



LATIN AMERICAN AND CARIBBEAN FORESTRY COMMISSION

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SUSTAINABLE WOOD VALUE CHAINS

Executive Summary

Sustainable wood value chains are considered to respond to the expected increase of demand for wood because of a growing population, general economic growth, and consumption of wood-based materials in substitution for fossil fuel based materials. The document analyses elements of sustainable wood value chains, including the role of innovative products, the role of sustainable wood energy, the importance of wood value chains for livelihoods as well as opportunities and ongoing initiatives in support of sustainable wood value chains in LAC and worldwide. Based on the analysis, actions are suggested for the commission.

Suggested action by the Commission

The Committee may wish to invite Members to:

- Welcome the Ministerial Call on Sustainable Wood and engage with FAO and other international, regional, and national organizations to convene policy dialogues at regional, subregional, and national levels to exchange knowledge and identify priorities and key milestones to advance the development of sustainable wood value chains and the uptake of sustainable wood products as part of climate change, ecosystem restoration, and other relevant strategies and action plans to achieve the SDGs.
- Engage with the private sector, forest communities, scientific community, civil society, and international organizations to strengthen governance for responsible wood production and consumption from natural and planted forests directed to international, regional, and national markets.
- Take actions to support the development of sustainably planted forests to meet the expected increase in demand for wood-based products, including through agroforestry schemes, and

ensure the inclusion of smallholders and local communities, SMEs, and producer associations, in particular, to access financial and technical assistance.

- Consider becoming a member of the International Commission on Poplars and Other Fast-Growing Trees Sustaining People and the Environment (IPC).

The Committee may wish to invite FAO to:

- Support countries, upon request, with technical expertise to strengthen policy, legal and institutional frameworks, facilitate access to technology, knowledge and capacity enhancement, and facilitate south-south cooperation and resource mobilization to advance sustainable wood value chains and encourage sustainable wood use, in line with their national climate change and ecosystem restoration commitments.
- Support countries to identify market opportunities and develop innovative finance strategies, business planning, and market developments to support inclusive wood value chain development, in particular taking advantage of the opportunities emerging in the construction sector, in collaboration with the private sector.
- Engage with countries, public and private sectors, international organizations and research institutions to collect, assess, disseminate good practices on sustainable and legal production and trade of wood energy, including charcoal, and support the transition from the traditional to the modern use of wood fuels.
- Support countries to optimize environmental and socioeconomic benefits from restoration interventions with consideration of planting fast-growing trees for commercial purposes, as appropriate, including in agroforestry systems and with involvement of smallholders.

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I. INTRODUCTION

1. 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. 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 (SDGs) in a variety of ways, most noticeably by 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.

II. SUSTAINABLE WOOD VALUE CHAINS

2. A sustainable value chain is profitable throughout all of its stages (economic sustainability), has broad-based benefits for society (social sustainability), and has a positive or neutral impact on the natural environment (environmental sustainability). As value chains are not only related to primary production, their sustainability involves actions related to responsible production and consumption. Sustainable wood value chains can meet these standards if 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, with the inclusion of smallholders and small and medium enterprises (SMEs).

3. Logging is not identified as a driver of deforestation. Rather, it is strongly associated with degradation, which in its most severe processes can lead to forest loss, especially conversion to other wooded land. The FRA Remote Sensing Survey (FRA RSS) estimated that severe degradation responded for 3.7% of global forest loss between 2000 and 2018. In Central and South America, livestock grazing was the most important driver of deforestation, followed by cropland expansion¹. A recent review of Latin America policy and economics² concludes that logging cannot be ruled out as a driver of deforestation, but overall, if it contributes to forest loss, it is an occasional issue rather than a general trend³. The review found mixed signals with positive and negative impacts of wood production on forest cover. For instance, it found declining forest loss due to logging when property rights are clarified and communities are granted access to concession management in Guatemala⁴, while in some other countries or sub-national spaces, logging and mining might be among drivers leading to forest loss. These results are coherent with the reviews that FAO conducted in the region as part of the elaboration of the Voluntary Guidelines⁵ for Making Forest Concession an Instrument to Mainstream Sustainable Forest Management.

4. Production of wood products in Latin America and Caribbean (LAC) is increasingly sourced from planted forests. South America had the highest increase in planted forest area between 2010 and 2020, even though the increase rate within the period has declined. Globally, in 2020, naturally regenerated forests contributed an estimated 54 percent and planted forests contributed 46 percent to global industrial round wood production, and LAC was responsible for 12 percent of global production from planted forests⁶.

5. The use of innovative technologies - including digital, biological and processing technologies, new wood-based products, social innovations and innovative finance mechanisms - is potentially transforming forest management and forest value chains⁷. Digital technologies and remote sensing data support policy-making and support more efficient implementation, monitoring, and enforcement. Technologies for forest management and traceability of forest products are well known and costs for their adoption are now lower with the use of mobile applications, drones, etc. Monitoring can be performed in smarter ways with the use of remote sensing, and systems based on secure digital certificates such as blockchain can facilitate access to markets. Dissemination of these technologies among forest producers including smallholders, forest communities and Indigenous Peoples (IPs), aligned with stronger enforcement, can curb illegality and increase productivity. However, there is a need to adapt these innovative technologies to smaller scales and to local needs, priorities and circumstances. Dissemination of such technologies, training and access to finance are also critical to

¹ FAO. 2022. FRA 2020 Remote Sensing Survey. FAO Forestry Paper No. 186. Rome. <https://doi.org/10.4060/cb9970en>

² Hyde, W.F., da Gama e Silva, Z., A., G., P., and Yin, R. 2022. Latin America, an introduction to the special issue, Forest Policy and Economics, Volume 141, 2022. <https://doi.org/10.1016/j.forpol.2022.102763>

³ Hyde, W.F., da Gama e Silva, Z., A., G., P., Susaeta, A. and Yin, R. 2022. Latin America: A regional perspective on its forest policy and economics. Forest Policy and Economics, Volume 141, 2022, 102760. ISSN 1389-9341. <https://doi.org/10.1016/j.forpol.2022.102760>. (<https://www.sciencedirect.com/science/article/pii/S1389934122000727>)

⁴ Bocci, C., Sohngen, B., Finnegan, B. and Milian, B., An analysis of migrant characteristics in forest-dwelling communities in northern Guatemala, Forest Policy and Economics, Volume 140, 2022, 102733, ISSN 1389-9341, <https://doi.org/10.1016/j.forpol.2022.102733>. (<https://www.sciencedirect.com/science/article/pii/S1389934122000454>).

⁵ FAO and EFI. 2018. Making forest concessions in the tropics work to achieve the 2030 Agenda: Voluntary Guidelines, by Y.T. Tegegne, J. Van Brusselen, M. Cramm, T. Linhares-Juvenal, P. Pacheco, C. Sabogal and D. Tuomasjukka. FAO Forestry Paper No. 180, Rome. 128pp

⁶ FAO. 2022. FAOSTAT: Forestry Production and Trade. In: FAO. Rome. <https://www.fao.org/faostat/en/#data/FO>

⁷ Roshetko, J.M., Pingault, N., Quang Tan, N., Meybeck, A., Matta, R. and Gitz, V. 2022. Asia-Pacific roadmap for innovative technologies in the forest sector. Food and Agriculture Organization of the United Nations (FAO), Rome. Center for International Forestry Research (CIFOR), Bogor, Indonesia. CGIAR Research Program on Forests, Trees and Agroforestry (FTA). <https://doi.org/10.17528/cifor/008515>

enable small and medium forest producers to make their production more efficient, sustainable, and legal.

6. Product innovation has opened new perspectives for the development of sustainable wood value chains. Mass timber and engineered wood products in construction, man-made cellulose fibre for textile production, and more modern forms of wood for energy can be prominent wood products for large-scale substitution of non-renewable materials⁸. Expansion of sustainable wood construction value chains can be particularly important in view of the rapid urbanization around the globe.

7. The emergence of cross-laminated timber (CLT) and its applications in construction has created an opportunity to lower the carbon footprint of the building sector⁹, while creating possibilities for new production arrangements. While global CLT production is dominantly from softwood and operated by northern industries, the alliance between architects, engineers, and forest producers, including communities has generated experiments in CLT production on a smaller scale and using local wood resources in the Global South, as well as increased global awareness of other wood-base construction materials.¹⁰

8. The technological progress in cellulose pulp production brought new perspectives to the pulp industry, which transform into bio-refineries that can provide low-carbon alternatives to fossil-based materials including bio-plastics and increasingly diversify the wood-based industry linkages with the rest of the economy. Man-made cellulose fiber (MMCF) in the textile industry and of xylitol in the food industry are examples of such products.^{11 12}

9. As countries improve forest governance, the increase in global wood production will be mostly met by planted forests. The Global forest sector outlook 2050 highlights the importance of forest productivity in the development of the forest industry, and South America's leadership associated to the use of clonal technology, fertilization, and improved silviculture, harvesting and recovery technology.¹³ Agroforestry and silvopastoral systems can also become more relevant to wood industry supplies. The region has successful examples of modern agroforestry systems supplying raw material to large industries, and presenting yields almost competitive to pure planted stands¹⁴. Such examples provide a good basis for reconciling restoration of degraded areas with forest production, and creates opportunities for the inclusion of smallholders in sustainable wood value chains.

10. Notwithstanding the growing role of planted forests in global supply of wood, the market for wood from natural forests will continue to exist and therefore conditions for proper implementation of sustainable forest management are critical. Experience in sustainable wood value chains accumulated through the EU-FAO Forest Law Enforcement, Governance and Trade (FLEGT) Programme and the

⁸ FAO. 2022. The State of the World's Forests 2022. Forest pathways for green recovery and building inclusive, resilient and sustainable economies. Rome, FAO. <https://doi.org/10.4060/cb9360en>

⁹ Ambrose Dadoo, Truong Nguyen, Michael Dorn, Anders Olsson & Thomas K. Bader (2022) Exploring the synergy between structural engineering design solutions and life cycle carbon footprint of cross-laminated timber in multi-storey buildings, Wood Material Science & Engineering, 17:1, 30-42, DOI: 10.1080/17480272.2021.1974937

¹⁰ Held, C., Meier-Landsberg, E. & Alonso, V. 2021. Tropical timber 2050: an analysis of the future supply of and demand for tropical timber and its contributions to a sustainable economy. ITTO Technical Series No. 49. International Tropical Timber Organization (ITTO), Yokohama, Japan.

¹¹ Cai, Z. et al. "New Products and Product Categories in the Global Forest Sector" (2014). In: Hansen, E., Panwar, R. and Vlosky, R., 2014. The Global Forest Sector. In *Changes, Practices and Prospects*. LCC Taylor and Francis Group.

¹² FAO. 2022. Global forest sector outlook 2050: Assessing future demand and sources of timber for a sustainable economy – Background paper for The State of the World's Forests 2022. FAO Forestry Working Paper, No. 31. Rome. <https://doi.org/10.4060/cc2265en>

¹³ FAO. 2022. Global forest sector outlook 2050: Assessing future demand and sources of timber for a sustainable economy – Background paper for The State of the World's Forests 2022. FAO Forestry Working Paper, No. 31. Rome. <https://doi.org/10.4060/cc2265en>

¹⁴ Macedo Pezzopane, J.R.M., Bossi, C., Carlos de Campos Bernardi, A., Dias Muller, M. & Perondi Ancho de Oliveira, P. 2021. Managing eucalyptus trees in agroforestry systems: Productivity parameters and PAR transmittance. *Agriculture, Ecosystems & Environment*, 312: 107350.

Forest and Farm Facility (FFF) in LAC countries shows that the development of inclusive forest sector assurance and traceability systems and support to the development and diversification of forest-based value chains at local levels can contribute to formalization and improved market access, as well as the diversification and resilience of rural livelihoods.

11. Ensuring positive outcomes from the increased wood use depends on sustainable provision of raw material, improved wood value chains and the enabling environment that can support private sector investments. Such efforts must be complemented by adequate policy, legal and institutional frameworks which also consider climate and biodiversity aspects. Supportive research and development as well as capacity development are critical to creating an enabling environment to the adoption of innovative technologies and upscaling sustainable wood use for the achievement of carbon-neutral and resilient economies.

III. SUSTAINABLE WOOD ENERGY

12. Global consumption of wood fuel from forests in 2050 may be between 2.1 billion and 2.7 billion cubic compared to 1.9 billion cubic metres in 2020, a rise of between 11 and 42 percent. In 2020, the LAC region consumed 228 million cubic metres of wood fuel (12 percent of global consumption). According to the Global 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 wood fuel is highest in Africa [(63 percent of households, followed by Asia and Oceania (38 percent) and Latin America and the Caribbean (15 percent)].

13. In addition to traditional use of wood fuel for cooking and heating, modern applications of wood fuel, such as wood pellets, for the generation of heat and electricity also received great attention as an alternative to partially substitute fossil fuels (coal, oil, and gas) towards a solution for net-zero greenhouse gas emissions. To meet additional demand for modern wood fuel, it is important to ensure that the biomass feedstock would be sourced from sustainably produced wood, such as through restoration of degraded forests, dedicated woodlot plantation, or agroforestry to prevent further degradation of natural forests. Equally important are demand-side solutions, such as more effective utilization of wood residues and post-consumer wood, more efficient conversion technologies, as well as cleaner and efficient utilization. The sustainability concerns of wood fuel production and consumption will require nexus approaches and a comprehensive set of policies, strategies, regulations, management measures, and financial resources to ensure that such additional biomass production does not cause economic, social, or environmental harm.

IV. IMPORTANCE OF WOOD VALUE CHAINS FOR LIVELIHOODS

14. Latin America and Caribbean is the global region with the highest forest area as proportion of total land. Forests and associated wood value chains are an important source of employment, livelihoods and income for millions. FAO in collaboration with the University of Georgia¹⁵ estimated that, in 2015, wood-based sectors contributed USD 46.02 billion to the Gross Domestic Product (GDP) of national

15 Li, Y., Mei, B., Linhares-Juvenal, T., Formenton Cardoso, N. & Tshering, C. 2022. Forest sector contribution to national economies 2015 – The direct, indirect and induced effects on value added, employment and labour income. Forestry Working Paper No. 33. Rome, FAO. <https://doi.org/10.4060/cc2387en>

economies in the LAC countries representing 1 percent of the GDP in the region¹⁶. This is a small share of the regional economy and in line with other global regions, meaning that forestry is a small economic sector.¹⁷

15. Total employment in the global forest sector in 2019 was estimated to be 33.3 million formal and informal employees¹⁸. The estimated combined direct contribution of the formal and informal forest sectors to employment in 2017–2019 was 2.8 million jobs in the Americas (Northern America, Latin America and the Caribbean). Half of this figure refers to the informal sector (based on disaggregated data for 13 countries). For instance, in Brazil, approximately 67 percent of the total forest sector and 52 percent of the wood industry workforce is informal.

16. Analysis of value added and employment generation by the different segments of the forest sector and their respective multipliers show a sector that is not very dynamic. Globally, solid wood products and pulp and paper are the most dynamic segments and present the highest direct and induced effects in the national economies. In Latin America and Caribbean, however, solid wood products present a very low total effect on national economies, with a sum of direct and induced effects amounting to 2.64 times the direct value added, while the global multiplier is 3.57. This result is consistent with a recent review of the forest sector in the region,¹⁹ which indicates that with exception of Brazil, Uruguay and Chile - and most notably the Brazilian pulp and paper sector - the downstream processing sectors in Latin America are not well developed.

17. A growing body of research and country cases has focused on the optimization socioeconomic benefits from restoration through planted forests and involvement of smallholders in restoration projects. The International Union of Forest Research Organizations (IUFRO) suggests that smallholders' harvest and sale of timber and other wood-related products increases their income²⁰. Evidence from Uganda show that households who increased the area allocated to trees on farms had significant increase in their total consumption²¹. As commercial planting of forests and trees (pure or mixed-species plantation models) can reduce the cost of restoration per capita, the restoration of degraded areas might offer a good opportunity for expanding the sustainable wood supply base.

18. Policy approaches to commercial forest planting are critical to ensure socioeconomic benefits are positive while avoiding harm to climate and biodiversity. Assessments of plantation forests (one or two species, even age class, and regular spacing)²² are limited but indicate risks of negative socioeconomic benefits²³. For instance, community displacement, local market disruption, competition for land, and increased poverty, are potential negative impacts. A recent research²⁴ conducted in Brazil assessing large forest plantations for energy and pulp found lower levels of poverty and higher per capita incomes over time in forest plantation areas, which might be associated to the absorption of local labour, outgrowing schemes, and the impact of forest activities and the salaries paid in the forest sector on the

¹⁶ GDP of 5.7 trillion (constant 2015 US\$) for Latin America & Caribbean based on World Bank national accounts data, and OECD National Accounts data files. <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?locations=ZJ>

¹⁷ Olmos, V.M. 2022. Forestry and the forest products sector: Production, income and employment, and international trade. *Forest Policy and Economics*, Volume 135, 2022.

¹⁸ Lippe, R.S., Schweinle, J., Cui, S., Gurbuzer, Y., Katajamäki, W., Villarreal-Fuentes, M. & Walter, S. 2022. Contribution of the forest sector to total employment in national economies - Estimating the number of people employed in the forest sector. Rome and Geneva, FAO and ILO. <https://doi.org/10.4060/cc2438en>

¹⁹ Hyde, W.F., Olmos, V.M., Robalino, J., da Gama, Z.A.G.P., Susaeta, A. and Yin, R., 2022. Latin America: A regional perspective on its forest policy and economics. *Forest Policy and Economics*, 141, p.102760.

²⁰ Daniel C. Miller, Stephanie Mansourian & Christoph Wildburger (eds.) 2020. *Forests, Trees and the Eradication of Poverty: Potential and Limitations. A Global Assessment Report. IUFRO World Series Volume 39.* Vienna. (especially chapter 5)

²¹ Miller DC, Muñoz-Mora JC, Rasmussen LV and Zezza A (2020) Do Trees on Farms Improve Household Well-Being? Evidence From National Panel Data in Uganda. *Front. For. Glob. Change* 3:101. doi: 10.3389/ffgc.2020.00101

²² FAO 2018. *Global Forest Resources Assessment. Terms and Definitions FRA 2020.* Forest Resources Assessment working Paper 188. FAO. Rome.

²³ Malkamäki, A., D'Amato, D., Hogarth, N.J., Kanninen, M., Pirard, R., Toppinen, A. and Zhou, W. 2018. A systematic review of the socio-economic impacts of large-scale tree plantations, worldwide. *Global environmental change*, 53, pp.90-103.

²⁴ Afonso, R. and Miller, D.C., 2021. Forest plantations and local economic development: Evidence from Minas Gerais, Brazil. *Forest Policy and Economics*, 133, p.102618.

local economy. The research points to a difference between charcoal and pulp oriented plantations. Charcoal production demand low-skill workers and processing close to the forest site with higher impact in sites with important poverty rates. These conclusions suggest that planted forests, including plantations, when accompanied by well-designed policies and governance for sustainable wood production and consideration of local circumstances when prioritizing value chains, can deliver positive environmental and socioeconomic results.

V. OPPORTUNITIES AND ONGOING FAO'S INITIATIVES IN SUPPORT OF SUSTAINABLE WOOD VALUE CHAINS

19. The Ministerial Call for Sustainable Wood²⁵, one of the key 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 (NDCs) and strategies, plans, and projects of the UN Decade on Ecosystem Restoration.

20. Many initiatives on sustainable wood value chains in LAC and worldwide are contributing to the establishment of enabling conditions to unlock their full opportunities. FAO works with countries and the international community to expand the sustainable management and use of forests, for example, through the International Commission on Poplars and Other Fast-Growing Trees Sustaining People and the Environment (IPC) and the Advisory Committee of Sustainable Forest-based Industries (ACSFI). FAO is leading the Collaborative Partnership on Forests (CPF) Joint Initiative Sustainable Wood for a Sustainable World (SW4SW), and is promoting collaboration across relevant initiatives and facilities, such as the Forest and Landscape Restoration Mechanism (FLRM), the Forest and Farm Facility (FFF), and the UN-REDD Programme. As a way of promoting sustainable wood value chains, FAO is working with governments, producer associations, multilateral organizations, the private sector and the civil society to identify priority areas and support the development of targeted cost-effective policies and measures to support sustainable wood value chains with positive socioeconomic and environmental impact.

21. 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 protection²⁶. 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. This offers a good opportunity for Latin America and Caribbean countries to participate in global research, knowledge exchange, and policy recommendations. As an example of the IPC's 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.

22. In March 2023, FAO, the National Directorate of Industrial Forest Development of Argentina, in collaboration with the IPC and the National Poplar Commission of Argentina, organized the

²⁵ <https://www.fao.org/3/cc0247en/cc0247en.pdf>, consulted on 21.06.2022.

²⁶ Isebrands, J. G., Aronsson, P., Carlson, M., Ceulemans, R., Coleman, M., Dickinson, N., ... & Weih, M. (2014). 6 Environmental Applications of Poplars and Willows. *Poplars and Willows*, 258.

symposium “Sustainable Forest Value Chains for more resilient, inclusive and carbon-neutral economies” at the VIII Latin American Forest Congress, in Mendoza, Argentina. With the presence of representatives of the private sector, the scientific community, and representatives of forest agencies from Argentina, Guatemala, Mexico, Panama, Paraguay, and Uruguay, the event concluded on the importance of sustainable wood production from both natural and planted forests in the region for livelihoods, the opportunity brought up by the surge in wooden construction markets for higher value addition, and the importance of policies, norms and finance to enable the circular bioeconomy. The participating experts also highlighted the potential of reconciling the region's restoration needs with expansion of planted forests to address the global estimated 37 percent increase in wood consumption in 2020-2050.

23. In Bolivia and Ecuador, FFF supported several forest and farm producer organizations. Entrepreneur trainings have been provided and several staff of forest and farm producer organizations have been trained and deployed in business incubation. Many producer organizations have received support from external business or financial-service providers. The main value chains targeted by FFF Bolivia in 2022 include various non-wood forest products as well as community timber. The results have shown that the empowerment of smallholders as well as the strengthened capacities of local forest and farm producer organisations (FFPOs) were key to achieve higher economic returns while assuring long-term resilience.

24. In Suriname, FAO supported the formulation of a forest finance strategy under the Joint Sustainable Development Goals Fund in 2020-2021. The strategy involved an assessment of the financial flows of wood products, income from NTFPs, nature tourism and payments for ecosystem services to estimate the economic potential of the forest sector. A new strategy was designed to reduce the export of round wood and to support value added production in Suriname to showcase its potential. In the context of developing the forest finance strategy 17 forest based companies developed business ideas and investment plans to expand their production for a total of 30 million USD. To finance those business plans the government of Suriname presented those investment plans at the SDG Fair and is committed to the establishment of an industrial zone for wood processing.

25. FAO has assisted countries to prepare project proposals to mobilize resources to support landscape and ecosystem restoration in the region. For instance, "Bio-CLIMA Nicaragua: Integrated climate action for reduced deforestation and strengthened resilience in the BOSAWÁS and Rio San Juan Biosphere Reserves" was approved by Green Climate Fund (GCF) in 2020, which aims to restore degraded forest landscapes in the most biodiversity rich region of Nicaragua, and to channel investments into sustainable land-use management and forest management. As part of the project, sustainably-managed commercial timber production, local timber processing, and value addition of wood are being supported.

26. Similarly, in Paraguay, with the support of FAO, “Poverty, Reforestation, Energy and Climate Change Project (PROEZA)” was prepared and approved by GCF in promotion of forest planting and reforestation in Eastern Paraguay. It aims to support local households to diversify their agricultural production to enhance their resilience to the impacts of climate change by 2025. Environmental conditional cash transfers (E-CCT) is being provided in exchange for community-based climate-sensitive agroforestry activities. The production of timber and wood fuel is included in their agroforestry planning to reduce deforestation, and illegal timber and firewood exploitation, trade and consumption.

27. FAO together with the members of the CPF joint initiative “Sustainable Wood for a Sustainable World” has organized policy dialogues, conducted value chain assessments, and forest sector structural analysis. In 2022, FAO published the global forest sector outlook and assessment of the forest contribution to national economies, including the effect in other economic sectors. An in-depth analysis of the contributions to the national economy in Brazil is in progress. Furthermore, in collaboration with IUFRO and Sustainable Wood for a Sustainable World (SW4SW) partners, FAO is assessing the status of existing wood policy networks and experiences. It reviews regional and global wood policies,

promotes knowledge and scientific exchanges on sustainable wood use, and organizes global and regional policy dialogues on the sustainable wood in line with global, regional and national aspirations for a carbon-neutral bio-economy.