)
- Operators must ensure that the items entering the EU market are not from land that has been deforested or subject to forest degradation since 31 December 2020

Australia Illegal Logging Prohibition Act (2012)
- Requires due diligence - an importer before importing regulated timber product should get evidence of compliance with the law of any foreign country; and evidence that the product has not been illegally logged

Japan Clean Wood Act (2017)
- Requires "Confirmation of Legality", showing that registered companies that timber products they handle are harvested in compliance with the national regulations

Tropical Timber Market Issues

- Efforts to ensure the legal origin of timber and trade in timber products have brought many initiatives (information about raw material origin; risk assessment; risk mitigation) –US Legacy Act; EUTR-EUDR; Australia's Illegal Logging Prohibition Act; Japan Clean Wood Act
- Timber legality is a necessary first step in ensuring SFM and the initial step in the international timber trade control
- Certification processes presents many advantages. However, as a whole tropical forests are still lagging behind in forest certification
  - Financing of indirect (compliance) and direct (auditing) costs of certification

Four aspects of legality:
- Legal right to harvest and trade within legally gazetted boundaries
- Compliance with legislation related to forest management, environment, labour and welfare, health and safety
- Compliance with legislation related to taxes and royalties
- Compliance with requirements for trade and export procedures.

Challenges in Forest Certification

- **High transaction costs for developing countries and small producers**: Certification costs are high, particularly for small producers. Small-scale and community-based forest producers often face challenges due to high costs and lack of capacity in managing complex administrative procedures.
- **Complexity in Consultation, Verification and Monitoring**: Ensuring compliance with certification standards and verifying certified areas can be complex, especially in supply chains involving diversified forest areas, local suppliers and stakeholders.
- **Limited Market Recognition**: While forest certification is widely recognized in some markets, its recognition remains limited in others for several reasons. As a result, certified products face limited demand in certain regions
- **Regulatory Barriers**: Some countries or municipalities introduce non-tariff trade barriers based on specific forest certification schemes. These barriers can impede the demand and flow of certified products and create trade conflicts.
- **Lack of Harmonization**: Forest certification standards and criteria vary across different schemes and countries, making it difficult for producing countries and wood products suppliers to meet market/import requirements in their export markets.

A Sustainable Forestry for A Sustainable Future

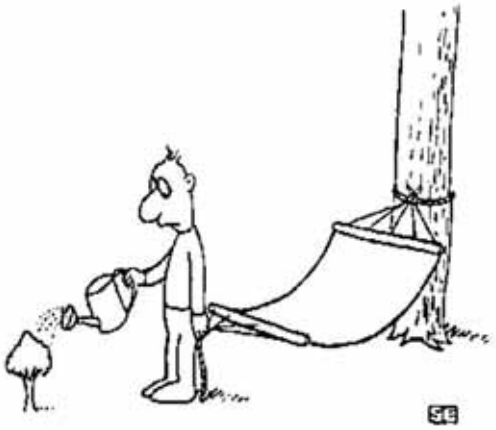
How can forest resources contribute to solving some of the global and national challenges?

SFM is a Nature-based solution:

- Climate change mitigation benefits - 2050 Carbon Neutral Target Commitments (23% of GHGs derive from Agriculture, forestry and other land use)
- Biodiversity – 30x30 Target of Kunming-Montreal Global Biodiversity Framework (home to 80% of global biodiversity in terrestrial ecosystems)
- Bio-energy (2.4 billion people still rely on wood fuel)
- Poverty reduction
- Social inclusion - indigenous people and community-based forest management

Thank you for your attention!

Happiness grows from a tree



E-mail: ma@itto.int

ITTO Website: www.itto.int

ITTO International Tropical Timber Organization

Sustaining Tropical Forests

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

The Potential of Sustainable Wood Value Chains for Circular Bio-Economy, Climate Action and Achieving Global Forest Goals

Ms. Thaís Linhares-Juvenal Team Leader
(Sustainable Forestry, Value Chains Innovation & Investments)
Secretary of the International Commission on Poplars and Other Fast-Growing Trees Sustaining People and the Environment - IPC
Forestry Division, FAO

Food and Agriculture Organization of the United Nations

The potential of sustainable wood value chains for circular bio-economy, climate action and achieving Global Forest Goals

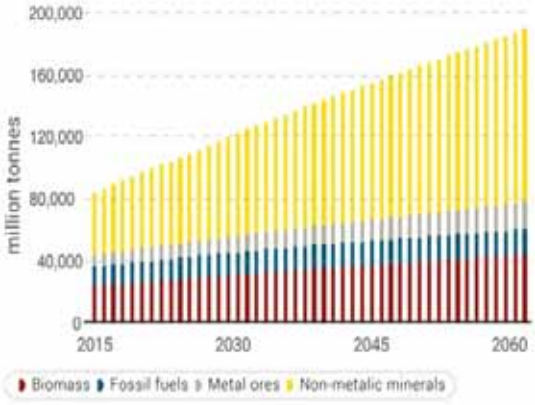
Thais Linhares Juvenal, Senior Forestry Officer, Forestry Division, FAO

EVENT, PLACE | DATE

THE NEED TO ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

- **Covid 19 impacts**, **high energy** and **commodity prices**, continuing **deforestation** (10 mil. ha/year) are a significant challenge to glob forest governance
- **Global consumption of natural resources** is expected to more than **double** from 92 billion tonnes in 2017 to **190 billion tonnes in 2060**
- **Sustainable and legal wood products** are a renewable, carbon-neutral material that can be used across multiple value chains
- **Scaling up bio-economies** using sustainable and legal wood can be cost-effective, innovative and carbon-neutral economies
- Sustainable wood value chains **can create jobs**, **boost incomes**, improve **food security**, support **conservation, restoration and biodiversity goals**

Projected global material extraction, 2015 to 2060, under current trends



Source: IRP, 2019

GLOBAL FOREST SECTOR OUTLOOK 2050

FAO's Forestry Working Paper in collaboration with International Tropical Timber Organization (ITTO) and Unique Consultancy.

New evidence provided to support policy making for a sustainable bioeconomy:

- What is the forest resource base and required production to sustainably supply future demand for wood products up to 2050 in a business-as-usual and in a bioeconomy scenario?
- What are the policy and investments needs to support the transition to a sustainable wood-based bioeconomy?

WHAT THE EVIDENCE TELLS US

Global wood product demand set to grow approximately by a third by 2050 due to population growth, urbanization and economic development

Bioeconomy scenario drives up to **6% increased demand for primary processed wood products** and **3% for industrial roundwood**

Roundwood production and increased productivity from **planted forests** will play a **significant role to meet growing wood demand**

Investments required to produce primary processed wood products to meet the future demand may amount to **USD 25 billion per annum from 2020 to 2050**

WHAT THE EVIDENCE TELLS US

The **global forest sector** contributed more than USD 1.52 trillion to national economies in 2015 (up by 17 percent over 2011)

Processing subsectors (i.e. solid wood products, pulp and paper, and furniture manufacturing) tend to have higher multipliers in value added and employment than the forestry and logging subsector.

In 2017-2019, **the forest sector employed a total of 33 million people** (formal and informal jobs).

Growing demand for materials that can substitute for non-renewable materials may lead to **employment** for this type of wood production **increasing between 1 and 4 %**

WHAT THE EVIDENCE TELLS US

Crucial need to combine Forest and Landscape Restoration and Sustainable Wood Production

- Global demand for primary processed wood products expected to increase by **37 percent** by 2050
- The major forest area expansion foreseen through restoration could be the springboard towards sustainably increasing wood production globally
- Countries worldwide have made pledges to restore an area of nearly **1 billion hectares** (ha)
- Planted forests for commercial purposes, including monoculture plantations, present the **second lower-cost range** for forest restoration in tropical and subtropical countries

FAO'S WORK ON RESTORATION

- **Forest and Landscape restoration Mechanism (FLRM):** Coordinating and facilitating the development and implementation of projects
- **Taskforce on Best Practices under the UN Decade on Ecosystem Restoration:** 300 members from more than 100 global organizations
- Forthcoming forestry flagship journal **Unasylva: "Towards more diverse and resilient planted forests":** State-of-the-art models of planted forests meeting the essential objective of production, while delivering on broader goals such as biodiversity, restoration, resilience to and mitigation of climate change, and livelihoods opportunities

POLICY IMPLICATIONS

Positive outcomes from the increased wood use depends on sustainable provision of raw material, improved wood value chains, good forest governance, and the enabling environment that can support integrated policy and investments measures

Agroforestry practices and forest and landscape restoration efforts integrated with sustainable wood production bear the potential to supply additional industrial roundwood and wood fuel to meet future demand

Engage with the private sector and adopting innovative technologies in upscaling sustainable wood use will be essential for carbon-neutral and resilient economies

POLICY IMPLICATIONS

Promote multistakeholder collaboration through dialogues, engaging with the private sector, forest communities, scientific community, civil society, and international organizations to strengthen governance for responsible wood production and consumption

Forest sector contribution to the bioeconomy should be based on adequate sustainable and legal production where trade-offs with other land uses will need to be considered

Smallholders, communities, local authorities and private sector with secure tenure land rights, need to be encouraged to invest in afforestation, forest restoration and sustainable forest management

GLOBAL POLICY RESPONSE

- XV World Forestry Congress in 2022/ Seoul Forest Declaration
- **Concerted efforts required** to address the need for more awareness, enhance global and regional dialogues, improve modalities for technical exchange and share experiences
- **Create an enabling environment** to significantly increase the use of sustainable wood-based solutions, which can be linked to the Nationally Determined Contributions by 2030
- FAO and members of the Collaborative Partnership of Forests (CPF) support efforts through an initiative such as **SW4SW** by improving forest governance.

SUSTAINABLE WOOD VALUE CHAINS

- Enable expansion of forest contributions to carbon neutral and more resilient economies.
- Necessary to meet the increase in demand for wood and sustain a forest-based bioeconomy.

The Sustainable Wood for a Sustainable World Joint CPF Initiative

Joint initiative of international organizations promoting **sustainable wood value chains** to achieve **SDGs** and accelerate **climate change** objectives.

The Sustainable Wood for a Sustainable World Joint CPF Initiative

POLICY LEVEL

Establish dialogue through global, regional, cross-sectoral and multistakeholder platforms

OPERATIONAL LEVEL

Improve data sets to better match the relevant needs to promote sustainable wood production; Develop tools and guidelines based on evidenced technical know how and data; Targeted capacity building

SCIENTIFIC LEVEL

Develop technical knowhow evidencing sustainability and benefits of wood production

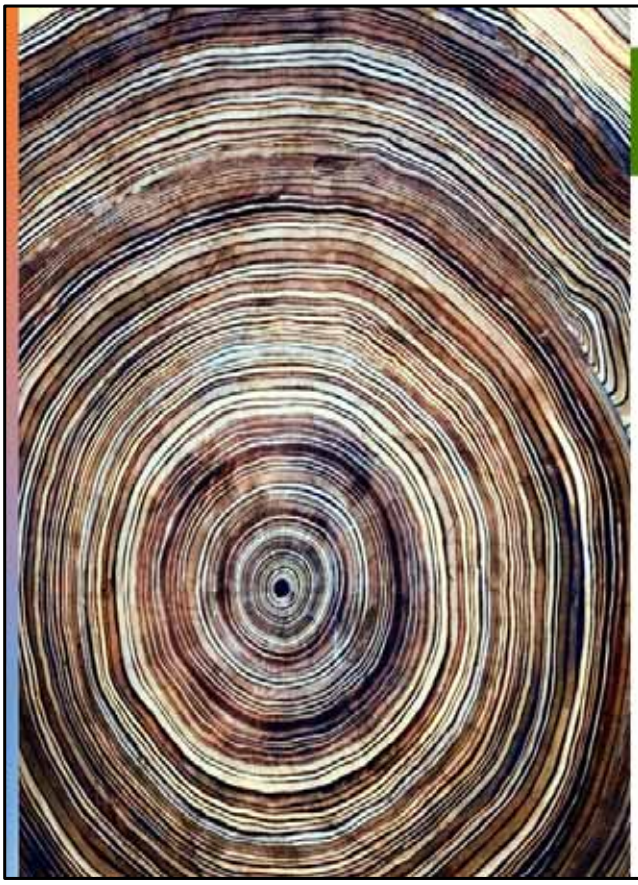
SUSTAINABLE WOOD for SUSTAINABLE WORLD

POLITICAL LEVEL

Communication, dissemination, advocacy of the wide-reaching benefits of sustainable wood

SW4SW 2018 – 2022

- Knowledge exchange, policy dialogues, workshops, technical webinars and events on sustainable wood value chains
- Capacity development and technical support to strengthen wood value chains
- Normative work on sustainable forest production, wood value chains and markets to support policy-making
- Advocacy and awareness raising



Recent SW4SW Activities

- FAO/IUFRO project **"Towards a Global Wood Policy Platform: Sustainable Wood for a Carbon-neutral Bioeconomy"**
- **Latin American Dialogue** "Sustainable Wood for a Sustainable World", in Curitiba, Brazil, October 15-16, 2023, co-organized with FAO, IUFRO, CIFOR and Empraba Florestas
- In Korea, **in-depth analysis** of the contributions of the forest sector to the national economy (in comment/validation phase).

Food and Agriculture Organization of the United Nations

THANK YOU FOR YOUR ATTENTION

Thais Linhares Juvenal, FAO | thais.linharesjuvenal@fao.org

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Session B :

Improved and Increased Production

2023 AFoCO Annual Thematic Dialogue

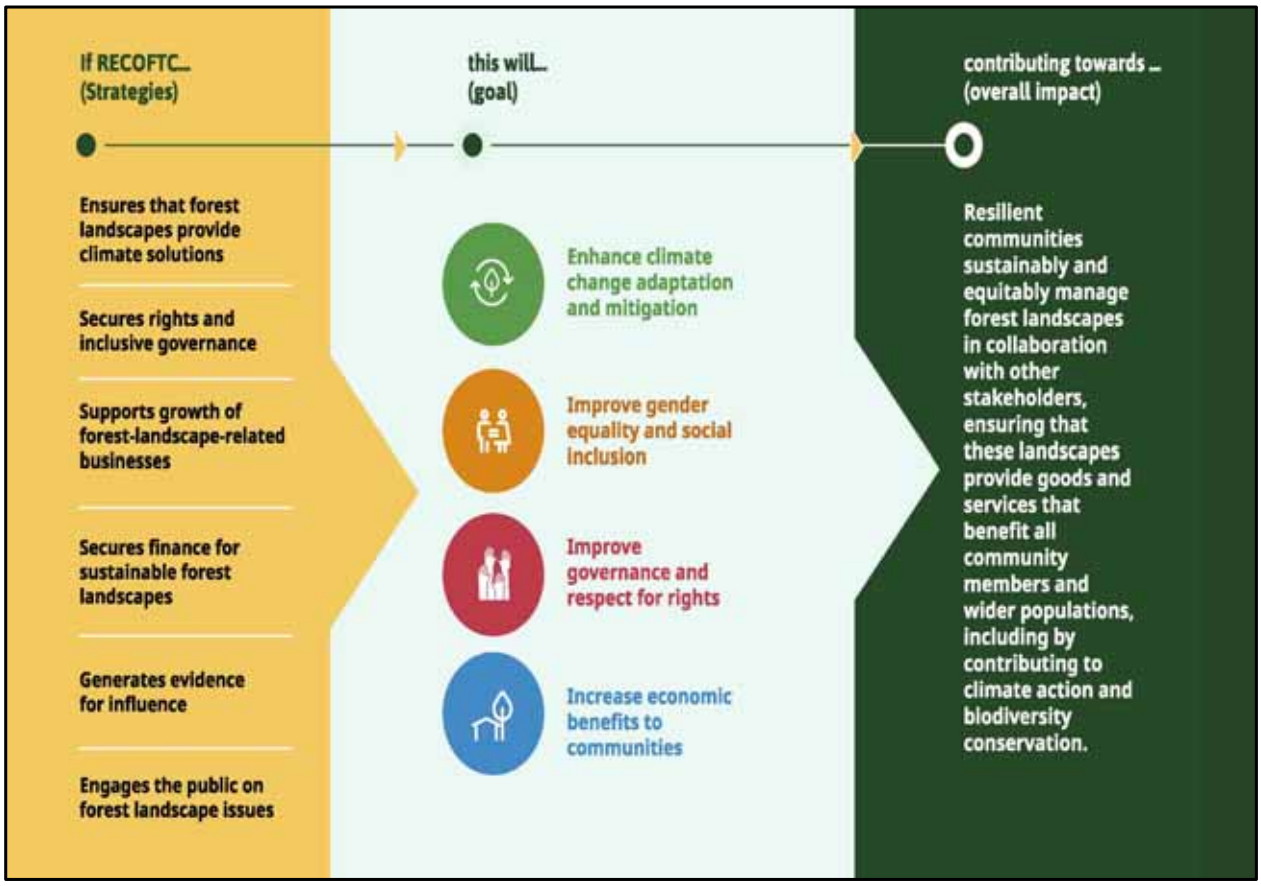
"Sustainable Wood for a Sustainable Future"

Community Forestry for Better Tenure and Improved Livelihoods

" Improved Tenure, Community and Smallholder Involvement, Diversification of Rents (Products and Pes) From Forests, to Forest-Based Benefits and Livelihoods of Forest-Dependent People "

Mr. Ronnakorn Triraganon,
Senior Strategic Advisor, RECOFTC

Community Forestry for Sustainable Wood Production



RECOFTC believes in a future where people live equitably and sustainably in and beside healthy, resilient forests.

Community forestry and sustainable wood production

Why is forest land tenure important for sustainable wood production?

- Require long term planning and investments
- Provide incentives for SFM and Sustainable Livelihood Development
- Allow landowners to manage properly
- Reduce illegal practices
- Empower people to contribute in SDGs

Potential contribution of small holders to sustainable wood production

- Agroforestry and mixed land use for multiple benefits
- Tree planting outside forest areas
- Diversified local livelihoods
- Clear source of timber
- Conservation of high value species
- Climate mitigation and adaptation

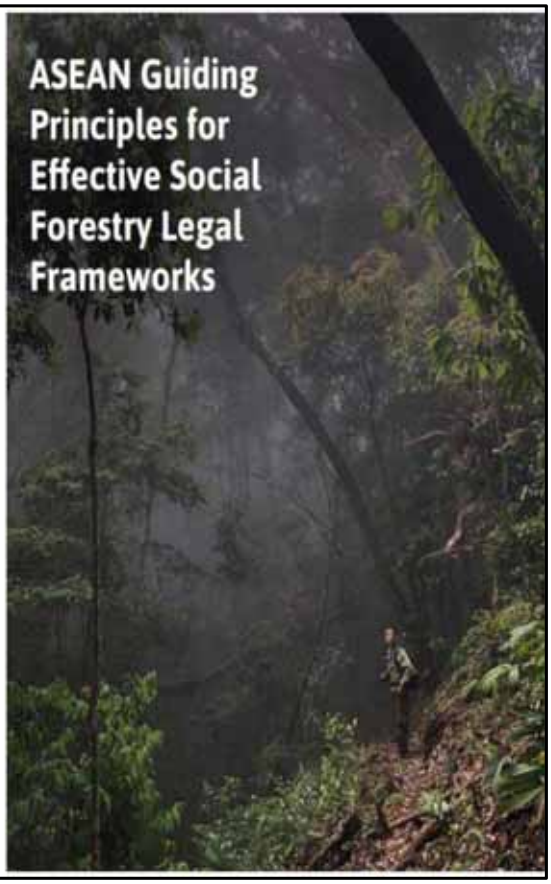
How could social forestry strengthen the forest land security for sustainable wood production? IF.....

- Strong and secure tenure rights of forest land and resources
- Conducive policies and legal frameworks
- Market driven
- Infrastructures
- Finance and credit
- Certification mechanisms
- Information and transparency

Key considerations for us

- **Policies and legal frameworks** to strengthen and secure local people rights for long term investment.
- Mechanism to support **community-based forest enterprise** in many countries.
- Clarity and financial support to stimulate **long term wood production**, otherwise communities only invest in short or fast-growing species
- CF: more than wood but **multiple benefits**
- **Governance** for effective participation, accountability, and transparency
- Fair benefits from **regulatory and voluntary** markets

ASEAN Guiding principles on social forestry effective legal frameworks 2022
www.recoftc.org



Thank you

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2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Forest restoration for increased supply " Community-level perspective on agroforestry benefits, non-timber forest products, wood energy "

Dr. Pham Duc Chien,

Director of Project and Program Division, AFoCO

2023
Annual
Thematic
Dialogue

AFoCO
Asian Forest Cooperation Organization

Enhancing Value-added, Sustainable Timber Production with Local Communities

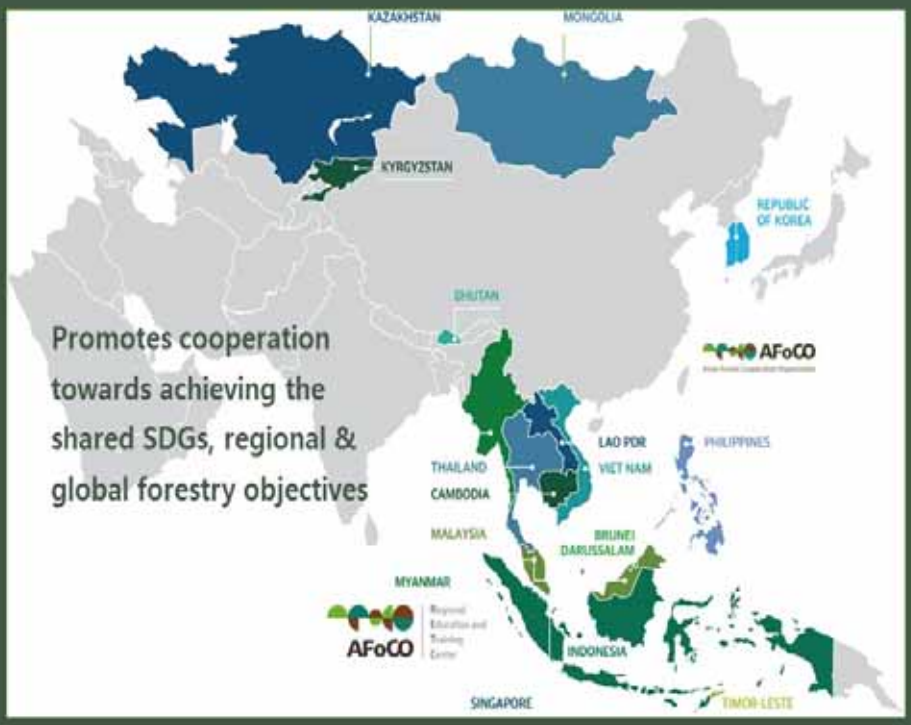
Promotion of Vertical Integration in Wood Processing through People's Organizations in Community Based Forest Management Areas in the Philippines(AFoCO/017/2020)

Presented By:
Dr. Pham Duc Chien,
Director,
AFoCO Secretariat

Introduction to AFoCO

- AFoCO is a treaty based intergovernmental organization.
- Assembly is the highest decision making body composed of Representatives of Parties.
- Secretariat: With the headquarters located in Seoul, administers and coordinates the activities & day-to-day operation of the organization.
  - HQ: Executive Director, Vice Executive Director, 20 staffs
  - RETC (Regional Educational Training Center): Yangon, Myanmar
  - Operational budget : mandatory contribution by the 14 Parties


AFoCO Member Countries: Parties and Observers



Parties (14)

Bhutan
Brunei Darussalam
Cambodia
Indonesia
Kazakhstan
Kyrgyzstan
Lao PDR
Mongolia
Myanmar
Philippines
Republic of Korea
Thailand
Timor-Leste
Viet Nam

Observers (2)

Malaysia
Singapore

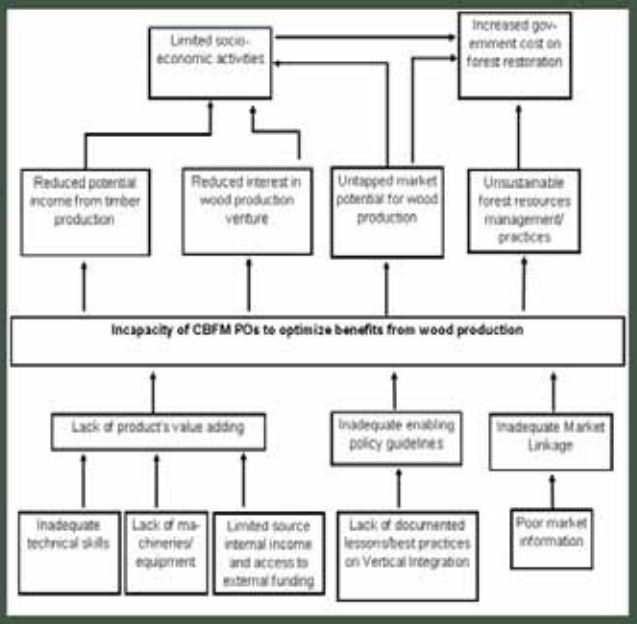
Project Background

- **Community Based Forest Management (CBFM)**
  - Since 1995, the Philippines has officially adopted CBFM as the country's overall strategy in achieving Sustainable Forest Management (SFM)
  - People's Organizations participating CBFM shall be given tenure security and incentives to develop, utilize and manage specific portions of forest lands for a period of 25 years renewable for another 25 years.

- **National Greening Program (2011)**
  - A massive forest rehabilitation program of the government, seeks to establish 1.5 billion trees in 1.5 million hectares nationwide within the period of six (6) years from 2011 to 2016.
  - A climate change mitigation strategy whereby it seeks to enhance the country's forest stock to absorb carbon dioxide and likewise designed to reduce poverty, providing alternative livelihood activities for marginalized upland and lowland households

Project Background

- The need for appropriate support mechanism
  - To ensure sustainable investments in forest plantation that is framed on the three pillars of SFM (social, economic and environmental).
  - To optimize the benefits derived by POs from forest plantations established within CBFM areas



Project Objectives

Objectives:

To support the vertical integration in Community Based Forest Management (CBFM) areas through the promotion of community-based livelihood opportunities through utilization of existing plantations.

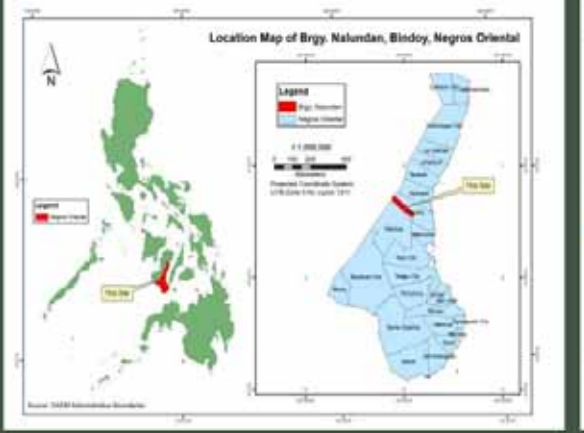
1. To promote the engagement of two participating CBFM People's Organizations (PO) into value adding activities in wood production;
2. To provide adequate market linkages for the two participating CBFM POs in the operation of their wood-based enterprise; and
3. To formulate and recommend enabling policy guidelines for the implementation of vertical integration as a business

Project Sites

Two tenured (CBFM) areas within the Philippines

- **Visayas: Region 7, Central Visayas (Province of Negros Oriental, Municipality of Bindoy); and**
- **Mindanao: Region 13, CARAGA Region (Province of Agusandel Sur, Municipality of Prosperidad)**

Visayas Project Site: Nalundan United Farmers Association, Inc. (NUFAI) located at Barangay Nalundan, Municipality of Bindoy, Province of Negros Oriental



Mindanao Project Site: Mabuhay Timberland Farmers Multipurpose Cooperative (MATILFAMCO), located at Barangay Mabuhay, Municipality of Prosperidad, Province of Agusan Del Sur

Achievements

Output 1.1:
Enhanced technical skills in value-adding activities in wood production of participating CBFM POs, for both men and wo men

Training on resource assessment and data gathering:
Conduct of training on resource assessment and data g athering in Region 7 (Left) and Region 13 (Right). Regio ns 7 and 13 conducted the training on August 4-5, 202 2 and October 20-21, 2022, respectively.

Workshop on the formulation of benefit sharing agreements:
Conduct of benefit sharing workshop in Region 7 (Le and Region 13 (Right). The workshop aims to develo quitable benefit sharing scheme between the stakeh ers and PO. The activity was conducted on June 23, 2 in Region 7 and October 19-20, 2022 in Region 13

Achievements

Output 1.2:
Access of the two (2) participating CBFM POs to machineries and equipment for value-adding activities in wood p roduction

Procurement of Machineries & Equipment
Machines for veneer processing delivered in Region 13, while the lumber processing machineries in Region 7 wil l be delivered by the 3rd quarter.

Procurement of Vehicle (Truck)
Contract for the supply and delivery of cargo truck awarded in Region 7 and 13.

Achievements

Output 1.2:
Access of the two (2) participating CBFM POs to machineries and equipment for value-adding activities in wood p roduction

Establishment of the wood processing plant (WPP) facility located inside the CBFM area of NUFAI at Barangay Nalundan, Bindoy, Negros Oriental, Philippines.
The PO is currently working on the beams in preparation for the installation of roofing materials.

Installation of wood processing equipment and facility
The temporary WPP site of the MATILFAMCO PO in Baranga buhay, Prosperidad, Agusan del Sur, Philippines.

Achievements

Output 1.3:
Participating CBFM POs have enough internal fund and are able to access external funding support to invest in value-adding activities to wood production

Workshop on the Updating of the Community Resource Management Framework (CRMF) The CRMF serves as the development and management plan of the PO.
The updating of the CRMF ensured that the project is integrated/incorporated in the said plan.

Achievements

Output 2.1:
Improved access of the two participating POs to reliable market information on wood-based products

Output 3.1
Vertical integration as business model in CBFM POs is promoted through the documentation of best practices and translated into policies

→ **will be achieved through follow-up project activities in 2023-2026**


AFoCO
THANK YOU!

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Session C :

Sustainable Production

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Assurance Systems to Governance and Demonstrate Sustainable Production for Improved Market Access

Mr. Bruno Cammaert,

Forestry Officer (EU-funded Forest Governance and Value Chains Programme Manager) Forestry Division, FAO

EU Forest Governance and Value Chains Programme

Sustainable Production: Assurance systems to improve governance and demonstrate sustainable production for improved market access

Bruno Cammaert
EU Forest Governance and Value Chains Programme
FAO, Forestry Division

Food and Agriculture Organization of the United Nations

EU Forest Governance and Value Chains Programme

What are assurance systems?

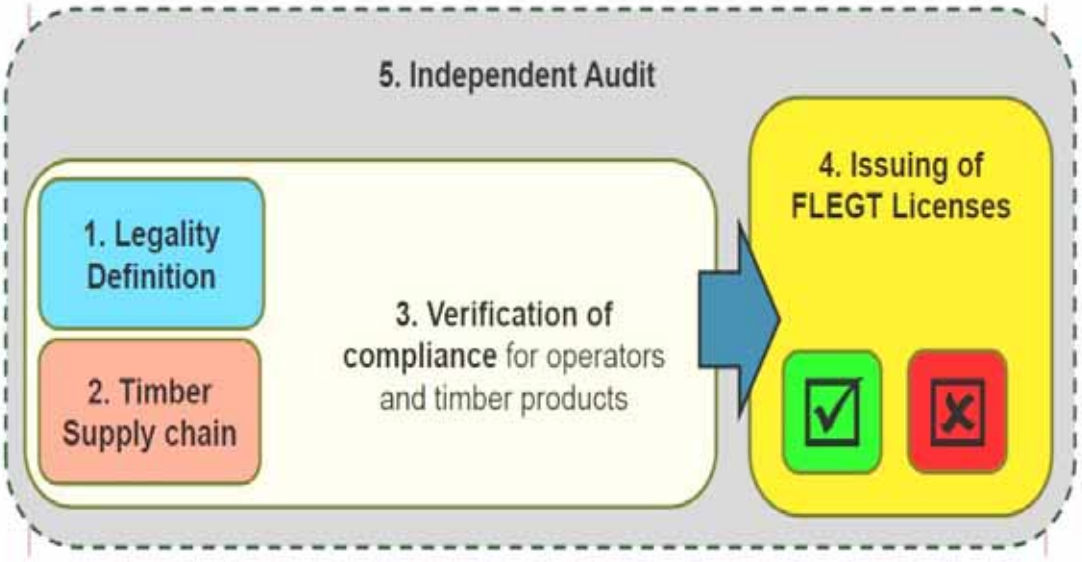
Systems that establish the standards for legality, or sustainability, by which timber production is measured. They are supported by supply chain control mechanisms, and verifiers to be monitored and controlled in the field.

Countries can tailor the design of such systems to include or combine:

- First-party verification or self-reporting and due diligence;
- Second-party field verification by governments or private sector associations; and
- Third-party audits of operators or the entire system by independently accredited bodies

EU Forest Governance and Value Chains Programme

Example: Timber Legality Assurance System (FLEGT)



EU Forest Governance and Value Chains Programme

What is the difference between an "assurance system" and a "traceability system"?

ASSURANCE	TRACEABILITY
Provides proof (verification) of a products' compliance with specific requirements (e.g. legality) and avoids mixing with non-compliant material along the supply chain	Provides and maintains information on the exact ORIGIN (e.g. country, jurisdiction, company, plot, stump) of the product all along the supply chain (tracing back)

EU Forest Governance and Value Chains Programme

Why are assurance systems needed?

Assurance systems are credible and verifiable ways to ensure timber is compliant with prevailing legality or sustainability standards and/or consumer preference. Demand for verified legal timber comes from:

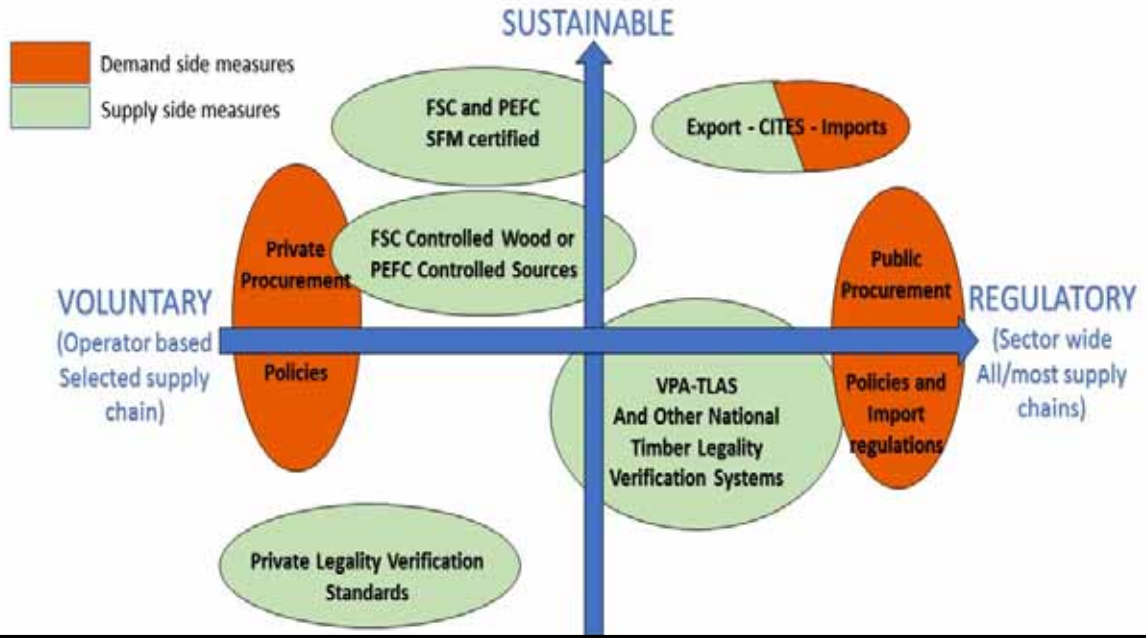
1. Consumer and Retailer purchasing preferences
2. Public and Private timber procurement policies
3. Binding Legislation (Due diligence):
   - ✓ US Lacey Act
   - ✓ EU Deforestation Regulation
   - ✓ RoK Act on the Sustainable Use of Timbers
   - ✓ Australia Illegal Logging Prohibition Act
4. Regional market integration (ASEAN Economic Community)

EU Forest Governance and Value Chains Programme

Why are assurance systems needed?

EU Forest Governance and Value Chains Programme

Assurance systems are supply side measures responding to demand side measures commitments to legal or sustainable timber production



EU Forest Governance and Value Chains Programme

Status of Legality Assurance Systems in the AP Region

Operational

Indonesia: Sistem Legalitas Verifikasi Kayu (SVLK) FLEGT (licensing)

Malaysia: Malaysia Timber Legality Assurance System (MYTLAS) for PM, with similar Systems for Sabah and Sarawak

Implemented but not licensing timber

Viet Nam: Vietnam Timber Legality Assurance System (VNTLAS) FLEGT

Developed but Status Unknown

Philippines: National Forest Stock Monitoring System (NFSMS)

Myanmar: Myanmar Timber Legality Assurance System (MTLAS)

PNG: Legality Standard (system?)

Under Development (FLEGT)

Thailand: Thai Timber Legality Assurance System (TTLAS)

Lao PDR: FLEGT VPA TLAS

Assurance System upgrades needed to meet EUDR Info Requirements

- Description of product (trade name/scientific name)
- Quantity
- Supplier name
- Buyer name
- Country of production
- Geolocation of all plots of land where the relevant commodities were produced, as well as date or time range of production
- Verifiable evidence that product is "deforestation free"
- Verifiable evidence that product is produced in compliance with relevant legislation

→ Less than 4 ha: At least one latitude and one longitude point
More than 4 ha: Polygons with sufficient points to describe the perimeter (Aggregated if several plots of land)

Lessons

Previous lessons learned on assurance and verifications system development can be used to advise strengthening and development of such systems in new countries

- **Modular Approach: Developing the system in phases, or "modules"** allows implementing agencies to undertake pilots tests, raise awareness, train users, test feasibility, and navigate user concerns. Generating early or regular "wins" (i.e. certificates and pre-licences) can ensure continued support for system development.
- **Risk-based verification:** Systems can assign different levels of verification for different risk levels, can improve system cost-effectiveness while maintaining credibility. This can enable low-risk smallholders to use the system, but safeguards and verification methods are necessary to ensure the reliability of self-reporting mechanisms.
- **Synergies with third-party certification** – such as mutual recognition between certification and assurance systems – can help prevent the development of parallel systems, avoiding extra burden and inefficiencies for operators moving towards sustainability.
- **Transparency:** The system's requirements and scope, control and oversight mechanisms, verification results, and product or operator claims must be clearly and publicly documented .
- **"Anchors" on domestic or export markets:** Systems are more successful with a strong anchor that generates the political will needed for operationalization. These anchors can be national strategic plans or policies, trade agreements, or alignment with the requirements of target export countries.

Summary

Assurance system development in the Asia-Pacific region could be further scaled up to deliver many benefits for all stakeholders engaged in timber supply chains

- At least 7 Asia-Pacific countries have assurance systems at varying levels of development, and some require support to finalize these systems and bring them into operation;
- All existing systems need "upgrading" to meet EUDR requirements (i.e. sustainability verification, geolocation requirements)
- Most assurance systems were previously developed for FLEGT VPAs; the opportunity remains to complete these assurance systems for use in export to any country with demand for verified legal timber

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

National Timber Legality Assurance System of Indonesia (SVLK)

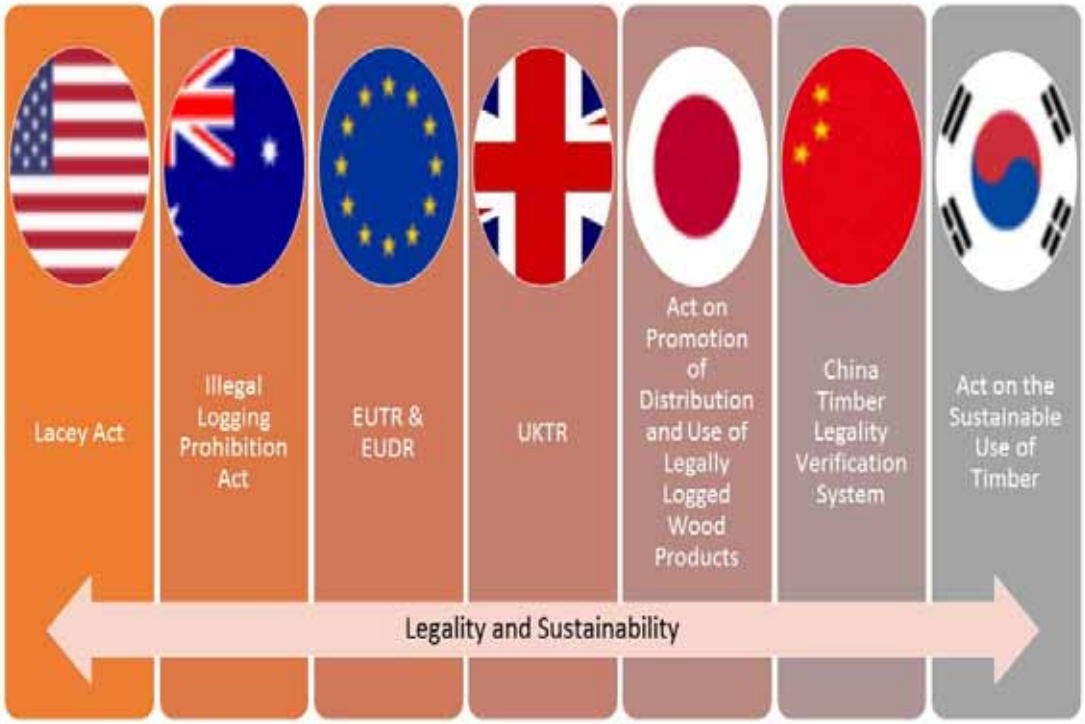
Mr. Kris Sugiyanto,
Director of Forest Processing and Marketing,
Ministry of Environment and Forestry, Indonesia

National Timber Legality Assurance System of Indonesia (SVLK)

Dr. Krisdianto Sugiyanto, S.Hut., M.Sc
Director of Forest Product Processing and Marketing Development
Ministry of Environment of Forestry

2023 Annual Thematic Dialogue "Sustainable Wood for Sustainable Future"
Seoul, 24 October 2023

Legal/sustainable timber policy in the international market



SVLK

SVLK is developed:
- Based on Indonesian laws and regulations
- Comply with International standards (ISO, etc.)
- Multistakeholders consultation process

Legality & Sustainability: From upstream to downstream & market (14 standards of SFM & Traceability)

Verification by accredited independent third party CABs

Mandatory

Implementation to involve all multi-stakeholders – CSO Consortium for independent monitoring

Strong commitment to sustain forest resources

Fair implementation: Dispute settlement and appeal mechanism

SVLK AS A SHIFTING PARADIGM

Core of the SVLK: legality of operators, control of supply chains and traceability, compliance upon standards and regulations, independent monitoring, licensing for exports, due diligences (DDs) for imports, etc.

New Logo of SVLK

By Law and Regulation (i.e. PP 23/2021 and MoEF Decree 8/2021) the scope of the SVLK has been **extended to cover both legality and sustainability aspects**

New SVLK Logo was launched at COP26 Glasgow

SVLK Logo might be attached with tagline of operator's claim on products' attribute (i.e. Sustainable or Legal)

The new logo was implemented by 15 June 2023, including on the document for exports (FLEGT License, etc)

Indonesia MoEF to carry out dissemination and initiate formal communication with authorities in importing economies on the new regulation and the use of the new SVLK logo

Indonesian LEGAL Wood

SVLK INDONESIA

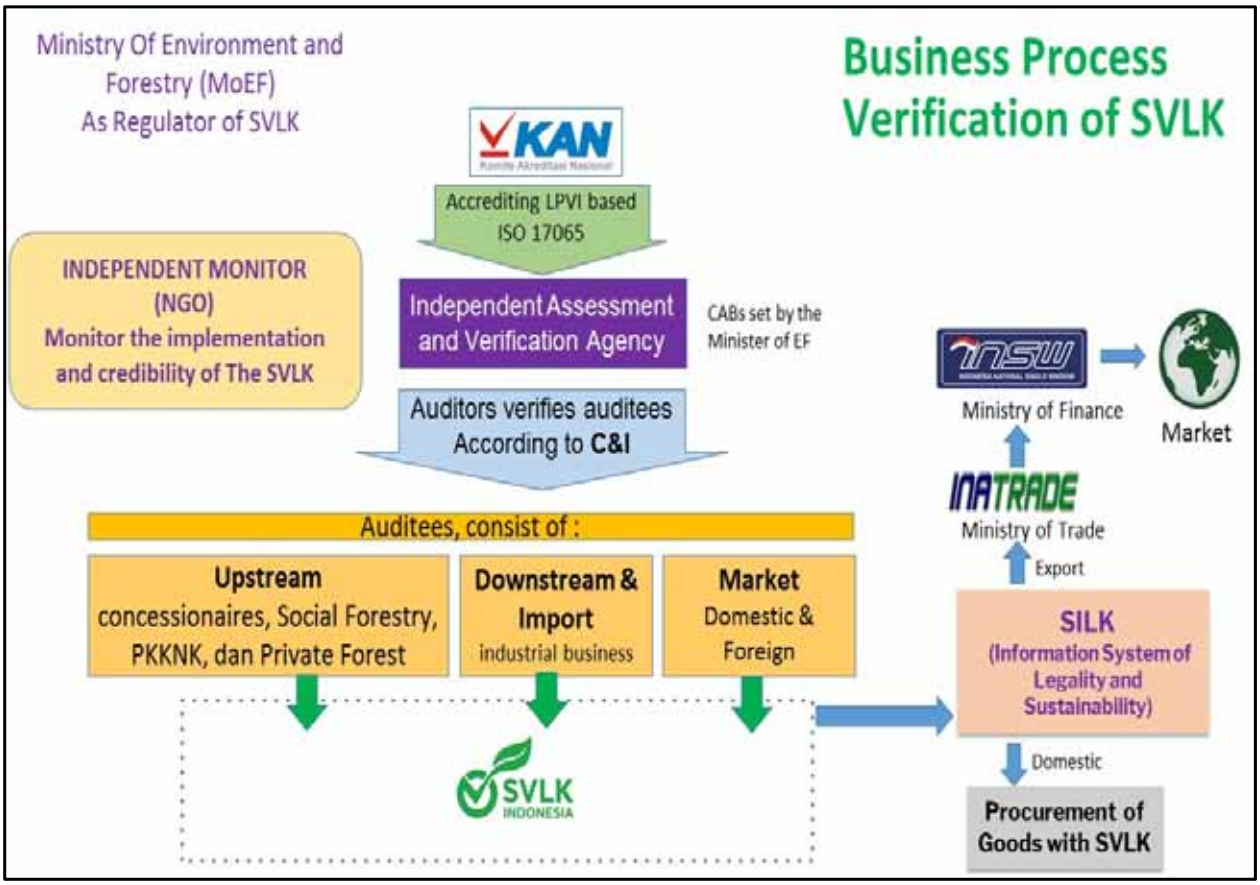
"SVLK" Guidelines & Key Actors

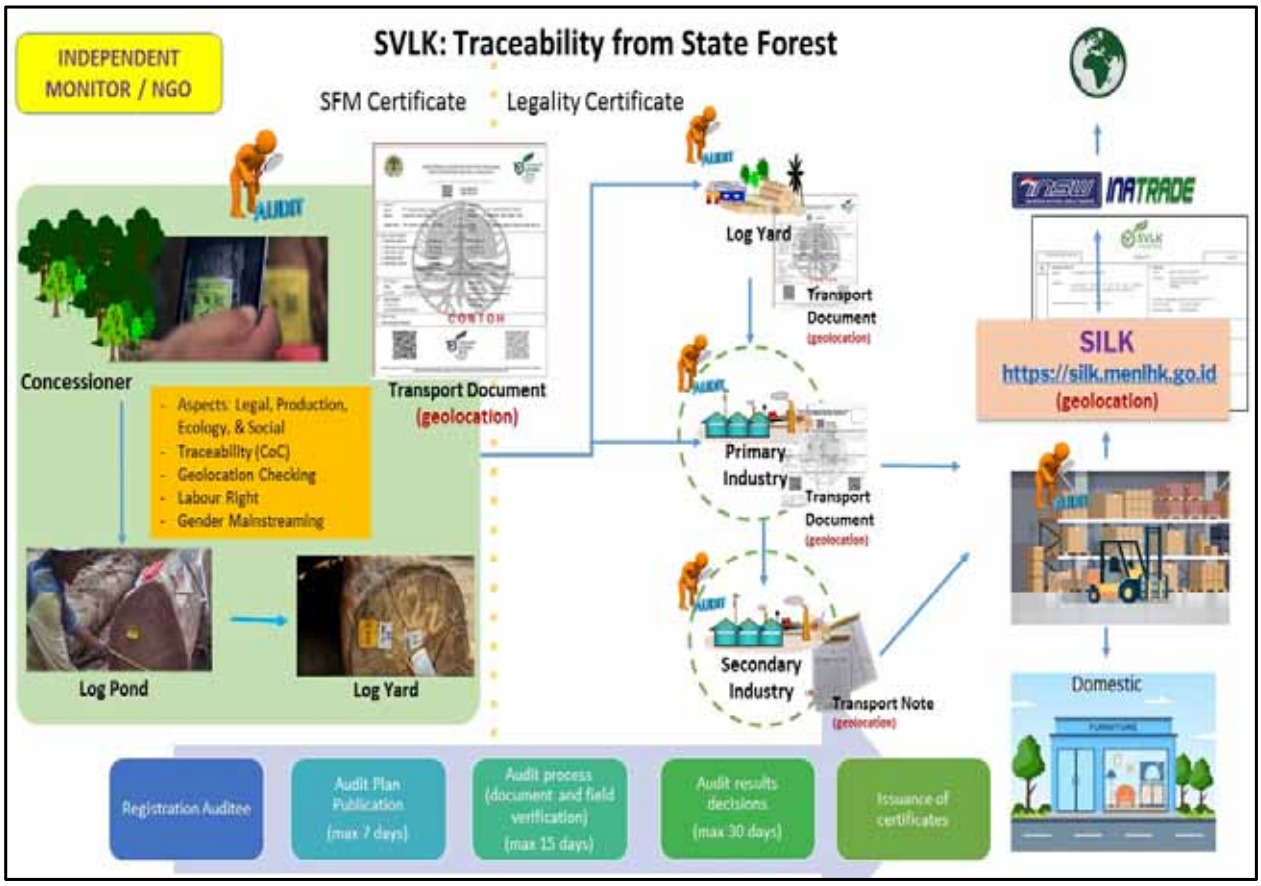
- **Standard and Guidelines (C&I)** of SVLK, based on Indonesian regulations and international standards (MoEF Decision No. SK.9895/2022 & ISO 17065:2012)
- **SVLK:**
  - ✔Upstream; S-Sustainable
  - ✔Uptream & Downstream; S-Legality
  - ✔Cultivated Wood/*Low Risk*; SDoC/Self Declare
- **Contents C&I's Book** It updates the standard and guidelines **involving multi-stakeholders** (Ministries/ government bodies, CABs, NGO, and relevant Associations) divided into 4 working groups (1) Upstream, (2) Down Stream, (3) Market, and (4) Credibility.

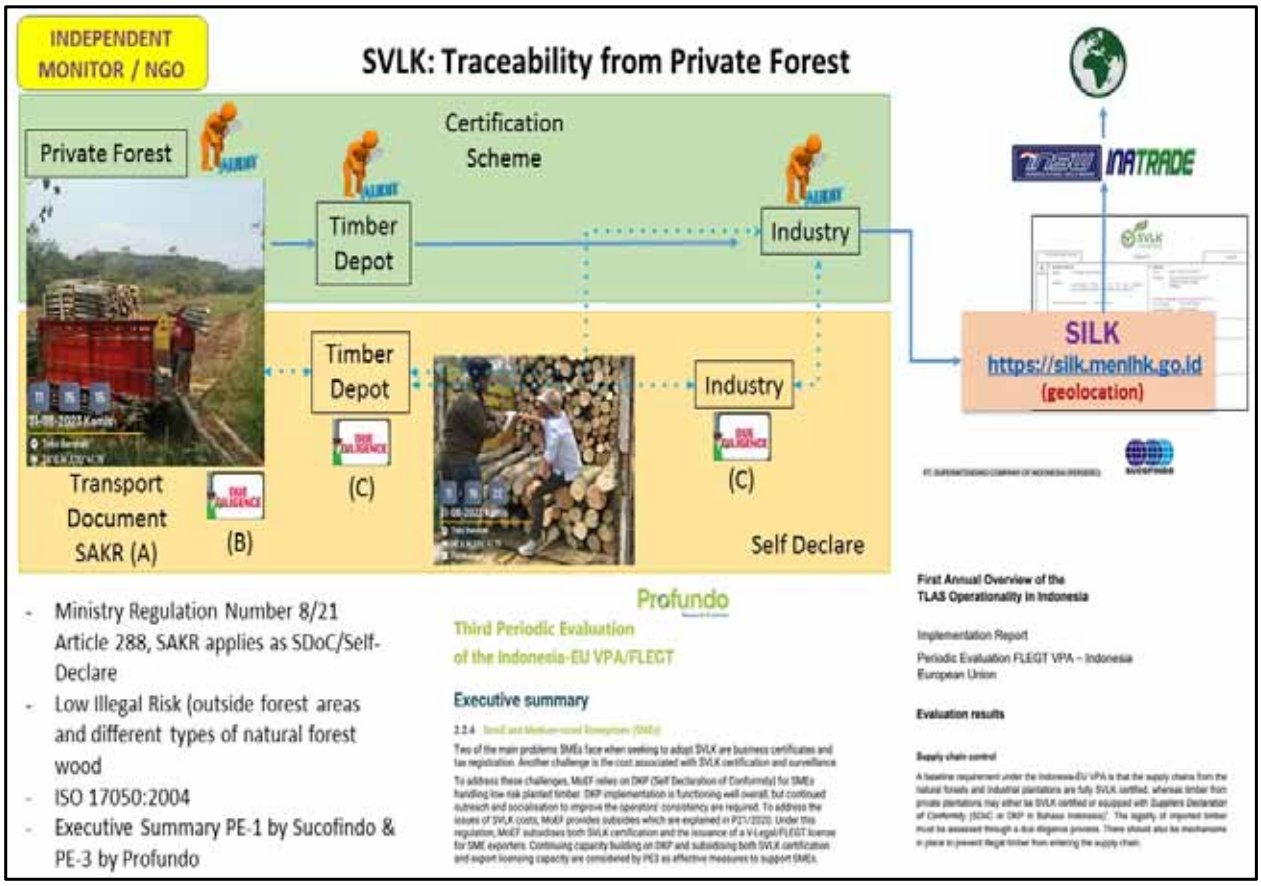
5 Key Actors of SVLK:

a. Government (MOEF) as regulator
b. National Accreditation Committee (KAN), as an internationally acknowledged accreditation body
c. Conformity Assessment Body/LPVI: 31 LPVI
d. Independent Monitor / NGO-CSO, to ensure the SVLK's credibility.
e. Private (management unit) as auditee

Business Process Verification of SVLK




INDEPENDENT MONITOR / NGO
SVLK: Traceability from State Forest
SFM Certificate
Legality Certificate
Concessioner
- Aspects: Legal, Production, Ecology, & Social
- Traceability (CoC)
- Geolocation Checking
- Labour Right
- Gender Mainstreaming
Log Pond
Log Yard
Transport Document (geolocation)
Log Yard
Transport Document (geolocation)
Primary Industry
Transport Document (geolocation)
Secondary Industry
Transport Note (geolocation)
INATRADE
SILK
https://silk.menlhk.go.id
(geolocation)
Domestic
Registration Auditee
Audit Plan Publication (max 7 days)
Audit process (document and field verification) (max 15 days)
Audit results decisions (max 30 days)
Issuance of certificates


INDEPENDENT MONITOR / NGO
SVLK: Traceability from Private Forest
Private Forest
Certification Scheme
Timber Depot
Industry
Timber Depot
Industry
Transport Document SAKR (A)
(B)
(C)
(C)
Self Declare
INATRADE
SILK
https://silk.menlhk.go.id
(geolocation)
- Ministry Regulation Number 8/21 Article 288, SAKR applies as SDoC/Self-Declare
- Low Illegal Risk (outside forest areas and different types of natural forest wood
- ISO 17050:2004
- Executive Summary PE-1 by Sucofindo & PE-3 by Profundo
Profundo
Third Periodic Evaluation of the Indonesia-EU VPA/FLEGT
Executive summary
First Annual Overview of the TLAS Operationality in Indonesia
Implementation Report
Periodic Evaluation FLEGT VPA – Indonesia
European Union
Evaluation results

Advantages from SVLK Implementation

- Reduce forest degradation and deforestation
- Improved market confidence*
- Unique experiences to customers*
- Assurance on proof of sustainability, legality and traceability for trade partners*
- Improve image on Indonesian timber products
- Better access to international markets*
- Improved forestry governance

*To sustain the system, however, will require the market to demonstrate that it values what SVLK is delivering

SUPPORTS OF SVLK TO PROMOTE TRADE OF LEGALLY HARVESTED TIMBER PRODUCTS

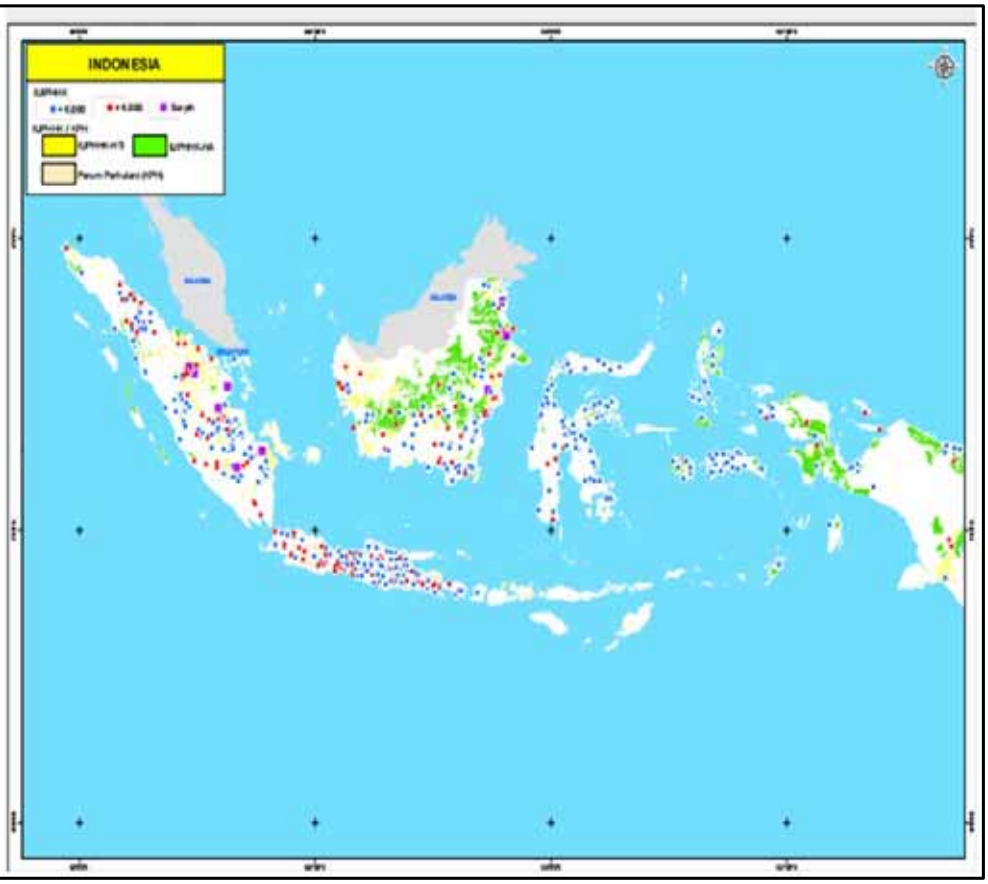
Since January 2013 to December 2022, SVLK Information System-'SILK' has issued more than 1.86 million Document of V-Legal (including FLEGT Licenses to EU and UK under the FLEGT VPA) to support exports of Indonesian timber products with a total value of USD 105.26 Billion.


Exports Value of Timber Products ($)
Exports by Year
6.19 M
6.93 M
9.84 M
9.27 M
10.93 M
12.13 M
11.62 M
11.05 M
13.56 M
8.19 M
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Product Category
169 KODE HS (6 DIGIT)
Source: Data Release | DITJEN PHL (menlhk.go.id)
Country
Continent
188 NEGARA
7 BENUA
CHINA 25.99%
UNITED STATES 11.93%
THE EUROPEAN UNION 9.78%
JAPAN 8.95%
INDIA 5.39%
ASIA 65.76%
NORTH AMERI.. 14.23%
EUROPEAN UNI.. 11.91%
AFRICA 4.16%
OCEANIA 3.08%
Value USD (..
Value USD (Mili..
Destination of Timber Products Exports
EKSPOR HASIL HUTAN
90,635,184
44,473
SVLK
INDONESIA


Thank You
Terima kasih
@DitjenPHL
@DitjenPHL
@Ditjen Pengelolaan Hutan Lestari
@Ditjen Pengelolaan Hutan Lestari

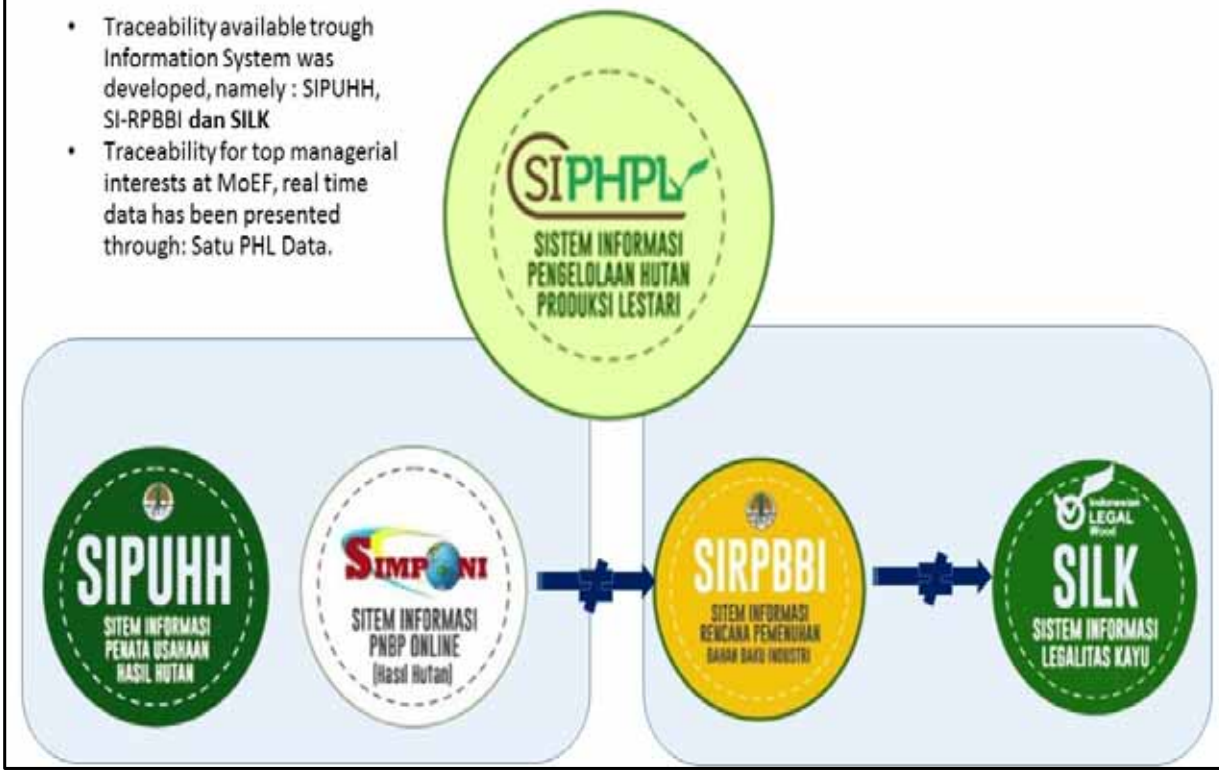
Appendix

Geolocation Timber Industry in Indonesia



Example of Traceability in SVLK (1)

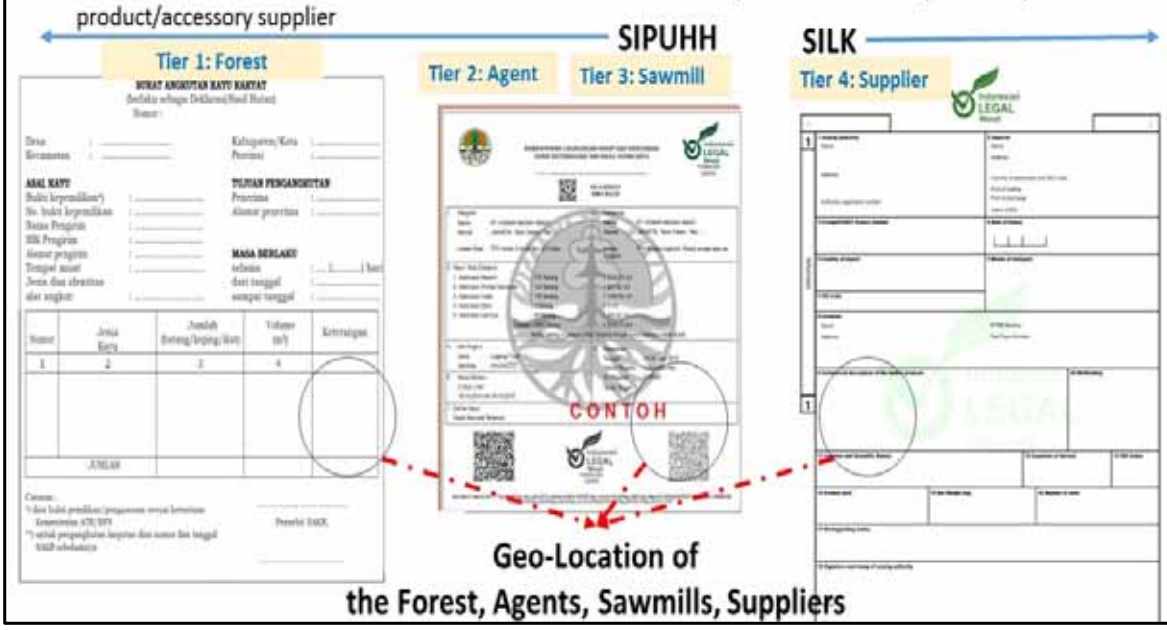
- Traceability available trough Information System was developed, namely : SIPUHH, SI-RPBBI **dan SILK**
- Traceability for top managerial interests at MoEF, real time data has been presented through: Satu PHL Data.



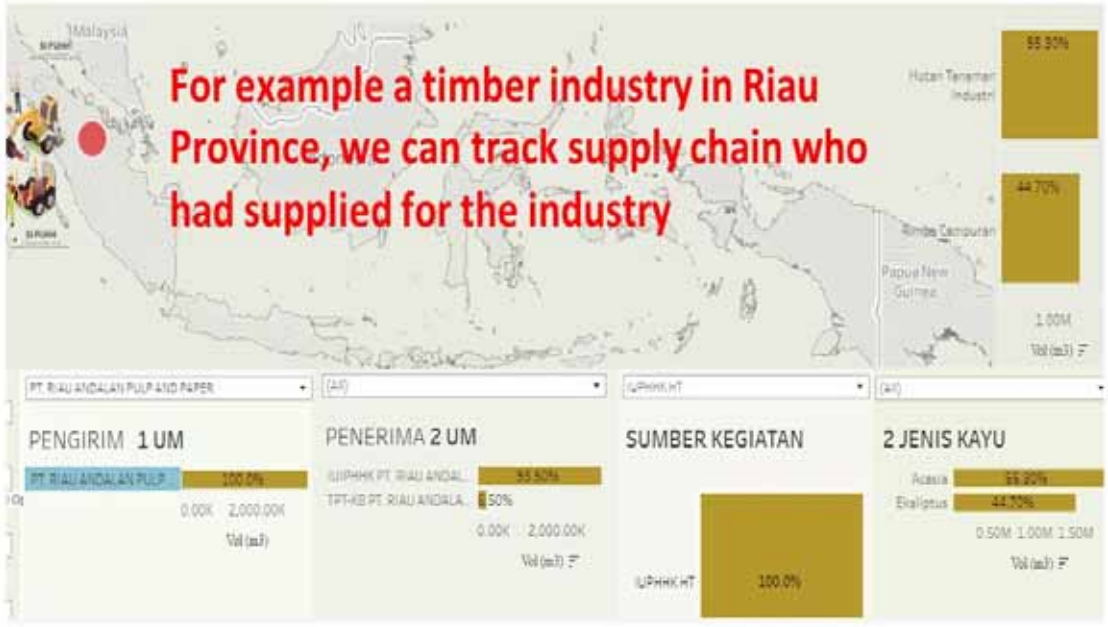
Example of Traceability in SVLK (2)

Traceability can be done trough documents at each timber delivery node.
We also on process in traceability documents covering the supply chain from the forest -> agents -> saw-mills -> product/accessory supplier

The Geolocation supply chain is designed to promote traceability in forest products.



Geo-Location of
the Forest, Agents, Sawmills, Suppliers



(A)

(B)

(C)


FORMAT SURAT ANGKUTAN KAYU RAKYAT

SURAT ANGKUTAN KAYU RAKYAT

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Important Role of Forest Certification for Sustainable Wood Production

Ms. Cindy Cheng,

Regional Director, FSC- Asia -Pacific FSC

IMPORTANT ROLE OF FOREST CERTIFICATION FOR SUSTAINABLE WOOD PRODUCTION

Cindy Cheng (Ms.)
Regional Director, FSC Asia Pacific
24th Oct 2023

FSC FORESTS FOR ALL FOREVER

FSC

A sustainable forestry solution to help protect healthy and resilient forests, for all, forever.


From a good idea to a global market tool
FSC FORESTS FOR ALL FOREVER
1,200+
international members in 92 countries
150+ million
hectares of forest land certified
54,000+
certificates that verify sustainable sourcing
1,600+
companies licenced to promote the FSC-labelled products.


Fundamentally balanced
FSC FORESTS FOR ALL FOREVER
33.3̄%
Social
33.3̄%
Environmental
33.3̄%
Economic
Local People and Society at Large
Biodiversity and Ecological Protection
Responsible and Economically Viable

FSC provides proven tools that help protect forests, verifying products from forest to consumer

FSC FORESTS FOR ALL FOREVER

Forest Level

Forest Management Certification

The world's most rigorous and credible standard for sustainable forestry.

Group Certification

Ecosystem Services Verification

FOR FOREST OPERATORS

Manufacturing

Chain of Custody (CoC) Certification

Securing a responsible and unbroken supply chain for forest material.

FOR COMPANIES

Retail

Promotional Licence

Leverage credible FSC trademarks for promotional purposes of FSC-certified products.

FOR NON-CERTIFIED RETAILERS AND BRANDS

FSC is already the most recognized and trusted forest certification system.

A small label making a big impact

When you purchase FSC-labelled products, you're helping forests, and the people that rely on them, thrive. Our standards:

Working with business to drive forest sustainability

Transforming Consumption
Amazon Climate Pledge Friendly

Helping consumers choose more sustainable forest products online

With over 60,000 FSC-certified products and growing, FSC is the exclusive forest certification system on Amazon's Climate Pledge Friendly platform.

The First FSC-certified Tyre
Pirelli + BMW

Working towards a future where the world's rubber supply is deforestation-free

FSC is the certification partner chosen to verify Pirelli's supply chain from forest to consumer.

Eco-packaging Innovations
Paper Bottle Company

Helping the packaging sector leverage reusable, responsibly sourced, and renewable materials

FSC is an Expert Advisor with PABOCO Paper Bottle Company's community, now working towards the recyclable and fully bio-based second-generation bottle.

9

Warak Kayu Library, Indonesia

This building employs passive climatic design and is built entirely from FSC-certified wood. The building is cooled down by means of cross ventilation, and solar heat is prevented from entering using shading elements.

ILVA

Building consumer awareness through increased visibility of FSC across channels

- Winner of the 2022 FSC Furniture Awards for the best use of FSC trademarks.
- ILVA's endeavour has been to make the FSC trademarks visible and understood by its consumers to increase awareness around sustainable furniture.
- ILVA has been an FSC Promotional Licence Holder since 2012.

Leading Players:

Championing responsible sourcing throughout the entire supply chain

140 billion
packs labelled in 2020

100%
FSC availability

McDonald's

By 2025, McDonald's committed to having 100% of packaging sourced from recycled or certified sources, with a preference for FSC materials.

The FSC label can be found on packaging around the world

McDonald's launched various consumer campaigns to promote their FSC-certified products and educate the consumers on the importance of sourcing products with a trusted certification.

Six meaningful ways to help protect the world's forests

Become FSC-certified and source FSC-labelled materials and goods

Create a forest policy to transform supply chain

Raise the profile of forest sustainability in consumer communications

Highlight FSC-certified products on e-commerce platforms

Become an FSC member

Check for the FSC 'check tree' label when shopping

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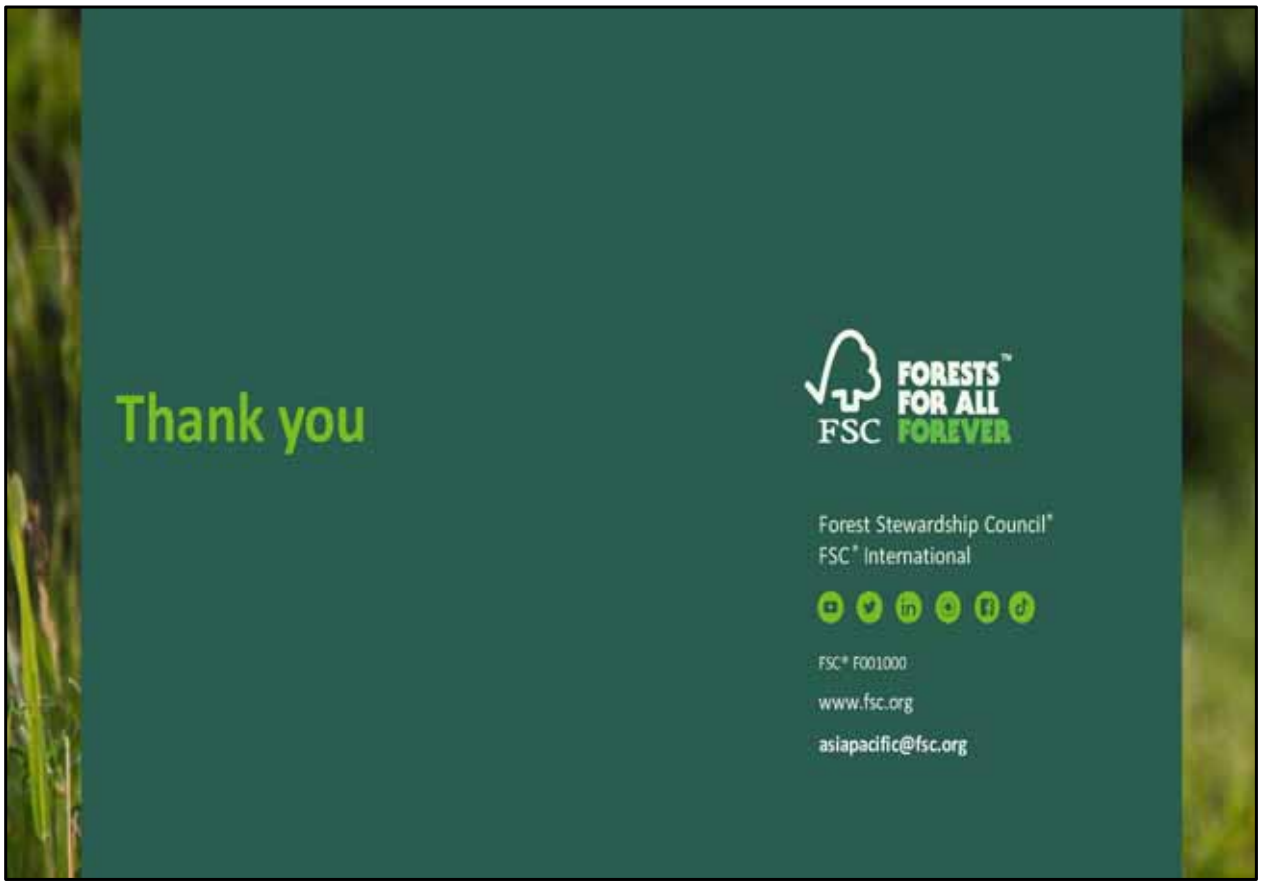
FSC FORESTS FOR ALL FOREVER


Thank you
FSC
FORESTS FOR ALL FOREVER
Forest Stewardship Council®
FSC® International
FSC® F001000
www.fsc.org
asiapacific@fsc.org

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

PEFC Certification:
Creating Value for Sustainable Forests

Ms. Siti Syaliza Mustapha,

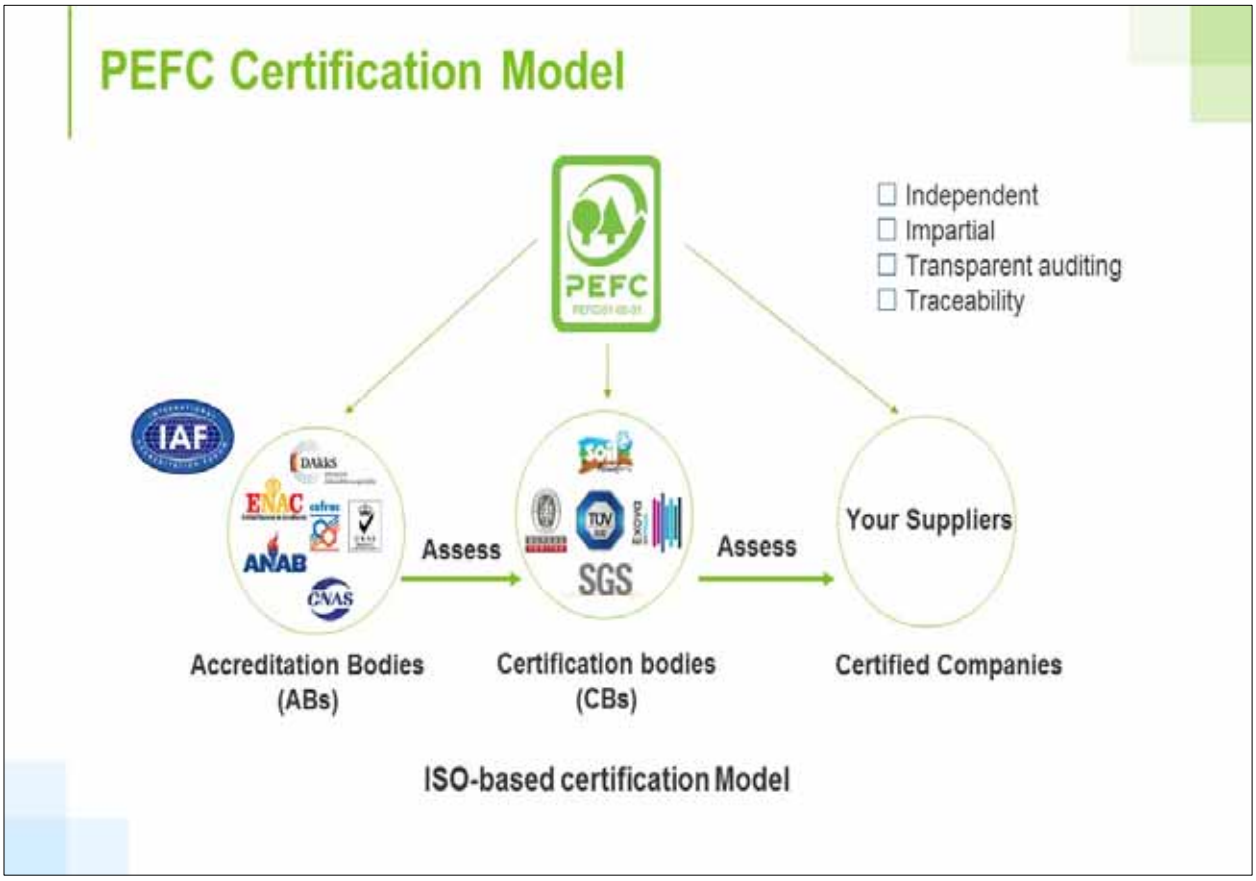
Deputy Secretary General/ COO, PEFC International


PEFC certification:
Creating value for sustainable forests
Siti Syaliza Mustapha
Deputy Secretary General/ COO
PEFC International
2023 AFoCO Annual Thematic Dialogue
"Sustainable Wood for Sustainable Future"
Regional Dialogue in Asia
24 October 2023
PEFC


Biodiversity
Communities
Water
Workers
Soil
Carbon mitigation
CO2


Sustainable forest management
promoted through third-party forest certification
From sustainably managed forests to end-products
Forests
Wood processing
Manufacturing
Wholesale
Retail
Consumer
Sustainable forest management certification
+
Chain of custody certification
PROVIDES
Healthy forests ecosystems (e.g., biodiversity, carbon)
Healthy workers (e.g., safety, training)
Healthy communities (e.g., indigenous people rights)
Healthy local economy (e.g., jobs, income)
PROVIDES
Assurance of origin from sustainably managed forests
Legal compliance
Independently audited traceability from forests to consumers
Covering requirements on health, safety and labour issues


PEFC
Programme for the Endorsement of Forest Certification
Global, not-for-profit, non-governmental organization
Alliance of national forest certification systems
Founded in 1999 in response to smallholders' requirements
Set international standards and endorse national forest certification systems


PEFC Certification Model
PEFC
Independent
Impartial
Transparent auditing
Traceability
IAF
DAkkS
ENAC
ANAB
CNAS
Assess
SGS
Assess
Your Suppliers
Accreditation Bodies (ABs)
Certification bodies (CBs)
Certified Companies
ISO-based certification Model


TAKING INTO CONSIDERATION LOCAL EXPERTISE AND GLOBAL COMPLIANCE
CARING FOR FORESTS LOCALLY AND GLOBALLY
PEFC
Consensus
Stakeholder engagement (Balanced rep.)
Transparency
Standard setting process
Continuous improvement
3. ENDORSEMENT BY PEFC
2. INTERNATIONAL COMPLIANCE
1. NATIONAL STANDARDS

Quality and robust requirements

Two core standards

140

192

complemented by four additional standards and several guidance documents

11

133

114

98

Numbers are the number of requirements in each standard

PEFC Sustainability Benchmark - Six Principles

1. Maintenance and appropriate enhancement of **forest resources** and their contribution to the global carbon cycle
2. Maintenance of forest **ecosystem health and vitality**
3. Maintenance and encouragement of **productive functions** of forests (wood and non-wood)
4. Maintenance, conservation and appropriate enhancement of **biological diversity** in forest ecosystems
5. Maintenance and appropriate enhancement of **protective functions** in forest management (notably soil and water)
6. Maintenance or appropriate enhancement of **socio-economic functions and conditions**

Source: PEFC ST 1003

PEFC's approach to traceability

Ensuring that any material entering the PEFC Chain of Custody is responsibly sourced, regardless of where it comes from

Materials included in a PEFC certified product can come from:

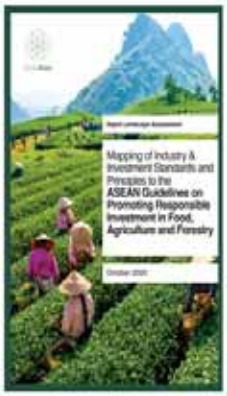
1. PEFC certified sustainably managed forests
2. Recycled sources
3. Wood from non-controversial sources through PEFC controlled sources

PEFC is regularly assessed by public and private organisations

Recent third-party assessment of PEFC demonstrate credibility and relevance

Full scores from TPAC - Dutch procurement in 2020 Assessment

Highest ranking against the ASEAN RAI: 95% due to regional approach, 2020 assessment



6. Programme for Endorsement of Forest Certification

95% Overall Match

Sources: TPAC 2020; ASEAN RAI 2020

4X

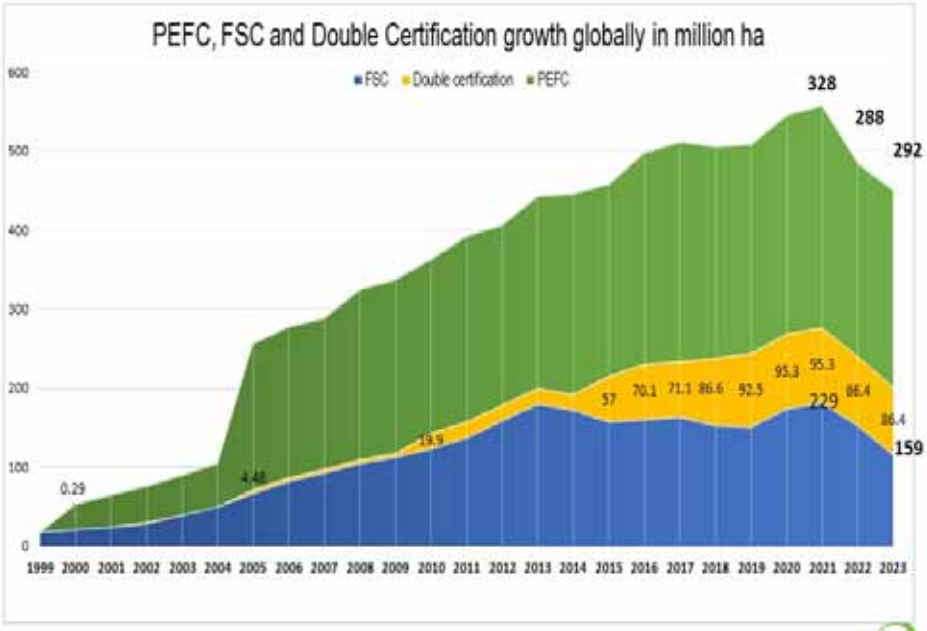
By 2050

THE WORLD BANK

Certification Statistics

11.4% of Global Forests are certified

18.7% of certified forests are double certified

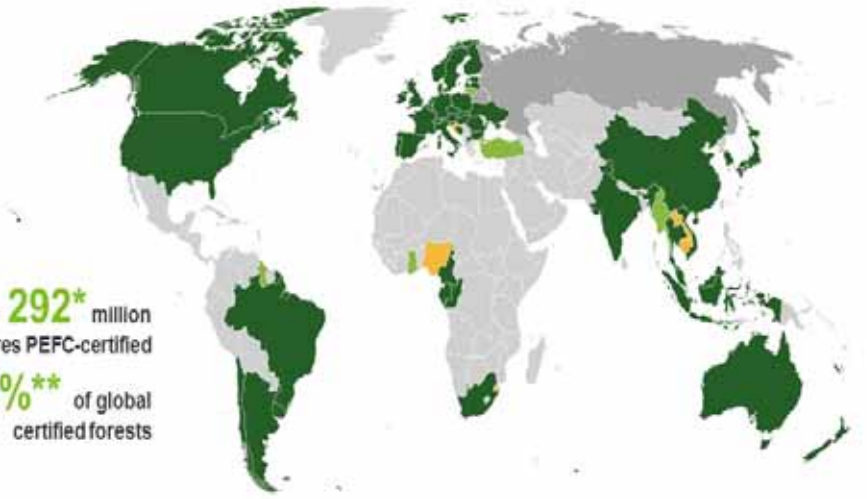


Source: PEFC data March 2023, FSC March 2023, double certification December 2022

PEFC

PEFC has the largest scale of certified raw material

High local & global availability



Over **292*** million hectares **PEFC-certified**

=80%** of global certified forests

48* Endorsed National systems

More than **22,000** PEFC-certified companies

in **70** countries

PEFC members with **endorsed systems** | PEFC members progressing **toward endorsement** | Countries **developing a system** & initiatives under development | Russia & Belarus

*Data March 2023- 292 million without Russia and Belarus. Data January 2022 - 322millions hectares. ** without counting double certified area twice in total

Promoting Sustainable Forest Management and Traceability across industries

PEFC IS HERE

Construction

Designing the Future with Sustainable Timber

Pulp, Paper & Packaging

Responsible Packaging

Textiles

Fashions change, Forests stay

Furniture

Forests are Home

Natural Rubber

Supporting Sustainable Rubber

In summary

- Part of the solution for sustaining forests, balancing environmental, social and economic sustainability dimensions
- Globally recognised and accepted processes applied by thousands of companies around the world
- Shared responsibility and accountability for traceability

Thank you for your attention.

Siti.mustapha@pefc.org

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Session D.

Sustainable Wood in the Context of Climate Change Mitigation/ Adaptation and Improved Economic Development

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Wood Utilization Model for Enhanced Carbon Stock

Dr. Myungkil KIM,

Director / Wood Industry Division, Forest Products and Industry Department, National Institute of Forest Science (NIFOS), Rep of Korea

National Institute of Forest Science
Republic of Korea

Suggestion of wood utilization model for inhanced carbon stock in Korea

Wood Industry Division
National Institute of Forest Science
Dr. Kim Myungkil

2023.10.24.

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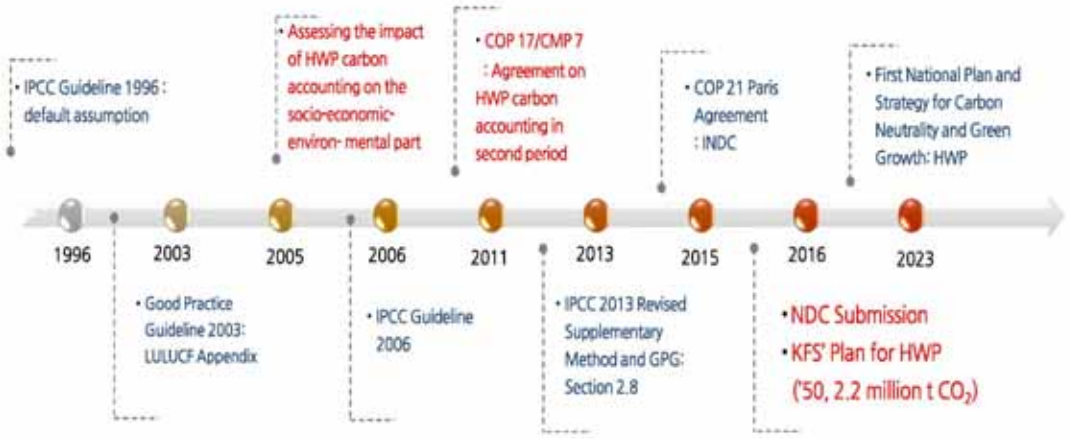
01 Wooden Building Examples

HWP trend of int'l discussions



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01 Wooden Building Examples

HWP trend of int'l discussions

(Source: UNFCCC NDC Registry, 2023.08.10)

Party	Forest	HWP	Approach
Australia	o	o	Stock-change approach consistent with the IPCC 2006 Guidelines
Austria	o	o	The Production Approach as defined in IPCC Guidelines
Brazil	o	o	The production approach, consistent with the 2006 IPCC Guidelines.
Canada	o	o	The IPCC 2006 Guidelines and using country-specific data.
Czechia	o	o	The Production Approach as defined in IPCC Guidelines
European Union	o	o	The Production Approach as defined in IPCC Guidelines
Finland	o	o	The Production Approach as defined in IPCC Guidelines
France	o	o	The Production Approach as defined in IPCC Guidelines
Germany	o	o	The Production Approach as defined in IPCC Guidelines
Japan	o	o	The production approach.
New Zealand	o	o	All LULUCF carbon pools
Republic of Korea	o	o	2006 IPCC Guidelines and IPCC 2013 KP Supplement
United States of America	o	o	The IPCC 2006 Guidelines to estimate emissions and removals from Harvested Wood Products

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01 Wooden Building Examples

HWP trend of int'l discussions

The effect of wooden construction:

- Using carbon-storing timber products can help mitigate climate change.
- FPINNOVATIONS reported that the carbon storage capacity of a single 100,000 ft² (approximately 9,290 m²) wooden building is equivalent to removing 1,400 cars from the road for a year.

source: canadawood.org

01 Wooden Building Examples

International policy trends in wooden construction

Japan	Legislation to promote the use of wood in buildings to contribute to achieving a carbon-neutral society.(2021)
Canada	GCWOOD Program, WOOD CHARTER Program(Quebec), WOOD FIRST ACT(BC)
USA	WOOD INNOVATION ACT
New Zealand	Wood First Policy and Action Plan, Building for climate change, The Forestry and Wood Processing ITP
Australia	Policies to encourage the use of wood.
France	Amendment of environmental laws (Article L228-4), and implementation of RE 2020 environmental regulations.
Sweden	Announcement of a policy to limit maximum allowable carbon emissions from the early stages of construction starting in 2027.
Netherland	Proposal of an eco-friendly wooden construction bill (mandatory use of wood in more than 20% of all buildings in Amsterdam from 2025).
Finland	Setting targets for wooden construction by 2025 and considering legislation to limit carbon emissions based on a full-process evaluation.

01 Wooden Building Examples

The world tallest, largest, first wooden buildings

Assent Tower(USA)- 25 floors

Metropole Parasol(Spain)- 18,000㎡

Schutat House(England)- '09

source: Choi, 2023.8.24

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01 Wooden Building Examples

Norwegian Wood Hotel & University Residences in British Columbia, Canada

source: 도시목조하포청 발표자료(재집용, 2023.8.24)

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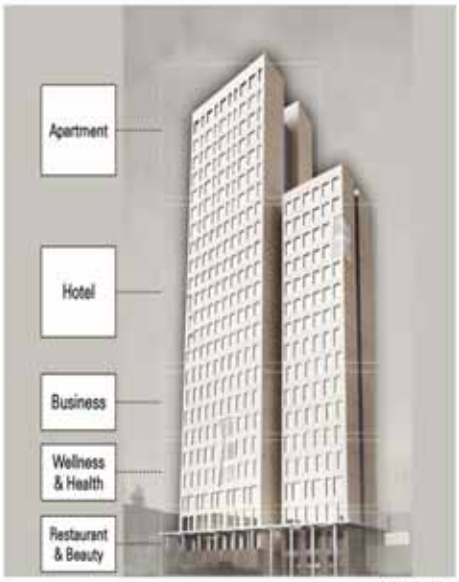
01 Wooden Building Examples

Austria HoHo Wien



source: Choi, 2023.8.24

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01 Wooden Building Examples

Olympic Stadium, Tokyo, Japan

With a 62-meter roof, utilizing Japanese cedar (by architect Kengo Kuma)
"Wood may change its color and material surface a little faster than concrete,
but I actually think that's the more interesting part.
Because it changes over time,
I believe it creates a more approachable architecture for people."

source: Choi, 2023.8.24

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01 Wooden Building Examples

12th F. PORT PLUS TOWER, Japan

source: You, 2021.8.24

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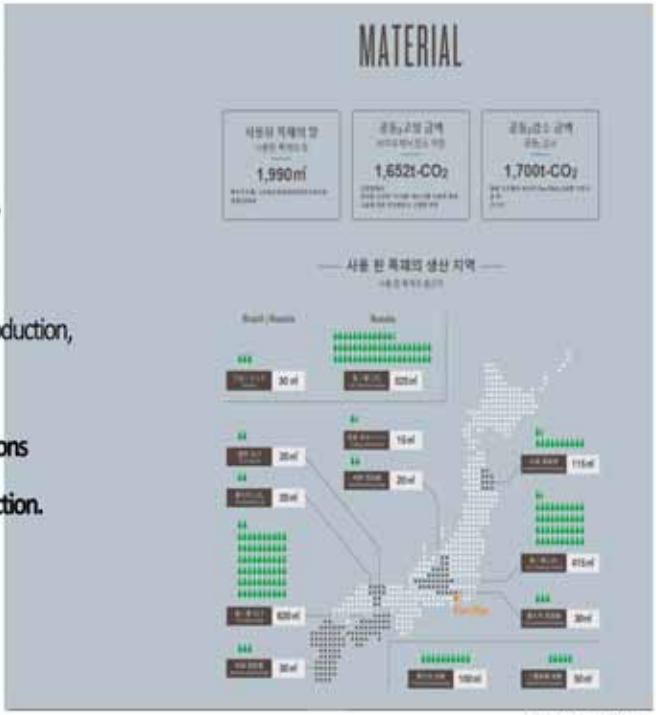
01 Wooden Building Examples

12th F. PORT PLUS TOWER, Japan

- Using approximately 1,990 m^3 of wood to stably fix about 1,652 tons of CO_2 over the long term.
- Throughout its entire lifecycle, from material production, construction, dismantling, to disposal, it achieves a reduction of approximately **1,700 tons (about 40%) of CO_2 compared to steel construction.**



source: You, 2021.8.24

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01 Wooden Building Examples

Forest Bioresources Dep., NIFoS / Suwon

Facility Overview:

Purpose: Office space for research and administrative functions.

Size: Basement 1 floor to Ground 4 floors, with a height of 17.14 meters.

Total Project Cost: 1,218.4 million KRW (South Korean Won).

Floor Area: 4,552.55 square meters.

Building Footprint: 1,395.55 square meters.

Completion Year: 2016.

Facility Features:

At the time, it was the largest wooden structure allowed under the building code (with a height limit of 18 meters).

The laboratories with heavy testing equipment are constructed using reinforced concrete.

The office spaces are built with a hybrid structure using Glued Laminated Timber (GLT) for structural elements.

source: NIFOS, 2016

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01 Wooden Building Examples

Forest Medicinal Resources Research Center, NIFoS / Youngju

Facility Overview

Purpose: Residential performance testing for medicinal resources research center, and a care center.

Size: Basement 1 floor to Ground 5 floors, with a height of 19.12 meters.

Total Project Cost: 341.2 million KRW (South Korean Won).

Floor Area: 1,233.08 square meters.

Building Footprint: 424.58 square meters.

Completion Year: 2018.

Facility Features

- It was the first in South Korea to meet the **2-hour fire resistance requirement for wooden structures of 5 floors or more,** as per the building code.
- It features the use of domestically produced deciduous pine **Cross-Laminated Timber (CLT) for floors and walls,** serving as a platform for high-rise wooden construction.

source: NIFOS, 2018

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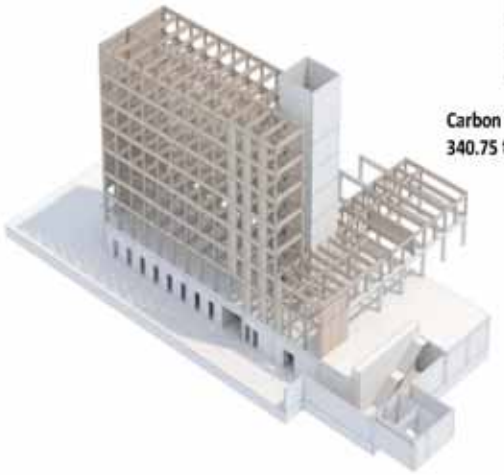
01 Wooden Building Examples

Korea Forest Welfare Institute, Daejeon

구 분	품명	본관동	교육동	합 계	비 고
중목구조	GLT	535m³	313m³	848m³	국산
	CLT	62m³	57m³	119m³	낙엽송
정글목구조		235m³	161m3	396m³	외산 SPF
합 계		832m³	531m³	1,363m³	-



Carbon Stock
340.75 t CO_2

TYPE 1 : OFFICE_본관동

TYPE 2 : CULTURE, EDUCATION_교육동

source: Choi, 2023.8.24

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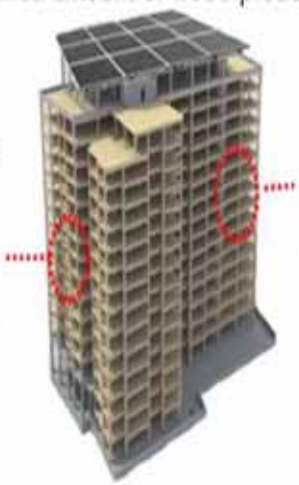
02 Wood Utilization Model

Asia's Highest Height(50M+) WOOD+ TOWER

- **(3N Building) N**ew Technology, **N**atural Material, **N**et Zero!
- The required amount of wood products for the "Wood+ Tower": 3,338 m³ (0.327 m³ per square meter).

<Interior & exterior wood>

CLT 420㎥
Lumber 50㎥
Flooring wood 60㎥



<Engineering wood>

CLT 1,890㎥
Laminated Wood 560㎥
Lumber 163㎥
SPB 195㎥

In alignment with the policy objectives of wood production (800,000,000 m³ by 2050), excluding the 430,000,000 m³ of wood supply in 2022, there is a focus on raising self-sufficiency rates, carbon storage, and expanding the wood industry

- Self-sufficiency rate: Increased from 15.0% to 24.7%.
- Carbon storage: 311,000 tons of CO2.
- Industry scale: Increased from 46.5 trillion KRW to 66.7 trillion KRW.

source: NIFOS, 2023

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02 Wood Utilization Model

HWP Analysis of Carbon Accumulation Change for CASCADING USE

category	Item
approaching method	Flux approaching method, Stock approaching method
Tier level	Tier1, Tier2, Tier3
Tier element	Activity data(production data, carbon coefficient), half life
Tier value	Estimation of tier value, calculation of potentiality
Accuracy	uncertainty
Verification	QA/QC

source: Jang et al. sustainability, 2021

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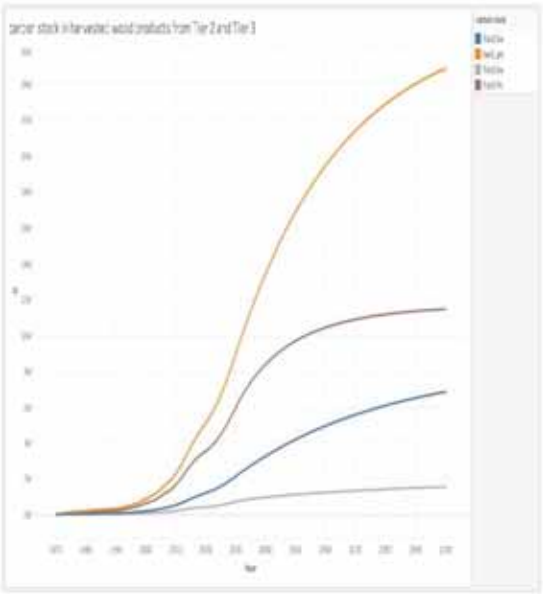
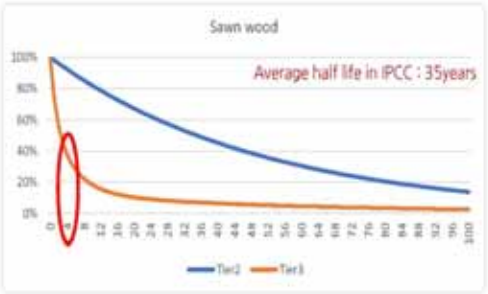
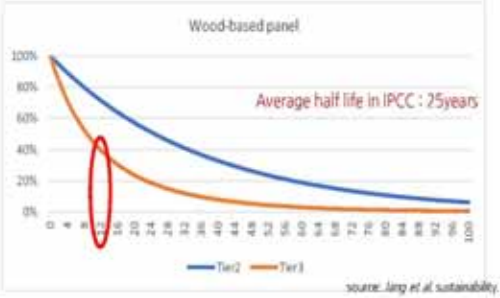
02 Wood Utilization Model

HWP Analysis of Carbon Accumulation Change for CASCADING USE







source: Jang et al. sustainability, 2021

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02 Wood Utilization Model

A self-developed Korean Building Life Cycle Assessment (LCA) evaluation program based on Excel

- Program Patent Application (Application Number 10-2023-0084640)

S-LCA (Simplified-LCA) Applied Statistics

Raw Material Extraction and Manufacturin	Material Transport	Construction	Use	Maintenance	Demolition	Disposal of Construction Materials	Disposal
• Environmental Labeling • National LCI DB • Ecoinvent DB		• 2002 Construction Industry Standard Items		• Enforcement Regulations of the Apartment Management Act		• Environmental Labeling Guidelines • National Institute of Oceanographic Research	
	• Environmental Labeling Guidelines • National Institute of Oceanographic Research	• 2022 Household Energy Panel Survey			• Considering Only Concrete and Steel Structures		*Update • 2020 National Waste Generation and Disposal Status

*Supplementation of domestic data

A Korean Building LCA Program Using Domestic Statistical Data

source: NIFOS, 2023

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02 Wood Utilization Model

A self-developed Korean Building Life Cycle Assessment (LCA) evaluation program based on Excel

Houses based on standard designs for wooden homes

- Across all stages, from raw material production to disposal, six types of wooden houses emit 17.6 to 52.7 tons less CO_2 compared to conventional houses.
- Furthermore, the carbon storage resulting from wood utilization is 17 tons of CO_2 for a 63m² house and 34 tons of CO_2 for a 136m² house.
- A 63m² wooden house can reduce a total of 34.6 tons of CO_2, offsetting the annual CO_2 emissions of 18 cars for a year.

(Calculated based on the annual carbon dioxide emissions (1.92 tons CO_2) from a car driving 15,000 km a year per car).

source: NIFOS, 2023

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02 Wood Utilization Model

A self-developed Korean Building Life Cycle Assessment (LCA) evaluation program based on Excel

Comparison of Carbon Emissions through Structural Transformation of Public Buildings

△ Building where Forest Products & Industry Dep. is located
(Gross floor area: above ground level 4768.81m²)

STEEL-CONCRETE		(transformation)	WOODEN STRUCTURE			
STEEL (Ton)	CONCRETE (㎥)		STEEL (Ton)	CONCRETE (㎥)	Eng. WOOD (㎥)	Interior WOOD (㎡)
44.21	3661.91		19.70	2393.06	406.03	517.02

(Conventional) Concrete structure

1,977.2 tCO_2
(0.415 tCO_2/m^2)

(Structural change) Wooden structure

1,546.4 tCO_2
(0.324 tCO_2/m^2)

430.8ton of CO_2 reduction

+ 847.5 ton of CO_2 storage

source: NIFOS, 2023

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02 Wood Utilization Model

Asia's Highest Height(50M+) WOOD+ TOWER What is the level of technology?

- **(Design) Complete the wooden structure design standards and wooden construction design manual.**
  * Promote standard design drawings, white papers, public wooden construction excellent casebooks, and wooden construction exhibition works.
- **(Materials) Standardize the quality criteria and long-term allowable stress of domestic engineered wood materials.**
  * Structural laminated timber, Cross-Laminated Timber (CLT), structural particleboard, wood fiber insulation material, and CLT connectors.
- **(Performance) Meet the required standards for fire resistance, earthquake resistance, energy efficiency, and durability of buildings.**
- **(Construction) Improve quality and cost savings by minimizing on-site work through industrialization.**
  * Utilize Building Information Modeling (BIM) techniques and modular construction methods (OSC) for construction quality management.

<laminated timber (L), CLT(R)> <timber connector> <Fire Resistance Test> <shear wall test> <wall insulation performance> <KS quality standards>

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02 Wood Utilization Model

Asia's Highest Height(50M+) WOOD+ TOWER What is the level of technology?

(Korean Industrial Standards) Establish KS standards and certification systems for the application of new technologies.

- (NIFoS) KS establishment: Structural Particleboard (December '23), CLT Connectors (September '24)
- (FOWI) Certification criteria: Wood Fiber Insulation Material (December '23), CLT (December '23), Structural Particleboard (June '24)

(Building Structure Standards) Revise building structure standards to incorporate new technologies

- (NIFoS ·AIK) CLT, Structural Particleboard, CLT Connectors (June '25) * Revised every 3 years

(Fire Resistance Certification) Obtain 3-hour fire resistance standards and fire-retardant/non-combustible certifications

- (NIFoS ·KICT) Fire resistance standards for structural laminated timber (3 hours) and CLT (2 and 3 hours) fires resistance standards notification
- (NIFoS ·Industry sector) Link building fire structure regulations with certifications for fire-retardant/non-combustible wood-based interior materials

source: NIFOS, 2023

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02 Wood Utilization Model

Asia's Highest Height(50M+) WOOD+ TOWER What is industrial competitiveness?

(Design) Expand specialized infrastructure for the design and structural planning of high-rise wooden structures

- (KFS) Utilize the design opportunities for wood-friendly cities and practical projects for wooden construction
- (NIFoS) Foster skilled wooden structure designers through design and structural planning competitions

(Production) Expand and scale up domestic building component manufacturers

- (KFS) Activate the operation of wooden industry clusters and scale up production facilities
- (FOWI) Encourage a shift in the business direction of existing wooden industries and attract new large-scale investments

  * (CLT) From 0 companies to 6 companies, (Structural Laminated Timber) from 5 companies to 8 companies, (Structural Particleboard) from 1 company to 3 companies (based on certified companies)

(Construction) Train comprehensive construction companies with accumulated wooden construction expertise

- (KFS) Accumulate technical information through the operation of advisory groups for wooden construction services
- (NIFoS·Industry sector) Promote information exchange through industry collaboration, construction quality certification systems, and on-site meetings

* Promote certifications like the "Korean Wooden Construction Association 5-Star Certification

source: NIFOS, 2023

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Adding wood to spaces!

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2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Factors Influencing Sustainable Wood Industry (prerecorded video presentation)

Prof. Francisco X. Aguilar,

Ph. D., Professor, Department of Forest Economics, Swedish University of Agricultural Sciences

Sustainable wood in the context of climate change mitigation/adaptation & improved economic development

Francisco X Aguilar
Professor, Department of Forest Economics
Swedish University of Agricultural Sciences

2023 AFoCO Annual Thematic Dialogue: Sustainable Wood for a Sustainable Future, Regional Dialogue in Asia

Outline

1. Climate change adaptation and mitigation in the forest sector
2. **Sustainable wood**: *Instrument* to enhance socio-ecological resilience to climate change
   a) Adjusting legal frameworks
   b) Capability building
   c) Integrated value-added products
3. Final remarks

SCIENCE AND EDUCATION FOR SUSTAINABLE LIFE

Climate change adaptation and mitigation in the forest sector

- Higher temperatures, disrupted intensity in weather patterns (rainy, dry seasons)
- Incidence on extreme weather (wildfire, storms), insect and disease outbreaks
- Effect on ecosystem services: wood supply and quality
- Impacts on forest ecological and socio-economic systems

Sustainable wood:
Instrument to enhance socio-ecological resilience to climate change

Objectives

- Strengthen ecological functions
- Advance human and social capital
- Economic benefits with inclusive distribution

Sustainable wood:
Instrument to enhance socio-ecological resilience to climate change

Interventions

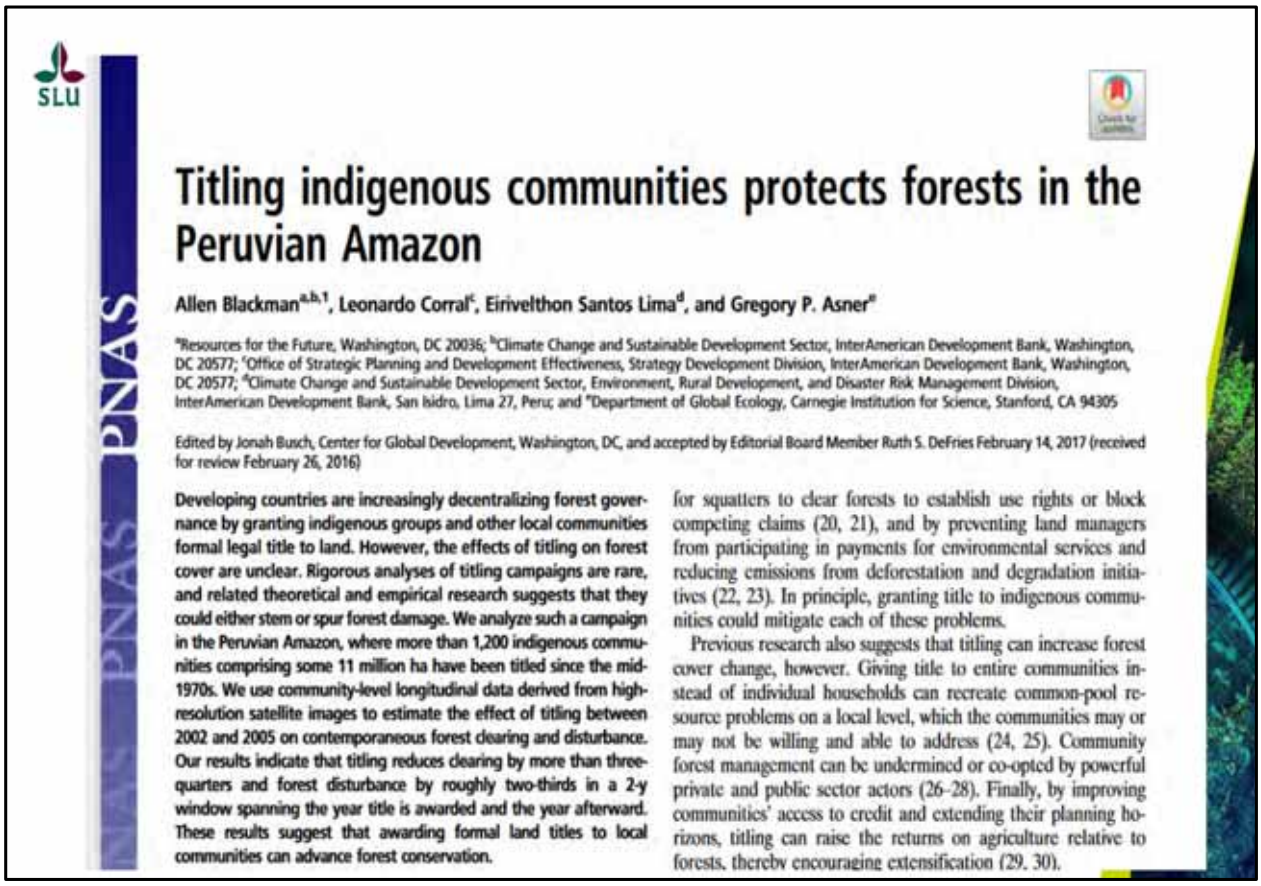
- Adjusting legal frameworks
- Capability building
- Integrated value-added products

Objectives

- Strengthen ecological functions
- Advance human and social capital
- Benefits with inclusive distribution

Adjusting legal frameworks

- Concession, co-management projects
- Rights to use forests for consumption and profit from wood harvesting
- Legal responsibiliy to protect and enforce sound management



Titling indigenous communities protects forests in the Peruvian Amazon

Allen Blackman[a,b,1], Leonardo Corral[c], Eirivelthon Santos Lima[d], and Gregory P. Asner[e]

[a]Resources for the Future, Washington, DC 20036; [b]Climate Change and Sustainable Development Sector, InterAmerican Development Bank, Washington, DC 20577; [c]Office of Strategic Planning and Development Effectiveness, Strategy Development Division, InterAmerican Development Bank, Washington, DC 20577; [d]Climate Change and Sustainable Development Sector, Environment, Rural Development, and Disaster Risk Management Division, InterAmerican Development Bank, San Isidro, Lima 27, Peru; and [e]Department of Global Ecology, Carnegie Institution for Science, Stanford, CA 94305

Edited by Jonah Busch, Center for Global Development, Washington, DC, and accepted by Editorial Board Member Ruth S. DeFries February 14, 2017 (received for review February 26, 2016)

Developing countries are increasingly decentralizing forest governance by granting indigenous groups and other local communities formal legal title to land. However, the effects of titling on forest cover are unclear. Rigorous analyses of titling campaigns are rare, and related theoretical and empirical research suggests that they could either stem or spur forest damage. We analyze such a campaign in the Peruvian Amazon, where more than 1,200 indigenous communities comprising some 11 million ha have been titled since the mid-1970s. We use community-level longitudinal data derived from high-resolution satellite images to estimate the effect of titling between 2002 and 2005 on contemporaneous forest clearing and disturbance. Our results indicate that titling reduces clearing by more than three-quarters and forest disturbance by roughly two-thirds in a 2-y window spanning the year title is awarded and the year afterward. These results suggest that awarding formal land titles to local communities can advance forest conservation.

for squatters to clear forests to establish use rights or block competing claims (20, 21), and by preventing land managers from participating in payments for environmental services and reducing emissions from deforestation and degradation initiatives (22, 23). In principle, granting title to indigenous communities could mitigate each of these problems.

Previous research also suggests that titling can increase forest cover change, however. Giving title to entire communities instead of individual households can recreate common-pool resource problems on a local level, which the communities may or may not be willing and able to address (24, 25). Community forest management can be undermined or co-opted by powerful private and public sector actors (26–28). Finally, by improving communities' access to credit and extending their planning horizons, titling can raise the returns on agriculture relative to forests, thereby encouraging extensification (29, 30).

Contents lists available at ScienceDirect

Land Use Policy

journal homepage: www.elsevier.com/locate/landusepol

Design of tropical forest conservation contracts considering risk of deforestation

Phillip M. Mohebalian*, Francisco X. Aguilar

The School of Natural Resources, University of Missouri, Columbia, MO, United States

ARTICLE INFO

Keywords:
Forest conservation payments
Socio bosque program
Discrete choice experiment
Deforestation
Forest degradation
Risk

ABSTRACT

Payments for Forest Conservation (PFC) programs financially compensate forest owners to maintain and increase the provision of ecosystem services. Nonetheless, their effectiveness and additionality in preventing deforestation and degradation remain contested. The design of PFC contracts can influence landowner participation and in-turn a program's prospects for additionality. We examined preferences for select PFC contractual attributes among over 200 private forest owners in Ecuador's Amazon basin using a discrete choice experiment. Forest owners at high-risk of deforestation, as compared to others of lower risk, were almost eight-times more likely to select contracts that allowed timber harvest under a management plan, about three-times more likely to select contracts managed by local municipalities or international NGOs, and showed stronger preferences for long-term contracts. To increase enrollment of forest lands at higher risk of deforestation and degradation PFC contracts might need to reconsider the benefits of increasing financial incentives, pursue administration through local municipalities or international NGOs, allow sustainable timber harvesting, and seek permanent agreements.

Capability building

- Capacity to manage forests and harvest wood
- Ability to engage in a process to add value to wood
  - Capital investments
  - Market-access
  - Grey infrastructure

Adding-value through sustainable management

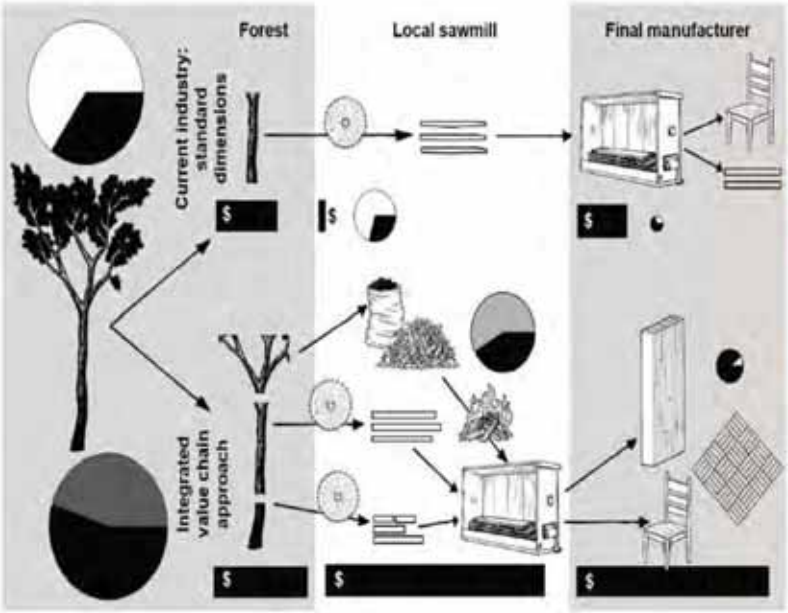


Diagram: Rosie Goodman
Photo: Klas Bengtsson

Processes, wood volume recovery (pie charts), and operating margins (bars) at each stage in the value chain in two different systems: the current timber industry based on standard dimensions (top) and the integrated approach based on product customization (bottom). In latter case, we estimate values for three wood product types—instrument components, glued and cross-laminated timber (glulam and CLT), and furniture blanks and parquet—and charcoal and biofuel as byproducts

Integrated value-added

- Integrate uses of products of different value-added levels
- Meeting household, local, and market-level demands

Benefits with inclusive distribution

- Youth engagement in economic opportunities
- Entrepreneurship and gender empowerment

Socio-ecological resiliency to climate change

Selected references

- *Co-benefits of forest carbon projects in Southeast Asia* https://doi.org/10.1038/s41893-022-00849-0
- *Design of tropical forest conservation contracts considering risk of deforestation* https://doi.org/10.1016/j.landusepol.2017.11.008
- *Payments for environmental services supported social capital while increasing land management* https://doi.org/10.1073/pnas.172087311
- *Titling indigenous communities protects forests...* https://doi.org/10.1073/pnas.1720873115

Thank you

Francisco X Aguilar

Professor, Department of Forest Economics, SLU, Umeå

University Fellow, Resources for the Future, Washington DC

E-mail: francisco.aguilar@slu.se

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Increasing Value Addition in Central Africa "Practices From the Region to Promote and Stimulate for Legal and Sustainable Wood, Add Value/Create Jobs and Mobilize Finance and Responsible Investments"

Mr. Benoit Jobbé-Duval,
ATIBT

2023 AFoCO Annual Thematic DialogueSustainable Wood for a Sustainable Future Regional Dialogue in Asia

Seoul, Republic of Korea
24 October 2023

Increasing the added value of the timber sector in Central Africa

ATIBT

Overview of the current regional context

a. **Log exports from Congo and Cameroon (and more generally from the CEMAC zone) are inevitably coming to a halt.**
b. **Accompanying measures essential if the sector is to be efficient when it comes to processing wood**
c. Possibility of trading logs between countries in the sub-region
d. The desire for greater added value and employment in the timber industry
e. The case of the Nkok SEZ
f. The desire to formalise the domestic timber market
g. States' desire to intensify timber exploitation
h. Strong interest in timber plantations in certain countries such as Cameroon.

Issues concerning sustainable and legal timber in the region

a. Increase in certified areas, from 5.5M in 2020 to 9M expected in 2025

b. Unfortunately, illegal timber production is still significant

c. A domestic market still supplied by the informal sector

d. Numerous challenges

i. The fight against illegal timber

ii. Renewal of management plans

iii. New CITES listings

iv. The need to turn more than ever to LKTS

v. Implementation of the EU RD in Europe

Regional initiatives and activities, including ATIBT activities

a. Vocational training actions

b. Actions to promote the domestic market for legal timber

c. Promotion of certification

d. Structuring the private sector

e. Support for the EUDR

f. Supporting countries in setting up Cites ACNPs

g. Setting up forest plantation projects

Possible exchanges with other regions.

a. **Above all, there is a need for greater exchange between countries in the sub-region.**
b. **Exchange of experience with Malaysia on wood processing, gluing and finished products.**
c. Exchanges of experience with Brazil on issues relating to the multiplication of plant material (wide diversity of species, therefore germination techniques, etc.).
d. Transfer of equipment technology.
e. Investments in the Congo Basin.

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Session E.

Mobilizing investment and finance in support of restoration, sustainable production and processing

2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

Lessons Learned from GCF Projects on SFM and Ways Forward (How to Best Link Sustainable Wood Use to GCF Funding Opportunities)

Mr. Ben Vickers, Land Use,
Forests and Ecosystems Senior Specialist, GCF

Forestry, Land Use and Ecosystem Portfolio of GCF

Lessons learned from investments in SFM for links to sustainable wood production

Ben Vickers

bvickers@gcfund.org

2023 AFoCO Annual Thematic Dialogue on
"Sustainable Wood for Sustainable Future"
24 October 2023, Seoul

01

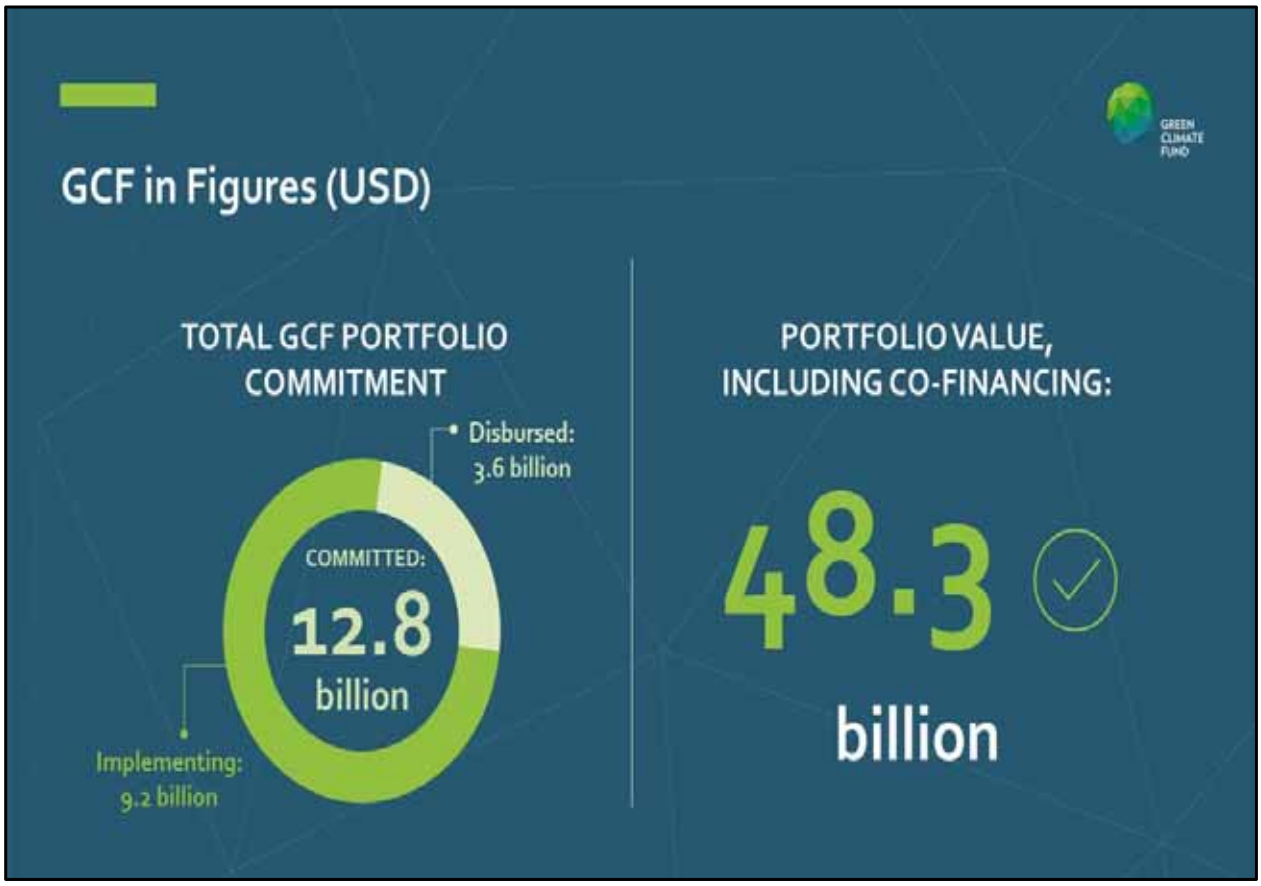
Set up by UNFCCC and serving the Paris Agreement

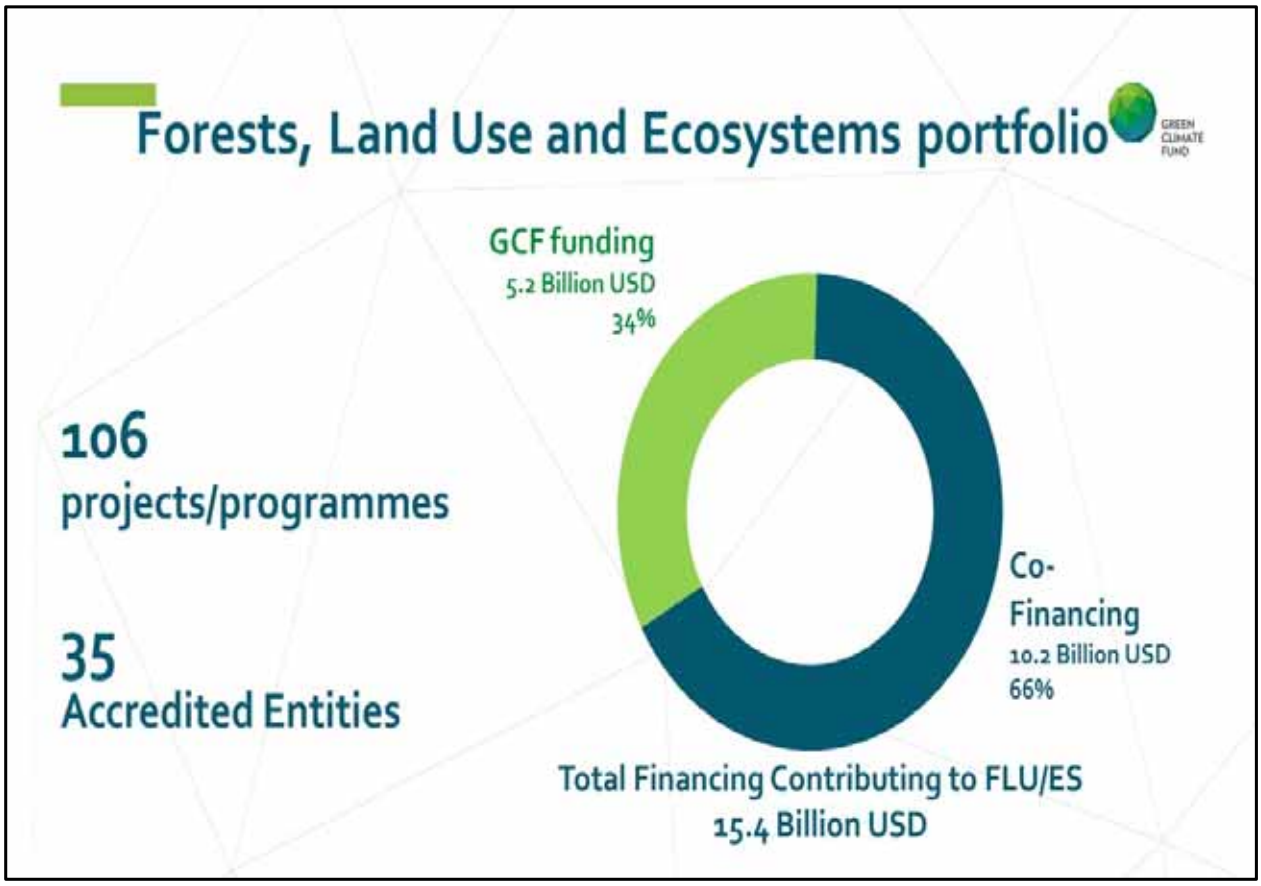
02

Supporting developing countries to transition to low-emission, climate-resilient societies

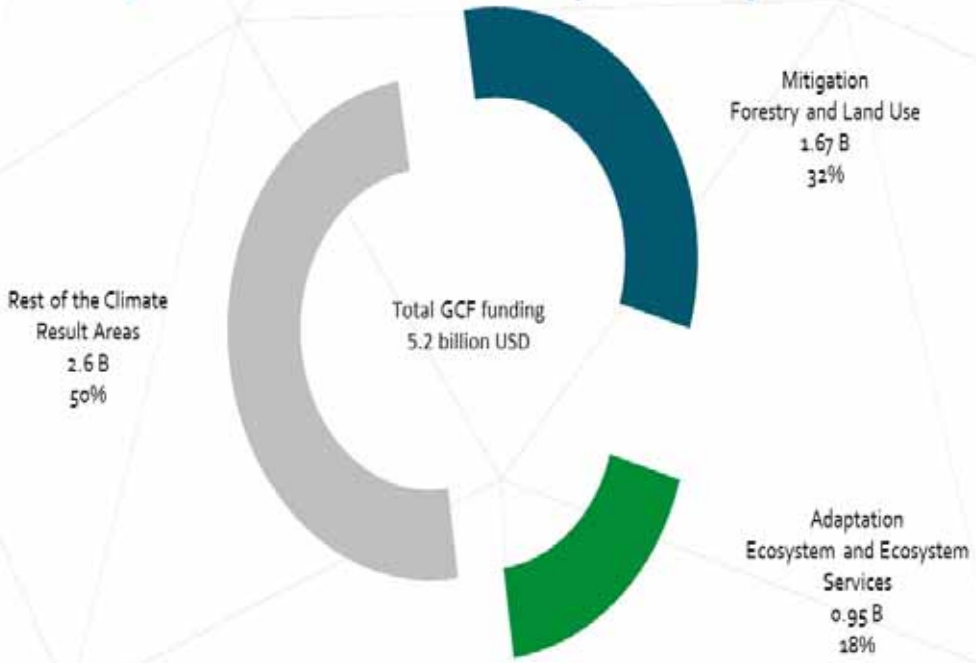
03

Serving as a hub of the climate finance landscape

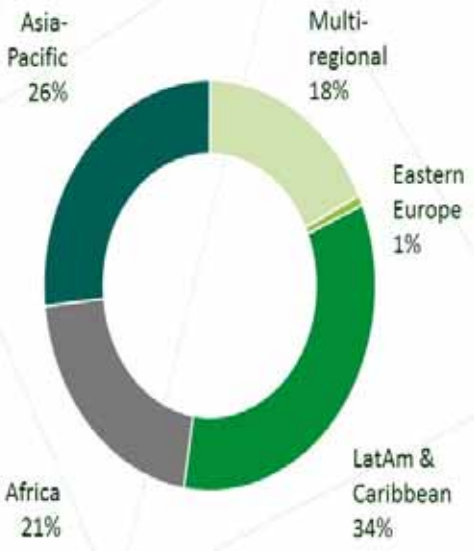

GCF in Figures (USD)
GREEN CLIMATE FUND
TOTAL GCF PORTFOLIO COMMITMENT
Disbursed: 3.6 billion
COMMITTED: 12.8 billion
Implementing: 9.2 billion
PORTFOLIO VALUE, INCLUDING CO-FINANCING:
48.3
billion


Forests, Land Use and Ecosystems portfolio
GREEN CLIMATE FUND
GCF funding
5.2 Billion USD
34%
106
projects/programmes
35
Accredited Entities
Co-Financing
10.2 Billion USD
66%
Total Financing Contributing to FLU/ES
15.4 Billion USD

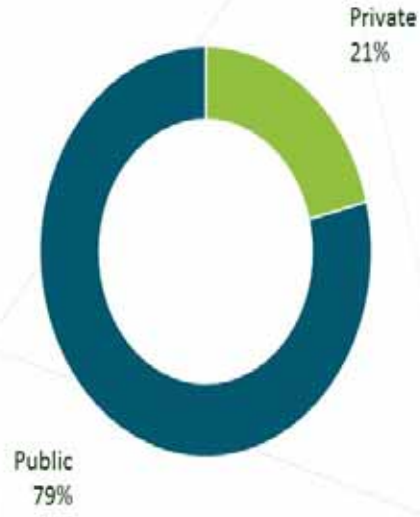
Forests, Land Use and Ecosystems portfolio



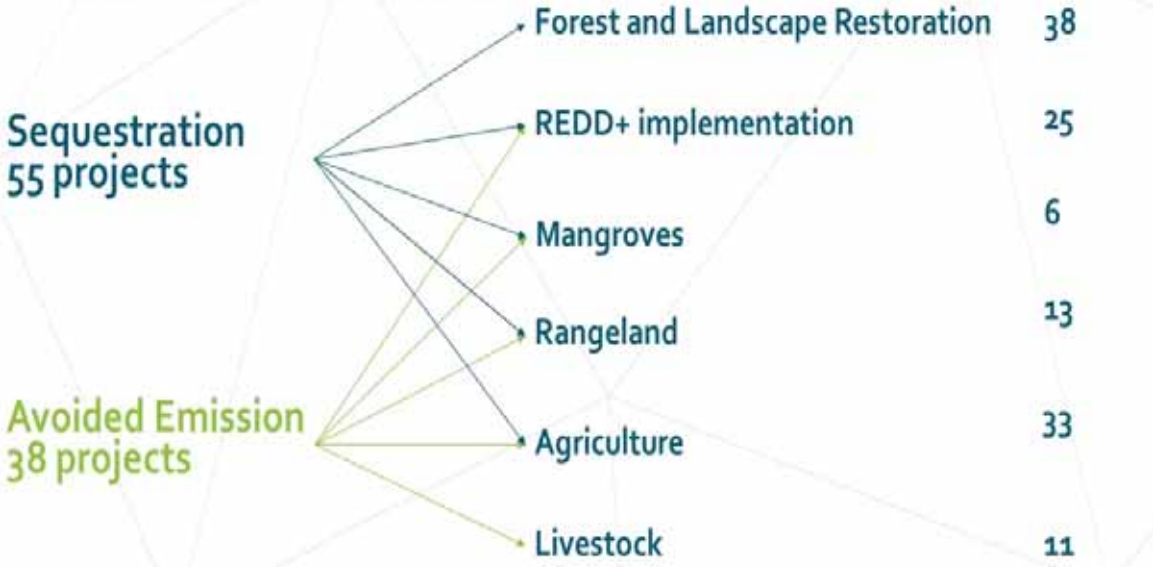
Regional breakdown



Private/Public sector



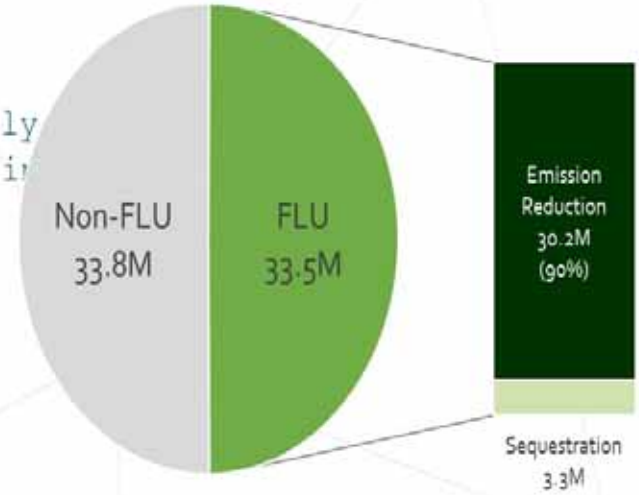
Mitigation Impacts from GCF Forests and Land Use portfolio: Categories of Investment



Mitigation Impact Reported (tCO_2eq)

67.2 $MtCO_2e$ GHG emission reductions reported globally by 2022, from 35 projects in all sectors

13 projects have reported mitigation impacts within the FLU sector



Opportunities in Climate Finance for Sustainable Wood Value Chains

- Well-designed SFM initiatives deliver both mitigation and adaptation impacts, in the context of climate change
- National climate change strategies or policies (NDCs, REDD+ Strategies, NAPAs) identify sustainable production of timber and forest products, including certification standards and systems (Indonesia, Viet Nam)
- GHG mitigation impact estimates of internationally-traded HWPs remains a challenge; double counting in producer/consumer countries; developing consensus including tagging, tracking (World Forest ID)
- Demand side policy: EUDR, US, UK, other markets. Reliability, support for national systems, standards and capacity
- Consumer attitudes to wood and paper products – distinguish between planted and natural forests as sources

Opportunities in Climate Finance for Sustainable Wood Value Chains

- Wood products as substitutes for non-renewable, high-carbon-footprint materials in the construction sector. Growing demand for housing through population growth, rural-urban migration
- Perception of wood as a lower quality construction material may require long-term cultural change – financial mechanisms necessary to incentivize behavioural change in the short term; engage banking sector, LFIs, for preferential financial products for construction industry, planners, home buyers
- Unrealised productive capacity of degraded forest ecosystems to meet long-term domestic demand
- Increase domestic processing capacity; reduce roundwood exports (e.g. PNG, Solomons) in favour of sawn timber and particle board

Deforestation-free supply chains

	Transformational planning/programming	Catalyzing climate innovation	Mobilizing financing at scale	Aligning finance w/ sustainable dvpt
4-pronged approach				
Existing initiatives	EUDR, US Forest Act UK Environment Act GIZ Indonesia	FP137 (Ghana) SAP015 (Cote d'Ivoire)	FP212 &GreenFund, TLFF, FACT Dialogue	
GREEN CLIMATE FUND	• Help align consumer and producer mkt regulations • Promote certification	• Design & pilot sustainable supply chain models • Align models with regulations	• Establish global/regional impact funds • Crowd in private finance at scale	• Enhance leverage capacity of domestic financial institutions through e.g., green agriculture bonds
Instrument	**Grants (incl. readiness)**	**Grants**	**Loans, equity, guarantees**	**Loans, equity**
Partners	Producer & consumer countries, existing & potential AEs, think tanks	Private early movers, GEF, think tanks, public AEs	Institutional investors, UNEP-FI, private AEs	Domestic financial institutions (PDBs, private banks)

MUFG - Arbaro Investing in Sustainable Forestry Projects

Countries	GCF financing	Accredited entity	Financial instrument	Total project size with co-finance
Paraguay, Ghana, Sierra Leone, Uganda, Ecuador, Peru, Colombia, Guatemala and Ethiopia	USD 25 million	MUFG	Equity	USD 200 million

- Invests into equity or equity-like investments in 8-12 FSC-certified plantation forestry projects.
- Business case of projects will focus on meeting supply gap for sustainable timber production, thus creating long-term carbon sinks, meeting social and environmental FSC criteria and contributing to rural economy and employment
- Mitigation benefits based on total project size, estimated at 20m tCO_2e in 15 years

GCF Additionality

Justification for GCF Funding request

- MUFG held a first call for Arbaro Fund, closing in 2020 with $60m
- Fund size of $120m is minimum required to sustain the Arbaro Fund team and long-term operation
- Forest plantation investments in undeveloped markets are high risk, even for IFIs – first close could not attract key investors
- GCF's investment approach is based on a high risk appetite for initiatives with sound business case and high climate impact
- MUFG calculates $25m of equity required to unlock full commitment of anchor investors towards the second close of the fund, and potentially attract further investors to reach $200m
- Including indirect leveraging at project level, GCF first-loss equity could mobilise up to 15 times the investment amount of $25m

Project selection

Pre-qualifying criteria:

1. Investment strategy, guidelines and restrictions
2. Environmental and social safeguards
3. Climate eligibility
4. FSC Certification

Arbaro Fund investment committee: external expert due diligence:

- Review and confirm qualifying criteria
- Shortlist projects
- Develop terms and conditions for investment
- Draft documentation according to Arbaro Fund templates

Project case study

&Green Fund

Brazil, Cameroon, Colombia, Cote D'Ivoire, DRC, Ecuador, Congo Gabon, Indonesia, Lao PDR, Liberia, Zambia

GCF funding: US$189m – Junior Loan and Grant
Total project funding: US$ 982m
Accredited Entity: FMO

- Mitigation: 339m tCO_2e
- Adaptation: 26.6m beneficiaries

- Promotes sustainable commodity production in countries with at-risk tropical forest resources
- Invests in private enterprise to transform tropical land-intensive supply chains to zero-deforestation practices and increase resilience of forest-dependent communities
- GCF loan finance provided at high concessionality to de-risk investment from other public and private sources
- Investments align with EUDR, including palm oil, rubber and timber supply chains

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Empowering action.

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2023 AFoCO Annual Thematic Dialogue

"Sustainable Wood for a Sustainable Future"

The Power of Partnership
- Forests for Global Net-Zero

Mr. Hyungsoo Kim,
CEO of TreePlanet


tree planet
Forests for Global Net-Zero
- The Power of Partnership


2010 ~
Desertification


2016 ~
Fine Dust


2018 ~
Forest Fire


2020 ~
COVID 19


Tree Planet started in 2010,
to create the ways of planting trees
for every people all over the world.


We built 320 forests with 1,200,000 trees
planted in 15 countries for 14 years.


Tree Planet Game
A virtual tree planting smartphone game
to make real forest in deforested areas.

2010

Tree Planet Origin
G20 Seoul Summit

2011-2013

Tree Planet 1
Burning Desert

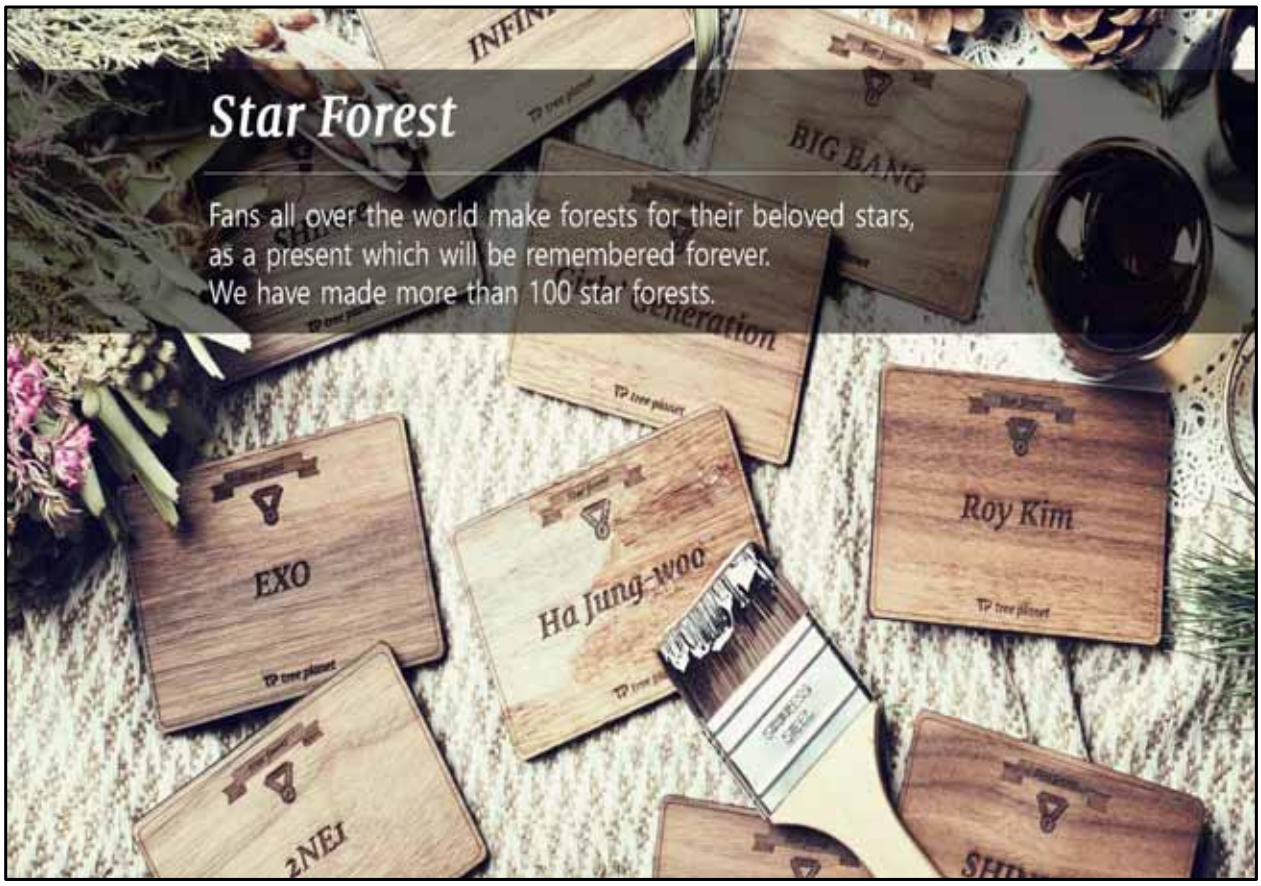
2013

Tree Planet 2
Spirits of the Forest

2014

Tree Planet 3
Birth of the Hero


United Nations
13


Star Forest
Fans all over the world make forests for their beloved stars,
as a present which will be remembered forever.
We have made more than 100 star forests.
BIG BANG
EXO
Ha Jung-woo
Roy Kim
2NEI


함께 만드는 초록 숲
KBS
존케이 나무

Memorial Forest for Sewol Ferry Tragedy

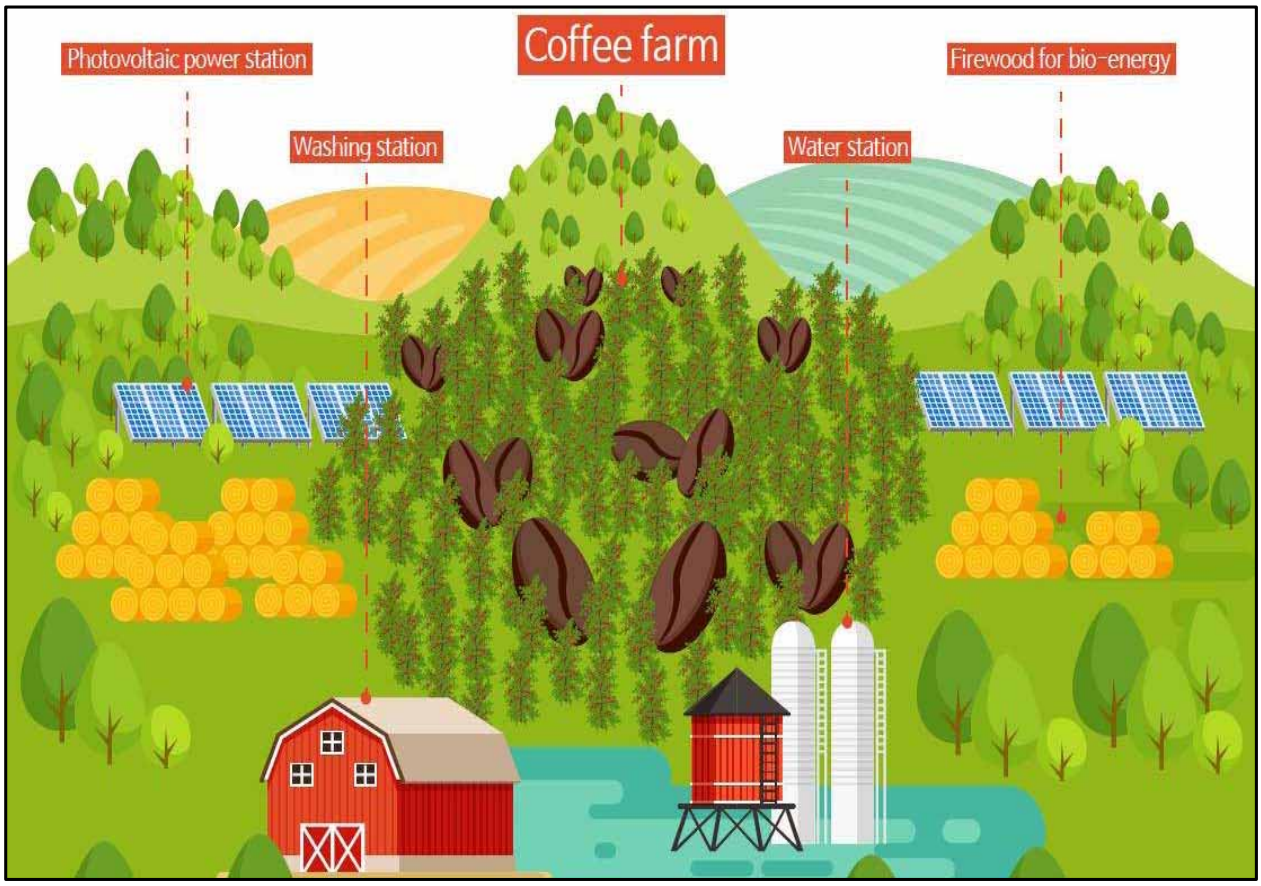
forest in peace

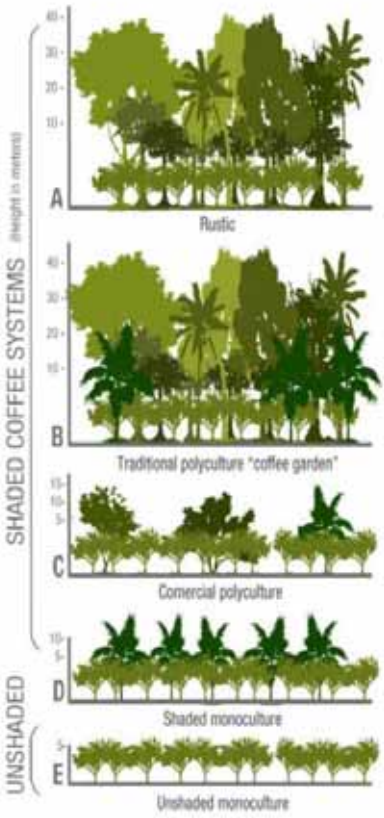
Design

Sewol ferry disaster is a man-made catastrophe which shall be remembered forever by the society. In memory of the tragic event that took place in April 16th of 2014, the monumental site was selected in 4.16km distance from the site of the tragedy, and the map that includes the forest and the incident site was made into a poster. The names of the victims and the comments from the families are inscribed on the insides of the Wall of Memory, a monumental stone that stands in the center of the forest. The three highest points of the wall each come up to 476cm, 325cm and 151cm, each of them representing the number of the passengers, the students from Danwon high school and the rest. The spots dividing the ruffled surfaces and the even ones are 172cm, 75cm and 97cm high, each referring to the number of survivors of the three groups.


백동 무궁화동산
세월호 기억의 숲
SEWOL MEMORIAL FOREST


tree planet
Make your farm
A way to improve lives in developing countries
and to make a sustainable world.





Coffee originates from Ethiopia. Ethiopia's most prestigious

"Specialty Coffee" grows slowly under the shade of large trees and develops its unique flavor and fragrance.

To one of the world's most valuable coffees, forest diversity is the biggest, most trustworthy asset.


Crowd farming campaigns closed in great success,
bringing in more than 1,754 farm-owners (participants).
tree planet
만드세요, 네팔 커피나무 농장
11,530,000
SOLD OUT
MAKE
YOUR
FARM
7,465,000
164
D-0
SOLD OUT
SOLD OUT


The Indonesia Lombok, Nepal, Rwanda coffee from shade-grown trees and
certificate rewarded to farm-owners provided both quality and value.
wework
LOMBOK BEANS
MYF
나무를 심는 커피
Do What You Love


MYF
Make your farm
Make Your Farm Coffee
KOICA
MYF
Make your farm
As a result,
Make Your Farm Coffee has
doubled average income level
and delivered 20tons of
coffee beans from the farms to
consumers.
KOICA

Forest Rehabilitation

To achieve Net-Zero Mission, we are rebuilding forest from forest fire and other nature disaster.

Net-Zero Forest

We registered forest carbon offset business through joint forest business agreement. (Since 2021)

Joint forest business agreement with Korea Forest Service

Carbon Offset Forest(tradable carbon credit)

We create ways for everyone to make forest.

Certified B Corporation

B-Corporation certification

Tree Planet is the first company received B-Corporation certification in 2013

UNCCD Business Observer

Since 2012, Tree Planet is collaborating with UNCCD as a business observer to make forest to fight against desertification

1,200,000 trees, 320 forests, 15 countries

Since 2010, Tree Planet planted over 1,200,000 trees in 320 forests across 15 different countries.

Over 300 Impact Partners are partnering with Tree Planet

Corporations

Government Agencies & Impact partners

NPO Partners


plant for all.
Join us in our journey of planting 100 million trees.
tree planet