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Summary of the XV World Forestry Congress: 2-6 May 2022

Convening under the theme “Building a Green, Healthy and Resilient Future with Forests,” the Fifteenth meeting of the World Forestry Congress (XV WFC) sought to define the role of forests in the 2030 Agenda for Sustainable Development and other major agreements, including the Global Forest Goals, the Paris Agreement on climate change, and the post-2020 global biodiversity framework. During the five-day meeting, participants addressed a wide variety of themes, including: the UN Decade on Ecosystem Restoration; Forests for a Healthy, Prosperous and Peaceful World; and Sustainable Pathways for Building a Green, Healthy, and Resilient Future.

Key events included: the launch of FAO’s State of the World’s Forests 2022 report; the High-Level Roundtable on the Peace Forest Initiative (PFI); the Ministerial Forum on Financing; the Ministerial Forum on Sustainable Wood; the Collaborative Partnership on Forests (CPF) Dialogue; two full-day forums, one on forest fires, and another on private sector investment; the launch of the Assuring the Future of Forests with Integrated Risk Management (AFFIRM) Mechanism for fire management; and the Sustaining an Abundance of Forest Ecosystems (SAFE) initiative. Additionally, participants were invited to special events on investing in young forestry professionals and career development; forests in a post-COVID World; and sustainable forests and green energy.

Over the course of the week, 30 thematic dialogue sessions were held, organized under six sub-themes on the most important current issues concerning forests and the products and services they provide. These sub-themes included: reversing deforestation and forest degradation; nature-based solutions (NbS) for climate change adaptation and biodiversity conservation; green pathways to growth and sustainability; forests and human health; managing and communicating forest information, data and knowledge; and enhancing management and cooperation.

The main outcomes of the Congress include: detailed action proposals following the six sub-themes of the Congress; a Ministerial Call on Sustainable Wood; a youth call for action; and the Seoul Forest Declaration, which outlines shared roles and responsibilities for ensuring a sustainable future for the world’s forests. The Wangari Maathai Forest Champions Award 2022 was presented to Cécile Ndjebet, African Women’s Network for Community Management of Forests.



Moon Jae-in, President of the Republic of Korea (©FAO/Jongwon Choi)

XV WFC convened in Seoul, Republic of Korea, from 2-6 May, 2022, with over 15,000 participants from 146 countries representing governments and public agencies, international organizations, the private sector, academic and research

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institutions, non-governmental organizations (NGOs), and community and Indigenous organizations. The meeting was held in a hybrid format, with 4,500 participants joining the meeting online.

A Brief History of the World Forestry Congress

The World Forestry Congress, considered to be one of the most influential forest-related events in the world, was first held in Rome in 1926, and subsequent meetings have generally taken place every six years. It has been held under the auspices of the Food and Agriculture Organization of the UN (FAO) since 1954.

The first two meetings of the WFC initiated the development of international co-operation in forestry and introduced an ever-growing common effort to find solutions to the many problems affecting forestry and forest products. The third Congress, planned for 1940, was postponed due to World War II, and was not held until 1949, in Helsinki, Finland. During the decades following World War II, meetings of the WFC were co-organized by the FAO and held in Finland (1949), India (1954), the US (1960), Spain (1966), Argentina (1972), Indonesia (1978), Mexico (1985), France (1991), Turkey (1997), and Canada (2003). The meetings progressively embraced the concept that the science and techniques of forestry should not be limited to the solutions to silvicultural problems as ends in themselves, but should include consideration of a whole set of environmental, economic, industrial, and social factors that are closely bound with forests, and that the combination of all factors form a new and broader concept of the term “forestry.”

Eleventh WFC: The XI World Forestry Congress convened in 1997 in Antalya, Turkey, under the theme “Forestry for sustainable development: towards the twenty-first century, thus confirming recognition of the importance of viewing forestry not as an isolated technical discipline, but rather as an important component of overall socio-economic development.

Twelfth WFC: The XII World Forestry Congress, held in 2003 in Québec, Canada, attracted over 4,000 participants from more than 140 countries. The Final Statement highlighted areas of priority concern, and included a vision for the future, accounting for the need for social justice, economic benefits, healthy forests, responsible use, good governance, research, education and capacity building. It recognized that the prerequisites to achieving these visions include sustained financial commitments and international cooperation, policies based on best science, and incorporation of local and Indigenous knowledge.

Thirteenth WFC: The XIII World Forestry Congress, themed “Forests in Development: A Vital Balance,” took place from 18 to 23 October 2009 in Buenos Aires, Argentina, with more than 7,000 participants representing 160 nations. The daily sessions focused on: forests and biodiversity; producing for development; forests in the service of people; caring for our forests; development opportunities; organizing forest development; and people and forests in harmony. The main outcome of the Congress included a message to the Fifteenth session of the Conference of the Parties (COP) to the UN

Framework Convention on Climate Change (UNFCCC) calling for urgent action on, *inter alia*, the promotion of sustainable forest management (SFM) and recognition that forests are more than just carbon, the need to address climate change mitigation and adaptation concurrently, the improvement of monitoring and assessment techniques, and inter-sectoral cooperation.

Fourteenth WFC: The XIV World Forestry Congress was held from 7-11 September 2015, in Durban, South Africa, with nearly 4,000 participants in attendance, under the theme “Forests and People: Investing in a Sustainable Future.” The main outcome of the Congress, the Durban Declaration, states, *inter alia*, that: forests are fundamental for food security and improved livelihoods and will increase the resilience of communities by providing food as well as wood energy; SFM requires integrated approaches to land use and addressing the drivers of deforestation and conflicts over land use; forests are an essential solution to climate change adaptation and mitigation; and that greater attention to gender equality and the enthusiasm of the youth as a source of inspiration and stimulus for innovation are required for realizing the vision of forests.

Selected Intergovernmental Forest-Related Processes: In the absence of a coordinated forest governance regime, global forest policy has been developed in a variety of fora, including the forest-related processes of the UN Forum on Forests (UNFF), the International Tropical Timber Organization (ITTO), and the FAO Committee on Forestry (COFO).

UNFF: The UN Forum on Forests was established in 2000, following a five-year period of forest policy dialogue within the Intergovernmental Panel on Forests and the Intergovernmental Forum on Forests. In October 2000, the UN Economic and Social Council (ECOSOC) established the International Agreement on Forests, with the objective of promoting the management, conservation and sustainable development of all types of forests and strengthening long-term political commitment. The resolution also established the Collaborative Partnership on Forests to support the work of the UNFF and enhance cooperation and coordination. UNFF has met 16 times between 2000 and 2022. The most recent session of the UNFF (UNFF-16) was held virtually due to the COVID-19 pandemic, from 26–29 April 2021, and focused on the Strategic Plan for Forests 2017-2030; implementation of the communication and outreach strategy; thematic priorities for 2021-2022 in support of the Strategic Plan; monitoring, assessment, and reporting; and means of implementation.

ITTO: The International Tropical Timber Agreement (ITTA), negotiated under the auspices of the UN Conference on Trade and Development, was adopted in 1983. In 1986, the ITTA established the ITTO, headquartered in Yokohama, Japan, to provide a framework for tropical timber producer and consumer countries to discuss and develop policies on issues relating to international trade in, and utilization of, tropical timber and the sustainable management of its resource base. ITTA, 1983, was superseded by two successor agreements (ITTA, 1994 and ITTA, 2006). ITTO operates under ITTA, 2006, focusing on the world’s tropical timber economy and the sustainable

management of the resource base, simultaneously encouraging timber trade and improving forest management. ITTA, 2006, also allows for consideration of non-tropical timber issues as they relate to tropical timber. The governing body of the ITTO is the International Tropical Timber Council (ITTC), with 71 members, which has met 57 times. The fifty-seventh session of the ITTC and the Associated Sessions of its four Committees were held online due to the COVID-19 pandemic, from 29 November – 3 December 2021. Key developments include: a decision to renew the ITTA, 2006; the adoption of the Strategic Action Plan 2022-2026, which will guide the activities of the organization until the expiry of the renewed ITTA, 2006; and the selection of the new ITTO Executive Director, Sheam Satkuru (Malaysia).

COFO: The Committee on Forestry (COFO) is the FAO's most significant Forestry Statutory Body, bringing together heads of forestry services and other senior government officials to identify emerging policy and technical issues, seek solutions, and advise the FAO and others on appropriate action. This is achieved through: periodic reviews of international forestry problems and their appraisal; review of the FAO forestry work programmes and their implementation; advice to the FAO Director-General on the future work programmes of the FAO in the field of forestry and their implementation; reviews of and recommendations on specific matters relating to forestry referred to it by the FAO Council, Director-General or member states; and reports to the FAO Council. COFO 25 convened virtually from 5 to 9 October 2020, and explored the contributions that the forest sector can make to the Sustainable Development Goals (SDG) Decade of Action as well as to recovering from the COVID-19 pandemic.

XV World Forestry Congress Report

On Monday, 2 May, Byeong-Am Choi, Minister of Forests, Republic of Korea, welcomed participants to the XV WFC. He lamented the rapid decline in global forest cover, and highlighted the many ways in which sustainably managed forests can help address biodiversity, climate, and health crises.

Via video message, Amina J. Mohammed, UN Deputy Secretary-General, on behalf of UN Secretary General António Guterres, said that in spite of their essential role in planetary health, forests remain under threat. To address this, she stressed the need to increase finance, ensure deforestation-free supply chains, engage all stakeholders, and incorporate Indigenous and local knowledge.

HRH Princess Basma bint Ali, Hashemite Kingdom of Jordan, FAO Regional Goodwill Ambassador, underscored the importance of ecological restoration and nature-based solutions (NbS) and prioritizing genetic diversity and locally-appropriate approaches. Noting the decline in renewable water resources in near East and North Africa, she emphasized the “unequivocally critical” regulating service that forests and woodlands provide and called for sustainable supply chains, adding that urgency is crucial.

Magdalena Jovanović, President, International Forestry Students Association, highlighted XV WFC as “an enormous opportunity” for youth to be at the center of forest-related



Byeong-Am Choi, Minister, Korea Forest Service

discussions, share experiences, and take a leading role. She added that although young people are the future of the sector, their voices are often not heard.

Qu Dongyu, Director General, FAO, emphasized the need to ensure that forests are an integral part of solutions to current and future challenges. He highlighted FAO's focus on halting deforestation, maintaining forests, and restoring degraded lands, and called for an efficient, inclusive, resilient and sustainable transformation of agricultural systems. He also stressed the need for bold and ambitious action, noting that there is no time to lose.

Moon Jae-in, President of the Republic of Korea, noted the many benefits provided by forests and their importance in both culture and religion. He highlighted the key role that forest restoration played in Korea's post-war recovery and invited participants to look for ways to transform the 2021 Glasgow Forest Pledge, signed by 141 countries, into action, adding that the Republic of Korea has committed to doubling overseas development assistance, including on forests, by 2030.

High-Level Dialogue: Building a Green, Healthy and Resilient Future with Forests

In a keynote speech, Qu Dongyu, Director General, FAO, highlighted three mutually reinforcing pathways depicted in FAO's State of the World's Forests 2022 report: halting deforestation and maintaining forests; restoring degraded lands and expanding reforestation, including through increased grass and bush cover to avoid soil erosion; and ensuring sustainable value chains. He stressed the importance of partnerships, and more efficient, inclusive, and holistic approaches to the sustainable use of forests.

A panel discussion, moderated by Jie-Ae Sohn, Ewha Womans University, focused on what needs to be done to achieve the Sustainable Development Goals (SDGs) by 2030 and how COVID-19 has changed our understanding of sustainability.

Via video message, Juergen Voegelé, Vice President for Sustainable Development, World Bank, stressed the need for a coordinated response, investing in natural capital, and addressing multiple crises together. Juan Carlos Jintiach, Coordinator of Indigenous Organizations of the Amazon River Basin (COICA), Ecuador, underscored strategic partnerships with local



Princess **Basma bint Ali of Jordan**, FAO Regional Goodwill Ambassador

communities and making use of Indigenous Peoples' governance structures. Yugratna Srivastava, Youth Task Force, UN Decade on Ecosystem Restoration, and Youth Constituency Focal Point to the United Nations Environment Programme (UNEP), called for the inclusion of youth voices by mandate and not by invitation only, and for resources to ensure their meaningful participation.

John Parrotta, President, International Union of Forest Research Organizations (IUFRO) emphasized that business-as-usual amounts to stealing from future generations and called for addressing issues driving deforestation and forest degradation. Parrotta emphasized the need for more efficient dialogue across sectors and for influencing public health decisions to significantly reduce future zoonotic disease outbreaks.

Yannick Glemarec, Executive Director, Green Climate Fund (GCF) highlighted forest restoration and sustainable forest management (SFM) as the best investment to foster a green climate resilient recovery from COVID-19. He pointed to GCF activities focused on: supporting 74 countries with their national adaptation plans; enhancing eco-businesses, building on the knowledge of local communities; strengthening domestic financial institutions to reach scale; and explained how solutions can be scaled up by de-risking initial large investments.

In a second panel, Byeong-Am Choi, Minister, Korea Forest Service, recalled that post-war reforestation efforts were coupled with economic development, and called for a coherent and integrated approach to forest management that addresses the current climate, biodiversity and health crises.

Kim Jun, SK Innovation, said that governments need to go beyond regulation and to provide incentives for investing in SFM, and noted the need for investment in science and technology.

Rosalie Matondo, Minister of Forest Economy, Republic of the Congo, highlighted action in the Congo Basin, including with GCF support, and called for sharing best practices and for partnerships. Jessica Vega, Co-Chair, Global Indigenous Youth Caucus, urged for women and youth engagement and prior informed consent procedures to jointly safeguard forest life and health.

Drawing attention to climate change impacts in his country, Bat-Erdene Bat-ulzii, Minister of Environment and Tourism, Mongolia, highlighted national incentive policies, including the Million Trees campaign to address land degradation.

Plenary

UN Decade on Ecosystem Restoration: Moderated by James Astill, *The Economist*, this session focused on efforts required to rise to the challenge of restoring the world's two billion hectares of degraded forest.

FAO Regional Goodwill Ambassador, HRH Princess Basma bint Ali, Hashemite Kingdom of Jordan, emphasized that restoration involves more than just planting trees and must consider biodiversity. She noted that grassroot efforts need to be complemented by high-level policy reforms and active participation of Indigenous and local communities.

Maria Helena Semedo, Deputy Director-General, FAO, described the UN Decade of Action and its goal to restore 350 million hectares of degraded land, which requires scaling-up and an integrated and systemic approach. She highlighted FAO's facilitative role in offering contextualized solutions, establishing partnerships, helping to scale-up investment, enhancing communication, and monitoring progress.

Identifying reasons for the lack of progress, Luc Gnacadja, Chair of the UN Decade for Ecosystem Restoration Science Task Force, spoke about the absence of adequate socio-ecological system restoration designs, top-down approaches, insufficient attention to improving livelihoods, and scarcity of appropriate implementing institutions for long term transformation.

In response to a question on engaging local communities, HRH Princess Basma bint Ali stressed the need to restore food sovereignty, listen, and win people's trust, cautioning against "fancy schmancy solutions." Gnacadja called for ensuring policy systems are fit to help local populations do what they can do best, and for farmers speaking to farmers to scale up solutions.

Adriana Vida, Chair, Global Partnership on Forest and Landscape Restoration, International Union for Conservation of Nature (IUCN), highlighted the need for inclusive, gender responsive, and geographically representative responses aimed at joint action. She noted that creating partnerships or networks is not the end goal, adding that the focus should be on bringing about systemic change.

The second panel discussion addressed action to scale up restoration on the ground. Christophe Besacier, FAO, highlighted inadequate technological knowledge and lack of capacity to design, implement and monitor restoration at scale, as key barriers to achieving the goals of the UN Decade on Ecosystem Restoration. He highlighted the associated Task Force's activities aimed at capacity needs assessments and identification of knowledge gaps. Rémi D'Annunzio, FAO, explained that restoration is intrinsically difficult to monitor, and the lack of a common framework and comparable indicators to facilitate transparent reporting complicates the issue. He noted that the Task Force is focusing on resolving issues regarding transparency, as well as ambiguity about what constitutes restoration.

Emphasizing the power of youth as beneficiaries and enablers, Yugratna Srivastava, Youth Task Force of the UN Decade on Ecosystem Restoration, explained the youth consultation process, which concluded that youth inclusion is a priority and identified

key barriers to participation, including lack of awareness and motivation. Gabriel Labbate, UNEP, said while ecosystem restoration is currently the best option for carbon removal at scale, the business case is lacking. He underscored the need for a carbon price for high quality carbon removal and certainty of demand. Christophe Besacier, FAO, drew attention to FAO's Principles for ecosystem restoration to guide the UN Decade. In closing remarks, Tom Crowther, Chair of the Advisory Council for the UN Decade on Ecosystem Restoration, and founder of Restor, a science-based open data platform to support and connect the global restoration movement, emphasized the need for systems-level change and a bottom-up movement, and outlined Restor's work on transparency and enabling connectivity.

Forests for a Healthy, Prosperous and Peaceful World: This session was moderated by Henry Bonsu, independent journalist and broadcaster. In a keynote speech, Maria Helena Semedo, FAO Deputy Director-General, underscored the link between healthy economies and healthy forests, and highlighted FAO's efforts on promoting cross-sectoral collaboration, including FAO's Green Cities Initiative and its support for the One Health approach.

Byeong-Am Choi, Minister, Korea Forest Service, focused on the use of forests to improve the urban environment, achieve carbon neutrality and create jobs, sharing his country's initiatives on, *inter alia*, expanding urban forests and tree planting, green employment policies and support measures, and plans to achieve carbon neutrality by 2050 by accounting for more than 23 million tons of CO₂ sequestered by forests.

Agus Justianto, Ministry of Environment and Forestry, Indonesia, said the Indonesian government supported the forest sector during the pandemic, including through a social forestry program, and is implementing law enforcement through restorative justice.

Adriana Lucia Santa Méndez, Ministry of Environment and Sustainable Development, Colombia, said the Amazon Vision program has enabled Indigenous communities living in the Amazon region to have a voice in decision-making and to share knowledge on best practices for agriculture and sustainable utilization of natural resources.

Gertrude Kabusimbi Kenyangi, Executive Director, Support for Women in Agriculture and Environment, called on governments to fulfill their commitments to gender-responsive empowerment of Indigenous Peoples and local communities for equitable sharing of forest benefits, saying while policies and laws look good on paper, implementation can be improved.

Betty Osei Bonsu, Green Africa Youth Organization, identified the need for capacity building, funding opportunities, and resources to enable youth to scale up environmental protection efforts. She called for the environment to be prioritized above profits.

Points raised in the ensuing discussion included: the need for developed countries to provide funding and for developing countries to make all possible efforts to strengthen sustainable management of forests; strategies for people to make their voices heard by establishing formal organizations and creating



Sheam Satkuru, Executive Director, International Tropical Timber Organization

relationships with funders and local decision makers; and the importance of local participation for successful forest governance.

Wood, the Most Ancient Raw Material Taking Us to the Future: This session was moderated by James Astill.

Saying "the city of the future is a forest," Vicente Guallart, General director of Urban Habitat, Spain, presented on timber-based constructions, including his design for the tallest timber-based building in Spain using cross-laminated timber panels, and a school in Cameroon using local timber. He emphasized local wood sources and labor and the need to find a balance between producing timber and protecting forests.

Rosalie Matondo, Minister of Forest Economy, Republic of the Congo, said Congo Basin countries decided to stop exporting timber and to process it locally. In response to a question from the moderator on the embargo on tropical timber products at the 2024 Paris Olympics, she stressed that Congo Basin timber products originate from SFM and not illegal logging and expressed frustration at the lack of evidence behind such policies.

Sheam Satkuru, ITTO, said a lack of trust means that tropical timber producing countries have to jump through hoops to prove that international standards are being met. She noted the need for effective communication on compliance, as well as an effective governance system to change perceptions of tropical timber producing countries.

Eduardo Rojas Briales, Chair, Programme for the Endorsement of Forest Certification (PEFC) International, highlighted advances over the last 25 years resulting in a more efficient use of wood. He noted that, going forward, significant construction activity will take place in the Global South, so bamboo and materials like cork will also be important.

Cindy Yin Lee Cheng, Forest Stewardship Council (FSC), explained that smallholders in South East Asia produce large volumes of timber but struggle to get their products certified, since education levels are low, and the certification process is complex. To address this, she said, a regional forest stewardship standard is being developed and will be launched within the year.

Florian Graichen, Scion Forest Products, New Zealand, noted that innovation in wood product manufacturing and timber engineering can replace non-wood products, emphasizing that "everything made from petroleum today can be made from trees

tomorrow.” He further reflected on opportunities to address numerous sustainable development challenges through the use of sustainably sourced products from trees and the requisite shift from a linear to circular bioeconomy.

Jane Molony, South African Paper Manufacturers Association, noted the wide variety of products that can be made from trees, including fabrics like viscose, as well as biomass energy.

Jose Pablo Undurraga, Director, Chilean High-Value Wood Program, described how Chile is embracing wood construction, largely based on plantation wood, and promoting small and medium enterprises in the forest sector through technology transfer and product diversification.

Hyun Park, President, National Institute of Forest Science, Republic of Korea, said that consumer attitudes toward logging need to change if greater use of wood in construction is to occur, and that government can play a role in promoting this.

Thais Linhares Juvenal, FAO, and Robert Grace, Founding Partner & Chief, Simplicity Officer, M&C Saatchi Abel, South Africa, introduced “Grow the solution: wood is nature’s sustainable solution,” a CPF global media campaign for mainstreaming wood as a sustainable material. Grace pointed to challenges, including reframing the conversation away from the dichotomy of protecting versus cutting forests towards “growing a solution,” and emphasized the importance of partnerships and simple messaging.

Special Events and Sessions

State of the World’s Forests 2022 Technical Launch: Forest Pathways for Green Recovery and Building Inclusive, Resilient and Sustainable Economies: Moderated by Henry Bonsu, this event featured a short video and panel discussion with the report’s lead authors from the FAO. They presented key findings, including that although forests cover 31 percent of the Earth’s land surface (4.06 billion hectares), that area is shrinking, with 420 million hectares of forest lost through deforestation between 1990 and 2020. They noted that although the rate of deforestation has recently declined, it is still significant, at about 10 million hectares per year between 2015 and 2020, and that 47 million hectares of primary forest were lost between 2000 and 2020.

The report identifies three pathways for the future: halting deforestation; restoring forest landscapes; and increasing the use of sustainably produced wood products. Noting that forests are shrinking because those who maintain them do not benefit from their protection, the video underscored the need to increase investment including by reorienting agricultural subsidies to forest restoration, SFM and agroforestry, and ensuring small scale owners and producers are at the center. The report authors identified key messages including: the need to enshrine tenure rights; the importance of providing incentives and removing disincentives for forest conservation; and the urgency of addressing conflict between forest and other development needs. Other issues identified included: ecosystem restoration as a clear pathway to green recovery; the role of forest products in shifting away from dependence on non-renewable materials; and the need to scale up investments in forests.

CPF Dialogue: Climate Change, Conflicts and Food Insecurity - Forest Solutions to Tackle Effects of Crises: This session was moderated by James Astill. Maria Helena Semedo, FAO, reaffirmed key findings from the State of the World’s Forests 2022 report, presented earlier, and emphasized the need for: mutually reinforcing pathways to achieving healthy forests and societies: halting deforestation and maintaining forests; restoring degraded lands and expanding agroforestry; and using forests sustainably and building green value chains.

Achim Steiner, UNDP, called for directly addressing the drivers of deforestation to end global deforestation by the end of the decade. He highlighted the Climate Promise Initiative that supports 120 countries to enhance their NDCs, including with respect to forests.

Sheam Satkuru, ITTO, referred to COVID-19 pandemic impacts, including fractured supply chains and monitoring, stockpiling of containers, and unemployment. She underscored the role of production forests in avoiding land conversion, and called for complementing cross-sectoral policies and international collaboration.

Saying healthy ecosystems are incompatible with runaway climate change, Patricia Espinosa, Executive Secretary of the UN Framework Convention on Climate Change (UNFCCC), underscored the importance of changing how we consume and produce energy and utilizing opportunities that address both mitigation and adaptation. She urged sustained financing and action on Reducing emissions from deforestation and forest degradation, plus the sustainable management of forests and the conservation and enhancement of forest carbon stocks in developing countries (REDD+).

Noting that, globally, 80 million people are internally displaced, Tony Simons, Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF), stressed that climate-induced movements will be more profound in the future due to the mismanagement of forests and emphasized the importance of the CPF.

John Parrotta, IUFRO, highlighted challenges including overlapping jurisdictions, where communities may have rights to forests but the mining industry has its own vested interests.



Achim Steiner, UNDP Administrator, addresses participants via a video message.

He drew attention to the impact of corruption, which overrides regulatory frameworks and otherwise robust laws.

Gertrude Kabusimbi Kenyangi, Executive Director, Support for Women in Agriculture and Environment, Kenya, noted that Indigenous Peoples were evicted from forests when governments started owning forests and consequently the rate of deforestation and degradation accelerated. She called for Indigenous Peoples to be allowed back into “discussions” as equal partners and rights holders, and for their forests to be returned.

Participants were presented with pre-recorded video messages from Susan Gardner, Director of Ecosystems Division, UNEP; Juliette Biao Koudenoukpo, UNFF Secretariat; Carlos Manuel Rodriguez, Global Environment Facility (Chief Executive Officer and Chairperson, GEF); Juergen Voegel, Vice President for Sustainable Development, World Bank; Ivonne Higuero, Secretary-General, Convention on International Trade in Endangered Species of Wild Fauna and Flora and Elizabeth Maruma Mrema, Executive Secretary, UN Convention on Biodiversity (CBD).

Abdullah Al Maruf, International Association of Students in Agricultural and Related Sciences, stressed the potential contribution of young people in advocating for, mobilizing, and providing innovative solutions, calling for young people to be treated as equal partners.

Robert Nasi, Director General, CIFOR, highlighted how forests can support peace, citing the example of transboundary forest management in Rwanda, Uganda and the Democratic Republic of the Congo, which he said has prevailed for more than 25 years in spite of conflict in the region.

In response to a question on post-conflict contexts, Semedo spoke about the potential for restoration to bring back people and create green jobs, while Satkuru said financing is critical.

On the role of agroforestry in the absence of strong governance, Simons referred to an ICRAF project in Papua New Guinea where communities are self-policing out of self-interest to ensure their products’ continued connection to high value market chains.

In response to a question on key concerns, panelists pointed to the Amazon tipping point, the lack of focus on tropical forestry, and the problem of silos. Conversely, panelists identified areas of hope including increasing cooperation and coordination, burgeoning awareness among the general public, and the role of Indigenous Peoples and local communities.

Ministerial Forum on Forest Financing: This session was moderated by James Astill. Maria Helena Semedo, FAO, called for promoting win-win solutions through national policies that, *inter alia*, promote local markets for sustainable products, repurpose subsidies to include sustainable forestry and agroforestry, secure land tenure and rights, support market-based measures for sustainable food systems, and increase transparency in supply chains.

Ahn Do-geol, Vice Minister, Economy and Finance, Republic of Korea, said that while just five decades ago his country was mostly depleted of forest, it is now a forest powerhouse with 55 percent forest cover. He expressed the Republic of Korea’s



Yannick Glemarec, Executive Director, Green Climate Fund

commitment to expand forest finance and budgets to fight climate change, including through sharing its successful forest restoration experience.

Stating waste and nature’s degradation “must be made an unbearable liability,” Lord Zac Goldsmith, Minister for the International Environment and Climate, UK, called, via video, for ensuring financial commitments are honored in full and for scaling-up finance, shifting subsidies towards sustainable production, and ensuring all overseas development assistance is climate and nature accountable.

Frank Rijsberman, Global Green Growth Institute (Director, GGGI), provided an overview of innovative financial mechanisms to reduce risk and enable capital flows for SFM, such as: green bonds, debt-for-nature swaps, and payment for ecosystem services.

Byeong-Am Choi, Minister, Korea Forest Service, highlighted efforts to quantify the market value of forests as carbon sinks in his country. He emphasized the need to ensure that values such as soil production, air purification, and aesthetic and psychological benefits, which are not usually transferred to the market, are included in the economic evaluation of forests.

Rosalie Matondo, Minister, Forest Economies, Republic of the Congo, highlighted reforestation efforts, expansion of conservation areas and legislative efforts to preserve forests. She noted the lack of funding for the Congo Basin area and called for a more targeted, tailored, transparent financial mechanism.

Marcial Amaro, Department of Environment and Natural Resources, the Philippines, said that the Philippines has adjusted its development plans in light of increasing climate threats, including more than 20 typhoons per year, and said that forests are part of the solution.

Yannick Glemarec, GCF, said that public forest financing needs to be catalytic, leveraging much larger private sources. He noted that three-quarters of the USD 783 billion sovereign bond market has no disclosure of climate or biodiversity risks, meaning that public money could be driving deforestation. He called for the creation of a new asset class for individuals to invest in green bonds.

Bianca Dager Jervis, Vice Minister of the Environment, Ecuador, spoke about her country’s pioneering climate change actions and commitment to sustainable growth, highlighting

Ecuador's deforestation-free and sustainable production and certification model. She lamented that Ecuador's conservation efforts have been insufficiently recognized and stressed compensation for relinquished benefits.

Noting that Gabon is carbon positive, Lee White, Minister of Water, Forest, the Sea and Environment, Gabon, said REDD+ cannot generate enough jobs and that, given the enormous impact that deforestation of the Congo Basin would have worldwide and the livelihood needs of people in the region, the survival of forests there cannot be gambled on the voluntary contributions from developed countries.

Ramsahay Prasad, Minister of Agriculture and Forestry, Nepal, observed that the contribution of the forestry sector to the country's GDP is negligible so this huge resource has to be mobilized. He explained that "forests for prosperity" is the country's development goal and SFM is a key approach for reversing land degradation and creating green jobs.

High-Level Roundtable on the Peace Forest Initiative:

This session, moderated by Suh-Yong Chung, Korea University, addressed the PFI, launched under the UNCCD in 2019, to promote transborder cooperation and collaboration on ecosystem restoration in fragile and conflict-affected situations.

Byeong-am Choi, Minister, Korea Forest Service, expressed his belief that peace can be built through forest management over generations, and said the PFI provides a platform for countries to work together to restore ecosystems and respond to the climate crises effectively.

Ibrahim Thiaw, UNCCD Executive Secretary, commended the Republic of Korea on its exemplary post-war work in restoring ecosystems, becoming one of the most advanced economies while achieving over 60 percent forest cover. He noted that when land is degraded, poverty and insecurity increase, but that restoration can bring stability and peace.

Hilario López Córdova, Executive Director, National Forest and Wildlife Service, Peru, presented on the Transboundary Biosphere Reserve Peace Forest protecting vulnerable dry forests in Peru and Ecuador, and highlighted a binational project on promotion of commercial forest plantations in border areas to increase resilience and improve livelihoods.

Ricardo Calderon, Executive Director, Asian Forest Cooperation Organization, spoke on his organization's work and strategic role in the PFI addressing conflict resolution affecting land use through multiple and diverse projects.

Ung Sam Ath, Ministry of Agriculture, Forestry and Fisheries, Cambodia, described Cambodia's efforts to restore degraded land in transboundary areas, and how this had contributed to meeting the SDGs.

Inthavy Akkharath, Ministry of Natural Resources and the Environment, Laos, noted that a growing population has increased pressure on forests, but cooperation with neighboring countries in the Mekong region has prioritized biodiversity protection and prevention of land degradation.

José Elias Escobar Avalos, Ministry of Agriculture and Livestock, El Salvador, explained that his country is characterized by long droughts and occasional heavy rainfall, and

that there are major socio-economic challenges. He highlighted goals to reforest 15 percent of the region and invest in green infrastructure.

Kebede Yimam Dawd, Ethiopian Forest Development, outlined initiatives aimed at promoting market-based, sustainable agroforestry, enhancing coffee production and restoring degraded lands. He highlighted the GGGI Forest Finance and Investment Incubator aimed at catalyzing the private sector financing of national and sub-national climate strategies in the forestry, agriculture, and land-use sectors.

Forests in a Post-Covid-19 World: This session was moderated by Sheam Satkuru, ITTO, and John Parrotta, IUFRO. In keynote remarks, Maria Helena Semedo, FAO, highlighted the role forestry can play in a greener post-pandemic future, stressing that maintaining healthy and resilient forests and restoring degraded land should be a part of COVID-19 response and recovery plans.

Dian Sukmajaya, Association of Southeast Asian Nations (ASEAN) Economic Community Department, described COVID-19 impacts in the forestry sector in ASEAN countries. He said ASEAN needs to enhance SFM practices including via decarbonization efforts and circular economies, and promoting the marketability of non-timber forest products.

Peter Gondo, UNFF, said COVID-19 has led to the postponement of forest management activities and disrupted supply chains and ecosystem-based activities such as hospitality. He said SFM has been an integral part of recovery plans in some countries, but international cooperation is critical due to limited fiscal space in developing countries.

Angela Coleman, US Department of Agriculture Forest Service, via live video, highlighted lessons learned on fire management during COVID-19, saying best practices such as remote incident management will continue to be used post pandemic.

Priya Shyamsundar, Nature Conservancy, called for enabling forest smallholders to lead the way in COVID-19 recovery, highlighting that smallholders dominate agricultural systems in the tropics, and these sectors also have low-cost restoration potential.



John Parrotta, President, International Union of Forest Research Organizations

Robert Nasi, CIFOR, noted the need to invest more in forestry, saying the technological solutions exist.

José Carlos da Fonseca, Executive Director, Brazilian Tree Industry, highlighted new technological innovations that have created alternatives to raw materials produced from fossil fuels, including lignin, which can replace polyurethane.

John Stanturf, Estonian University of Life Sciences, highlighted opportunities created by the pandemic, including public awareness of the importance of forests and urban rewilding for social wellbeing, as well as challenges including labor shortages and supply chain disruptions.

Sustainable Forests and Green Energy: This event was moderated by Henry Bonsu, journalist and broadcaster.

Thais Linhares Juvenal, FAO, outlined the benefits of bioenergy as an integral component of sustainable energy systems. She introduced the FAO Energy Smart Food programme, the Global Bioenergy Partnership, and work with the International Renewable Energy Agency (IRENA) on renewable energy for agri-food systems, and called for stronger collaboration between UN agencies and the private sector.

Francesco La Camera, Director General, IRENA, spoke on the potential of bioenergy in accelerating the energy transition, emphasizing the need for coordination with the forestry sector to tap synergies and avoid negative impacts and for policy frameworks to ensure sustainability. He stressed long-term sustainable targets, regulation and certification schemes.

Annette Cowie, NSW Department of Primary Industries, Australia, presented on SFM as a source of sustainable bioenergy, noting, *inter alia*, the potential of carbon storage in biochar and the challenge of integrating bioenergy into our landscapes sustainably.

Maria Michele Morese, Executive Secretary, Global Bioenergy Partnership (GBEP), spoke about the “urgent but gradual” transition from traditional to modern bioenergy through direct approaches (such as improving efficiency in each stage of the bioenergy value chain), and indirect ones (through alternatives that reduce pressure on forest resources by substituting feedstock for example). She introduced GBEP’s sustainability indicators.

Saying there is “no food security without energy security” in Sub-Saharan Africa, Phosiso Sola, CIFOR-ICRAF, spoke about charcoal use in Africa, noting it will remain a major energy source for many people in coming decades, yet some supply basins are threatened and degraded, with impacts extending beyond international borders, given unsustainable feedstock sourcing and incongruent policies. She called for investments to reduce the proportion of wood fuels in the energy budget.

Pointing to a lack of data on bioenergy production and consumption in Africa, including on health and other associated impacts, Yagouba Traoré, African Energy Commission, highlighted the Strategic Framework on the African Bioenergy Data Management, aimed at improving bioenergy data to assist energy decision-making processes.

Toshimasa Masuyama, Ministry of Agriculture, Forestry and Fishery, Japan, shared Japan’s experience, noting current large forest stocks after the switch to fossil fuels for energy. He called



Maria Helena Semedo, FAO Deputy Director-General

for integrating climate-smart and SFM into national carbon neutrality strategies, and using residues and by-products from the wood supply chain to generate renewable energy or as feedstocks for more value-added environmentally-friendly materials.

Launch of the Assuring the Future of Forests with Integrated Risk Management (AFFIRM) Mechanism: Tae-hun Nam, Deputy Minister, Korea Forest Service, described the evolution of AFFIRM, a global platform that responds to the need for a more holistic and integrated way to address multiple hazards, including forest fires. He highlighted the Korea Forest Service-FAO collaboration on the platform.

Maria Helena Semedo, Deputy General of FAO, said that forest management is threatened by a variety of risks, and that these can be reduced while contributing to climate mitigation, biodiversity conservation and the SDGs. She said that AFFIRM signals a paradigm shift from emergency response to risk reduction and enhanced recovery.

Peter Moore, FAO, outlined the AFFIRM mechanism in further detail, noting that these resources will be available beyond the initial pilot countries. He said that risk reduction is much less well understood than emergency response, and requires assessment of hazard, exposure, and vulnerability.

Nam and Semedo then signed the agreement on behalf of Korea Forest Service and FAO, respectively.

The future is now: Investing in young forestry professionals and career development: This event, organized by and for young forest professionals for the first time at a WFC, was moderated by Elaine Springgay, FAO.

Lacey Rose, County Forester, County of Renfrew, Canada, shared lessons-learned from her professional experience in the forest sector, highlighting the importance of mentors, applying for experience broadly, accepting challenges, and finding your community, saying “if you can see it, you can be it.”

Alfred Duval, Future Foresters, New Zealand, spoke about the creation of the Future Foresters network. He noted initial challenges, including lack of networks, generally negative public perception of forestry and lack of awareness, and stressed increased opportunities in the sector, growing support and sense of pride.

Amina Maalim, Kenya Forestry Research Institute, noted that fellowship and mentorship opportunities such as ICRAF-



Second panel of the special event, The Future is Now

CIFOR's West Africa Forest-Farm Interface Project have played a big part in her career development, although these opportunities were limited early on in her career.

Anali Bustos, Monte Alegre Natural Reserve - University of Buenos Aires, Argentina, noted that opportunities in the forestry sector are limited since Argentina focuses on agriculture. She discussed challenges due to the lack of mentorship opportunities and the exclusion of young people in the sector. She noted that forestry restoration is a relatively new science and practice, opportunities are limited and many young people are expected to begin their careers as volunteers.

Maria Paula Sarigumba, Veritree, reflected on her experience as a young forest professional. She highlighted the importance of forming a community and collaborating across generations.

Panelists shared challenges they have faced early in their careers, such as being overwhelmed by acronyms, and grappling with "imposter syndrome." Sharing advice for young professionals, panelists suggested taking up all opportunities, knowing one's strengths, finding a niche, advancing both technical and soft skills, and creating work for other young professionals. They called on senior professionals to become mentors, providing material resources for young professionals, and encouraging practical experience.

The event included the launch of the Global Network for Forestry Young Professionals (ForYP), which aims to, *inter alia*, increase visibility, augment opportunities, diversify voices, and provide meaningful connections.

An intergenerational dialogue panel ensued, with Shireen Chambers, Institute of Chartered Foresters, UK, presenting on the Institute's work investing in young professionals to achieve the UK's push for woodland creation as part of carbon neutrality goals. She noted a skills shortage and lack of awareness of forestry as a green career, but expressed hope, given developments in education and jobs.

Ramon Carrillo Arellano, ITTO, noted that capacity building is at the core of ITTO and that the objective of the ITTO fellowship program established in 1989, is to strengthen professional expertise in tropical forestry and related disciplines.

Maria Chiarella, Project Learning Tree Canada, noted that mentorship is one way of investing in future forestry leaders. Highlighting challenges in the sector, she noted: ethnic

minorities are traditionally excluded in Canada; women are underrepresented, particularly at senior levels; the absence of minority professionals serving as role models; and negative perceptions of careers in forestry, agriculture and natural resources. She highlighted the Project Learning Tree Canada / WFC Green Mentor program designed to create youth mentorship across the globe.

The contribution of a forest circular bioeconomy to sustainable development: This session, moderated by James Astill, was introduced by Sven Walter, FAO, who underscored the bioeconomy's potential for creating jobs, increasing productivity, harnessing research and innovation, and tackling the climate change and biodiversity crises.

Marc Palahi, European Forest Institute, stressed the need for a systemic transformation in the next two decades and the bioeconomy's catalytic role in decarbonizing across sectors, through "in-setting instead of offsetting tactics." He highlighted the need for wood-based textiles and wooden products to replace concrete and steel at scale.

Lee White, Minister of Water, Forest, the Sea and Environment, Gabon, said the solution to Gabon's oil dependency and young population lies in SFM and maximizing the value-added for timber products, highlighting the creation of jobs in peri-urban timber processing hubs. He underscored the need for certification of socially responsible, climate-neutral, and biodiversity-safe practices.

Carlos Faroppa, Ministry of Agriculture and Fisheries, Uruguay, described the evolution of bioeconomy initiatives in Uruguay, and their contribution to the National Development Strategy and SDGs. He emphasized taking a regional approach and international cooperation.

Virginia Puzzolo, Circular Bio-based Europe Joint Undertaking, said that public-private collaboration had been essential to the development of the European bioeconomy, based on balanced investment and clearly defined objectives.

Jane Molony, South African Paper Manufacturers Association, stressed that governments need to create an enabling environment, and that instead of taxes, industry prefers to be responsible for collecting its own fees that can then be put towards priorities determined by industry.

Doris Wang, Shilin, said that bamboo is a sustainable material, since root systems are not destroyed during harvesting, and said under-developed countries should be supported.

Stéphane Hallaire, CEO and founder of Reforest'Action, said that in order to mainstream the bioeconomy we need to encourage entrepreneurship, and highlighted experiences in Nigeria and India. He said that constraints and rules can trigger innovation.

Gijs Breukink, World Wide Fund for Nature, described successes in restoring degraded forest in Brazil, improving logging practices in Gabon, and empowering local communities.

Jim Chamberlain, USDA Forest Service, emphasized the importance of non-timber forest products, such as food and medicine, and the role these can play in providing livelihoods to marginalized populations.

Sandra Regina Afonso, Brazilian Forest Service, said that forest products, such as açai, can provide sustainable livelihoods, supported by local cooperatives, but that fairer trade needs to be fostered.

Jörg Schweinle, Thünen Institute, stressed the need to have a clearly defined strategy to support the bioeconomy, including goals, timelines, and benchmarks.

Mokena Makeka, Dalberg Advisors, noted that the Congo Basin's population is expected to double by 2050, and called for a rapid increase in the use of wood as a substitute for concrete and other building materials.

Summarizing the discussion, Robert Nasi, CIFOR, noted that while "bioeconomy" is not a new concept, its importance needs to be communicated outside of the forest sector. He noted that according to the IMF, fossil fuels are subsidized at a rate of a million dollars a minute, and that this needs to be redirected to climate-beneficial bioeconomy activities.

Rural Finance and Forest and Farm Producers'

Enterprises at the Centre of the 'Green Recovery': Henry Bonsu moderated the session.

Rob Busink, Ministry of Agriculture, Nature and Food Quality, the Netherlands, said that if the expansion of agriculture into forested areas is not addressed, deforestation is likely to continue. Noting that more than 80 percent of the world's food is produced by family farms, he said that agriculture and family farms must be included as part of the solution. He highlighted an initiative by the Forest and Family Facility and the Dutch ministry, which seeks to provide country-level solutions to ensure food security and strong livelihoods while maintaining forests and biodiversity.

Tony Baumann, Federal Ministry for Economic Cooperation and Development, Germany, noted that the pandemic and the climate crises offer a dual opportunity for economic reconstruction, calling for smart policies to discourage market distortions and unsustainable practices, and emphasized the role of smallholder farms and their contribution to a green recovery.

Mattias Lindstrom, Swedish International Development Cooperation Agency, noted that local banks are not interested in rural finance due to actual and perceived risks, and that barriers to financing include high transaction costs, bad governance and low financial literacy. He added that blended finance is one way of raising capital and includes equity, debt and technical assistance.

Anne Arvola, Finnfund, Finland, explained that mobile money is widely accessed and has the potential to provide finance to previously excluded, bottom of the pyramid clients, but these services can only reach those with access to a mobile telephone and broadband networks. She stressed that farmers need knowledge about investments and climate-smart practices as well as access to required inputs.

Clement Ngoriarengey, Deputy Chief Conservator of Forests, Kenya, highlighted inclusive and diverse efforts in Kenya to manage forests and a growing understanding of the role of forest and farm producers. He explained that the importance of smallholder farmers is recognized since they contribute 40 percent of the timber demand in the country.



Elizabeth Nsimadala, President, Eastern Africa Farmers Federation

Bharati Pathak, Chairperson, Federation of Community Forest User Groups Nepal, highlighted her organization's activities aimed at linking forest users all over the country to strengthen their role in the policymaking process, and noted the objectives include coordinating with government agencies and NGOs to establish networks and campaigning to ensure inclusiveness, social justice, good governance, and deepening democracy.

Andriamparany Ranoasy, Director, Fikambanana Fampivoarana ny Tantsaha, presented on Fifata, a Malagasy farmers' organization focused on providing access to credit, training and agricultural advice to its 300,000 members.

Marco Grefa, Asociación Wiñak, Ecuador, spoke about the Chakra Kichwa Amazonica system and the association's work supporting agro-artisanal production focused on preserving biodiversity and cultural heritage while enhancing productivity and wellbeing through sustainable farming.

In a round-table discussion, Elizabeth Nsimadala, President, East Africa Farmers Federation, highlighted the impacts of climate change on small-scale farmers and of consumer power, and drew attention to climate-smart agriculture and green energy, such as solar and biogas, as a means of reducing deforestation in East Africa.

Ma. Estrella Penunia Banzuela, Secretary General, Asian Farmers' Association for Sustainable Rural Development, underscored Indigenous Peoples and local communities as agents of change and solution providers, and called for accreditation and support to allow them to apply directly for climate finance and engage in implementation, monitoring and evaluation.

Cécile Ndjebet, Founder and President, African Women's Network for Community Management of Forests, emphasized women's contribution to halting deforestation and landscape restoration and the need for specific mechanisms to ensure they have access to funding, addressing, for example, guarantees and conditions for credit.

Noting that climate finance is built by and for governments and multilateral organizations, but not for local organizations, Gustavo Sánchez Valle, President, Mexican Forest Farmer Organizations Network MOCAF, Mexico, highlighted the Mesoamerican Alliance of Peoples and Forests' own financial mechanisms, and called for respecting communities' priorities and pre-investing in governance and rights.



Bianca Dager Jervis, Vice Minister of the Environment, Ecuador

Femy Pinto, Non-Timber Forest Products Exchange Programme, highlighted barriers to accessing funding from private investors and institutions, and challenges centered on meeting the requisite funding criteria. She suggested that a facilitatory or intermediary entity could be identified to help overcome these issues.

During the discussion, participants focused on: ensuring that rural finance reaches the people on the ground; the gender gap on land rights and lack of access to finance for women; the feminist development cooperation approach; adapting development assistance to meet the needs of forest and farm producers; scaling up and actively seeking out financial institutions; and using intermediaries as a way of reaching a wider net of forest and farm producers.

Wangari Maathai Award Ceremony and Forest Champions' View: The 2022 Wangari Maathai Forest Champions Award was presented to Cécile Ndjebet, African Women's Network for Community Management of Forests. Accepting the award, Ndjebet shared her experience of meeting Wangari Maathai, highlighting Maathai's vision for mobilizing African women to plant trees.

Maria Helena Semedo, FAO, said all award recipients have demonstrated a great ability to lead their communities, educate others, serve as role models, and achieve large impacts with minimal resources.

The ensuing discussion with past award winners was moderated by Ma. Estrella Penunia Banzuela, Asian Farmers' Association for Sustainable Rural Development. On a question on the inspiration for forestry activism, Gertrude Kabusimbi Kenyangi, Support for Women in Agriculture and Environment, highlighted her personal experience of growing up in a forest-dependent local community and witnessing declining vegetation cover and its impacts on the everyday lives of women. Léonidas Nzigiympa, Burundi Office for Environmental Protection, a previous awardee, said his experience of nearly losing his life in an attack motivated him to find a way to contribute to the lives of others. Ndjebet emphasized the role of her family in instilling a love of agriculture and inspiring her through struggle.

In a video message, Martha Isabel Pati Ruiz Corzo, Sierra Gorda Ecological Group, Mexico, highlighted successes from 35 years of participatory conservation action, including millions

of trees planted, the development of microenterprises, and preservation of biodiversity. She expressed hope that in the future forests will cover all of Mexico, from Baja California to the Yucatan.

Reflecting on her achievements, Nzigiympa highlighted a project with a local community in Burundi that conserved the forest while also building shelters and reducing conflict. Ndjebet underscored improved living conditions, including improved access to electricity and clean water, along with increased mangrove cover. On obstacles and challenges, Kenyangi pointed to security of land tenure for women and access to financial resources. Nzigiympa said that he had received blackmail and threats to his own life.

All panelists stressed that receiving the award impacted their work in positive ways, including through invitations to high-level meetings and access to media platforms to spread public awareness.

In a video message, Maria Margarida Ribeiro da Silva, Verde para Sempre Extractive Reserve, stressed the importance of community organization, transparency and dialogue. She called for increased investments in forest management initiatives, and expressed hope that a knowledge sharing center can be created.

Sub-thematic Dialogues

On Monday, Tuesday, Wednesday, and Thursday, participants convened in a total of thirty dialogue sessions, five for each of the six sub-themes of the meeting.

Sub theme 1: Turning the tide: Reversing deforestation and forest degradation

Session 1: Global deforestation: challenges and opportunities for concrete action to halt and reverse forest loss by 2030: Bianca Dager Jervis, Vice Minister, Environment, Ecuador, described efforts to increase traceability and certification of "deforestation free" agricultural products, including coffee and cacao, and said financial support is needed for small-scale producers.

Adriana Lucia Santa Méndez, Ministry of Environment and Sustainable Development, Colombia, noted that Colombia's new climate law applies to one million hectares of land, and that taxes have been applied to pay for ecosystem services.

Thomas Yaw Gyambrah, Forestry Commission, Ghana, noted that cacao is worth USD 1.2 billion annually to the Ghanaian economy but is leading to deforestation. He highlighted the need to enhance institutional coordination and governance structures and to focus on deforestation hotspots.

Gustavo Sánchez Valle, President, Mexican Organization of Rural Forest Communities, stressed the need to involve Indigenous communities, pay them fairly for ecosystem stewardship, and ensure that the UN International Labour Organization Convention 169, or Indigenous and Tribal Peoples Convention 1989, as well as the Cancun Safeguards, are upheld in implementation of REDD+.

Karine Hertzberg, International Climate and Forests Initiative, Norway, emphasized the need to continue building capacity for

better management, monitoring, reporting, and on-the-ground implementation.

Ben Singer, Senior Forest and Land Use Specialist, GCF, highlighted that 40 times more financing is directed to activities that drive deforestation than to activities intended to combat it. He noted the rapid growth of voluntary carbon markets, largely based on REDD+ activities.

Martin Monaco, Ministry of Environment and Sustainable Development, Argentina, described how Argentina's forest legislation connects to a national fund for payment for ecosystem services, and that this applies to 300 million hectares of forest. He noted efforts to manage the forest sustainably, and increase value-added wood products.

Gandi Sulistiyanto Soeherman, Indonesian Ambassador to the Republic of Korea, said the main challenge is to meet development needs while pursuing SFM.

Ali Aboseena, CEO, Egyptian Environmental Affairs Agency, emphasized the need for access to finance and to link this to the pursuit of global objectives to stop deforestation and forest degradation.

Hyun Park, National Institute of Forest Science, Republic of Korea, described capacity-building efforts based on Korea's extensive experience in reforestation. He called for global solidarity and cooperation, actively sharing experiences, and learning from failures.

Session 2: Enabling and scaling up finance to halt deforestation: This session, moderated by Gabriel Labatte, UNEP, was introduced by Serena Fortuna, FAO, who said the session aimed to discuss mainstreaming forest-positive finance from both public and private sectors, in order to transform food systems to reduce deforestation and support sustainable commodity production.

Bianca Dager Jervis, Vice-Minister, Environment, Ecuador, said her country had been committed to REDD+ since 2008 and was involving stakeholders in forest protection efforts. Orita Hiroshi, Japan Forestry Agency, highlighted the role of Article 6 of the Paris Agreement (cooperative approaches) in scaling up forest investment in developing countries, including by the private sector.

Allan Traicoff, Lowering Emissions by Accelerating Forest finance (LEAF) Coalition, lamented the short supply of high-quality carbon credits. David Antonioli, CEO, Verra, said his company is providing communities with financing and supporting them to change their lives without hurting forests.

Mwangi Githiru, Wildlife Works Ltd, showcased the Ksigau Corridor REDD+ Project Area, which has generated about 1.6 million carbon credits. Ravi Muthayah, Ministry of Plantation Industries and Commodities, Malaysia, described his country's policy approach to stopping unsustainable commodity production practices, including limiting the oil palm estate to 6.5 million hectares.

Benjamin Singer, GCF, described an approach to encouraging deforestation-free supply chains, including: transformational planning and programming; catalyzing climate innovation;



Nathalie Lecocq, Director General, FEDIOL, addresses participants virtually

scaling up models that work using different financial means; and aligning domestic finance with sustainable development.

Tristan Lecomte, Executive President, Pur Projet, described how his company is offsetting its carbon footprint by intervening in its own supply chains through agroforestry.

Carlos Ruiz-Garvia, UNFCCC, outlined the UNFCCC Global Innovation Hub, which aims to facilitate and promote dialogue to promote transformative innovations for a low-emission and climate-resilient future.

Session 3: Responding to changing agrifood commodity markets' requirements to turn the tide on deforestation: Fitriani Ardiansyah, Sustainable Trade Initiative, moderated the panel. Felipe Carazo, Tropical Forest Alliance, noted forests have taken a hard hit because of the increase in food production required to support a growing population, and said it is important to look beyond voluntary actions to regulatory frameworks in order to face challenges.

Maggie Charnley, International Forests Unit, Department of Business, Industry and Strategy, UK, noted the centrality of forests to the UK UNFCCC Presidency, and the importance of stakeholders and traders working across supply chains. She said strong laws can provide confidence to consumers that they are not contributing to deforestation when they buy a product.

Diego Inclán, National Institute of Biodiversity, Ecuador, cautioned that when it comes to deforestation we need to be sure that "the cure is not worse than the illness," adding that the Ecuador REDD+ Action Plan provided an important pathway and clear goals for solutions to the problem.

Nathalie Lecocq, FEDIOL Belgium, said achieving sustainability requires both voluntary and mandatory measures, and a variety of smart tools that can be used depending on the situation. She cautioned against creating difficulties for smallholders, and noted the importance of clear land tenure rights.

Wendy Arenas, Alisos Colombia, said that, in contrast to palm oil, global cocoa production is largely done by millions of smallholders, which poses challenges to regulation. She expressed concern about who is expected to pay for the extra costs associated with certification.



Serena Fortuna, FAO

Gert van der Bijl, Senior EU Policy Advisor, said market-based measures to reduce deforestation can be effective, but are not enough, and emphasized the need for partnerships.

Herry Purnomo, CIFOR, noted south Sumatra lost 63 percent of its forest cover between 1990 and 2019, and said public and private sector commitments matter greatly.

Ahmad Dermawan, CIFOR, said companies often deny responsibility for deforestation, and called for better access to information concerning concession ownership and corporate structures.

Serena Fortuna, FAO, noted the portion of agricultural products traded internationally had increased from 11 to 24 percent from 2000 to 2018, and called for cross-sectoral efforts and the creation of an enabling environment to address challenges.

Session 4: Strengthening governance and verification systems to halt and reverse deforestation and forest degradation: Moderator Chenchu Norbu, Asian Forest Cooperation Organization, noted that legislation alone is insufficient to prevent deforestation and forest degradation, and that this is a shared responsibility between producers and consumers.

Chris Beeko, Forestry Commission, Ghana, reflected that forest governance is more stakeholder-driven than it was before, with a shared vision and increased trust. He said legality verification systems can contribute to more sustainable outcomes.

Erick Luwira, Indonesia Furniture Industry and Handicraft Association, noted that between 2001 to 2019, illegal logging dropped from 80 to 20 percent of Indonesia's timber supply. He said that additional scrutiny under voluntary systems and systematic data collection has led to increased credibility, but said that new requirements can pose challenges to smallholders.

José Filadelfo Martínez, Voluntary Partnership Agreements (VPAs), Honduras, noted that the EU-Honduras VPA will soon be ratified. He stressed the importance of stakeholder engagement and recognition of Indigenous land rights, and called for "strong but simple" systems that allow smallholders to achieve benefits from legal forest management.

Peter Feilberg, Preferred by Nature, noted the benefits of risk-based approaches to verification and certification, including reducing the burden on smallholders. He said current systems

could be augmented by incorporating satellite data, and by improving opportunities for input from stakeholders. He observed that voluntary initiatives have contributed to the development of mandatory measures, including regarding terminology and concepts.

Melissa Blue Sky, Center for International Environmental Law, presented a comparative analysis of timber legality frameworks in the US, EU, Australia, Japan, and the Republic of Korea, examining requirements related to due diligence and declarations. She said there is an emerging consensus that these demand-side laws are making a major contribution to reducing trade in illegal timber.

Sheam Satkuru, ITTO, noted these new measures provide confidence in the legality and sustainability of forest products, but must be credible in order to mitigate risk.

Session 5: How to address drivers for deforestation - Implications for policy-making: This session was moderated by Estelle Fach, Central African Forest Initiative.

María José Sanz Sanchez, Basque Centre for Climate Change, said while advances in acquiring consistent time series of land cover geospatial data have been helpful for identifying, deforestation hotspots and direct drivers of deforestation, underlying drivers are more complex to monitor and understand, requiring interdisciplinary approaches combining geospatial land cover and land use data with other economic, social, and other data.

Frédéric Achard, Joint Research Centre, European Commission, said the EU Forest Observatory monitors global change in forest cover and forest degradation, and monitors the consumption and production of commodities and products linked to deforestation and forest degradation, such as cocoa and palm oil.

Rémi D'Annunzio, FAO, presented a suite of methods and tools for identifying and quantifying the drivers of deforestation and forest degradation to support land-use decision making. He stressed the importance of robust, transparent, and reproducible methods; active participation from local communities, academia and civil society; and a focus on capacity building.

Augusto Castro-Núñez, International Center for Tropical Agriculture, noting many countries with the potential to reduce emissions caused by deforestation are experiencing conflict, presented findings from a case study on deforestation in Colombia. He highlighted the underlying deforestation driver in times of both conflict and peace is land grabbing.

Ray Thomas Kabigting, Forest Management Bureau, the Philippines, said his country had institutionalized the national forest monitoring system into policy in support of its goal to be REDD+ ready and to participate in results-based payments, highlighting they still need to develop and enhance a comprehensive satellite monitoring system.

On challenges to ensuring data accessibility for stakeholders, panelists highlighted disparity between large companies and smallholders in data access; the need for data sharing agreements before data is produced; and the importance of transparency on methods of data generation.



Juan Carlos Jintiach, COICA

In closing remarks, Arild Angelsen, Norwegian University of Life Sciences, said data provides a good platform for policy dialogue, because numbers are considered neutral, but cautioned that numbers can also be political. He stressed the importance of transparency and access to data.

Sub theme 2: Nature-based solutions for climate change adaptation and mitigation and biodiversity conservation

Session 1: Setting the scene of forests and trees as nature-based solutions: This session was moderated by Henry Bonsu. Via video message, Elizabeth Maruma Mrema, UN CBD Executive Secretary, underscored forests' importance and called for higher ambition to enable the transformation needed.

Deborah Lawrence, University of Virginia, elaborated on forests' role in climate mitigation, adaptation and resilience, including through regulating temperature, contributing to rainfall, stabilizing the local climate, and minimizing extreme weather and risk.

Juan Carlos Jintiach, Coordinator, COICA Ecuador, recalled Indigenous Peoples' long experience maintaining forests and their connectivity to them, underscoring free, prior informed consent procedures and the importance of implementing NbS with the communities.

Michael Schlup, SAIL Ventures, drew attention to the Green Finance for Sustainable Landscapes project promoting sustainable landscapes, and called for changing how projects are financed and for creating incentives through long-term credit. Recalling the recent change in renewable energy access, he expressed optimism that forest solutions can be found once the right regulatory frameworks and financial incentives are in place.

Susan Chomba, World Resources Institute, underscored the need to: reach the more than 300 million poor local communities who depend on forests for food, fodder and energy; make agriculture more sustainable and productive to ease pressure on forests; and ensure supply chains are not driving deforestation.

In response to questions from the floor, participants addressed, *inter alia*: forests beyond carbon; valuing environmental services; the use of timber as a renewable material; substantive engagement of women and elderly people; and the need for targets, clear land tenure, and ownership of projects.

Session 2: Sustainably managed forests for biodiversity:

Robert Nasi, CIFOR, said that non-protected areas contain high biodiversity values. He gave an example of community forest concessions in Guatemala's northern Petén region, which he said demonstrates that local communities can manage forests for the production of timber and non-timber forest products, protecting the forest and its biodiversity.

Thomas Hofer, FAO, highlighted the key findings from the upcoming FAO-CIFOR review on mainstreaming biodiversity in forestry. He noted SFM, managed for production and other benefits outside Protected Areas, has a critical role in biodiversity conservation. Other findings include that biodiversity underpins benefits and services provided by forests; and as forest resources continue to decline, effective interventions are needed to better mainstream biodiversity within the forest sector.

Jamal Annaglyjova, UN CBD, highlighted Aichi Targets 5 (halving deforestation) and 15 (restoring ecosystems), noting that loss and degradation of habitats still remains high and that overall the targets have not been achieved. She explained there is incomplete understanding of the complexity of ecosystem restoration, and it is difficult to produce reliable data to achieve this target.

Sheam Satkuru, ITTO, highlighted the ITTO-CBD Collaborative Initiative for Tropical Forest Biodiversity, which is designed to enhance local capacity for biodiversity conservation in production forests and for the rehabilitation of degraded and secondary forests.

Francisco Razzolini, KLABIN, Brazil, said his company was the first in the pulp and paper industry in the southern hemisphere to receive the Forest Stewardship Council certification in 1998. He noted that 23 sustainability goals had been established, with five related to biodiversity.

Chemuku Wekesa, Kenya Forestry Research Institute, highlighted conservation challenges in the Taita Hills forests including loss, fragmentation and degradation of the Indigenous forest cover. He elaborated on strategies to overcome these challenges including: ecotourism, bee-keeping, and butterfly farming. Wekesa noted that additional strategies also include the establishment of agroforestry belts and tree nurseries.

Session 3: Global restoration programmes during the UN Decade on Ecosystem Restoration: This session was moderated by Adriana Vidal, Chair of the Global Partnership on Forest and Landscape Restoration, and Christophe Besacier, FAO.

In a keynote speech, Tiina Vähänen, FAO, explained the background and recent developments under the UN Decade on Ecosystem Restoration, including a call for World Restoration Flagships as models for restoration and the Multi-Partner Trust Fund. She noted barriers around political will, public awareness, legislative and policy environments, scientific research, finance, and technical capacity.

Jair Urriola Quiróz, Central American Commission on Environment and Development, spoke about the Commission's work and outlined key elements of the Declaration on restoration and the AFOLU 2040 initiative for productive forests.

Eun-sik Park, Secretary-General of XV WFC Secretariat, Korea Forest Service, shared the successful experience of the Republic of Korea as the only country to have managed to restore their forest after World War II, identifying key factors of success as the fact that all Koreans participated in the effort, and the existence of political commitment with accompanying legal and institutional measures.

Alfred Gichu, Ministry of Environment and Forestry of Kenya, elaborated on Kenya's pledge to restore nine percent of Kenyan territory, highlighting the need for Kenyans to "move as a team" and for investment in afforestation and reforestation programs that deliver livelihood benefits.

Via video message, Arlette Soudan-Nonault, Minister of Environment and Sustainable Development and the Congo Basin, Republic of Congo, described restoration efforts, including those with the Central African Forest Commission, and drew attention to impacts of armed conflict in forested areas.

Also by video message, Eve Bazaiba Masudi, Vice Prime Minister of Environment and Sustainable Development, Democratic Republic of Congo, elaborated on efforts to prevent degradation, highlighting SFM, REDD+, and the Global Peatlands Initiative.

Deborah Sue, Ministry of Forestry, Fiji, spoke on challenges to restoration in Fiji, including fragmentation and lack of appreciation of native species. She underscored the importance of community and stakeholder consultations, alternative income generating activities, and local champions.

Chadi Mohanna, Ministry of Agriculture, Lebanon, described Lebanon's shift towards a forest and landscape restoration approach, combining restoration with social needs and food security.

Addressing how to bring more youth into governance processes, Yugratna Srivastava,

Youth Constituency Focal Point to UNEP, emphasized rights-based participation, with youth engagement always designated and based on mandate, not invitation.

Luc Gnacadja, Lead UN Decade Science Task Force, addressed past failures, including lack of attention to livelihood benefits, limited consideration of trade-offs, and insufficient engagement with planners. He recommended: partnerships,



Luc Gnacadja, Lead, UN Decade Science Task Force

especially with those who hold the land; long-term focus; shared core principles; and information sharing from the onset.

Garo Batmanian, World Bank, emphasized the need for a catalog of tools with different sources of financing given the "ecosystem continuum," and underscored risk management and a level playing field for private sector involvement.

Speaking on the private sector's contribution to restoration, Stéphane Hallaire, CEO and founder of Reforest'Action, drew attention to the "huge amount of money" for carbon finance and to the large potential of transforming supply chains into a sustainable, regenerative, circular bio-economy. He highlighted his company's search for "ecopreneurs" who will restore land while creating sustainable value chains and for projects to take up climate-related funds.

Session 4: Harnessing NbS from forests for climate change mitigation and adaptation in NDCs: Ali Abosena, Egyptian Environmental Affairs Agency, said UNFCCC COP-27 will be the "COP of implementation," and 2022 is an important year for accelerating and delivering forest pledges.

Hyoeun Kim, Ambassador and Deputy Minister for Climate Change, Republic of Korea, said her country will meet its climate targets by continuing to create forest carbon sinks through restoration, urban forestry, SFM and the use of wood in construction.

Pablo Vieira, NDC Partnership, said that although NDCs have increasingly incorporated forests, technical assistance is still required to identify specific actions. Pointing to challenges with robust monitoring, reporting and verification (MRV), finance, and capacities for implementation, he said a whole-of-government and whole-of-society approach is needed to drive implementation.

Thomas Yaw Gyambah, Forestry Commission, Ghana, described how his country is leveraging forests and trees in climate action through REDD+ implementation, plantations, and enhancement of forest governance through community resource management.

Valeria Cadena de la Espriella, Ministry of the Environment, Water and Ecological Transition, Ecuador, said forests play a crucial role in adapting to climate change in her country because they provide relevant mitigation co-benefits as well as enhancing local community resilience.

Myrna Cunningham, Fund for the Development of Indigenous Peoples of Latin America and the Caribbean, highlighted how NbS are community based and directed by Indigenous Peoples. She called for land security, reaffirmation of culture, and respecting and supporting Indigenous governance.

Alexandre Meybeck, CIFOR-ICRAF, underscored that although forestry and agroforestry are being integrated into NDCs, there is a need for better MRV of adaptation outcomes, increased finance, and better collaboration between sectors and dialogue with those protecting nature.

Jessica Vega Ortega, Global Indigenous Youth Caucus, stressed the need for NbS to integrate youth from diverse sectors of society, so that transformation can be holistic and sustainable.

Session 5: The role of forest genetic resources and integrated management of pests and diseases in maintaining healthy and resilient forests: This session was moderated by Shiroma Sathyapala, FAO.

Paul Bosu, Council for Scientific and Industrial Research, Ghana, said integrated pest management focuses on long-term prevention, as opposed to eradicating pests. He outlined methods including genetic selection for resistance, introducing a mixture of species, and introducing resistant species in mixes.

Marius Ekué, International Center for Tropical Agriculture, stressed the need to apply functional traits to align species selection with restoration and production objectives and increase resistance to stress factors, and to ensure the use of genetically diverse germplasm to promote resilience.

Prasad Hendre, CIFOR-ICRAF, stressed the importance of genetic and inter-species diversity, noting gene banks as a useful tool in this respect. He highlighted the need for decision support tools for farmers and planters to help them understand the best trees to be planted in each area in order to improve resistance and yield.

Shambhu Charmakar, Technical University of Dresden, Germany, said integrated pest management in order to manage forest invasive species is now part of a forest management plan in his country, noting the need for more studies to provide support for growers.

Hyerim Han, Korea Forest Service, said pine wilt disease is devastating Asian forests, highlighting control methods are based on monitoring its life cycle, and the need for strong governmental leadership to control the disease.

Sub theme 3: The green pathway to growth and sustainability

Session 1: Managing forests for the SDGs: Creating value, equality and resilience from forest products and ecosystem services: Garo Batmanian, World Bank, highlighted that although there is a tendency to focus more on SDG 15 (life on land) when it comes to forests, forests in fact are interlinked to multiple SDGs. He stressed the need to promote the landscape approach in investments, and improve monitoring and reporting.

Yanshu Li, University of Georgia, US, said forests contribute to national economies both directly, such as through direct trade in forest products, and indirectly, by enabling environmental conditions for other sectors such as agriculture.

Benjamin Filewod, London School of Economics and Political Science, UK, noted countries follow variable development pathways in the forest sector, characterized by unequal distribution of benefits from forests globally. He said the standard of higher forest education is a significant predictor of the development outcomes of forest sectors.

Paola Sarela Pozo Inofuentes, Thünen Institut, emphasized the role of a forest-based bioeconomy contributing to the realization of the SDGs as an ultimate win-win for both the environment and people. She highlighted the imperative of developing value chains in the forest bioeconomy.



Garo Batmanian, World Bank

Francisco Aguilar, Swedish University of Agricultural Science, noted the value of wood-based energy in contributing to SDG 7 (energy), especially in developing countries and low-income countries, in the right conditions. He urged for bringing local communities that rely on wood energy on board to craft sustainability strategies.

Luke Brander, Vrije Universiteit Amsterdam, the Netherlands, highlighted the role of forest ecosystem services in supporting green recovery, noting mangroves, tropical and temperate forests have contributed the most value.

Speakers identified key messages from the session, including the need for a comprehensive information database, monitoring, reporting, and evaluation; and the need to promote value addition, valuation, monetization and deliberate investment in forest services.

Session 2: Advancing decent work, green jobs and sustainability in the forest sector: This session was moderated by Henry Bonsu.

Alette van Leur, International Labour Organization, said that as the world of work changes, the forest sector can play a key role towards a just transition that takes into account climate change mitigation and decent work.

Paola Deda, United Nations Economic Commission for Europe (UNECE), highlighted the opportunities of a transition towards a circular, bio-based economy for the creation of green jobs in forestry. Yong-kwan Kim, Korea Forest Service, introduced his country's green jobs policies, in particular the response to COVID-19 and the impacts of climate change.

On the issue of promoting decent work in the forest sector through social dialogue, Apolinar Zarzuela Tolentino, Building and Wood Workers International, noted the importance of social dialogue at different levels, keeping in mind the four building blocks of decent work. Victor Violante, Australian Forest Products Association, noted the importance of tripartite social dialogue and government leadership.

Kathryn Fernholz, Women's Forest Congress, noted the need to consider the roles of women to ensure equality, as well as individual and organizational successes.

Cho Jung Myung, Korea International Cooperation Agency, stressed the importance of young people in developing countries, most in rural areas, who were particularly affected by the



Moderator **Henry Bonsu**, journalist and broadcaster

pandemic. Rebecca Ssanyu, Development Research and Training, Uganda, noted that young people employed in the forest sector in Uganda were mostly in low-skilled stages of the value chain, even when they had higher education qualifications.

Jörg Schweinle, Thünen Institute, Germany, explained challenges related to data collection on forest-related employment, including how such figures were approximations based on best efforts. Marta Gaworska, Polish State Forests, explained forestry employment statistics in Poland, highlighting the Statistical Yearbook of Forestry as a key source of information. Sven Walter, FAO, stressed the importance of women in leadership, capacity building, and social dialogue, and the need to work to improve data availability.

Session 3: Innovation in the forest sector: New paths to growth and sustainability: The session was moderated by Eric Hansen, Oregon State University, US, who said that while the forestry industry has historically disinvested in research and development, times are changing, and it is an exciting period for new product development.

Duncan Mayes, InnoRenew Centre of Excellence, outlined innovations in mass timber construction that address material utilization rates. He noted new technologies to recycle medium-density fiberboard, and architectural approaches to designing for reuse and disassembly.

Olajide Joseph Alaba, BlackCamel Energy, highlighted the problem of illegal logging, pointing to initiatives in Nigeria to improve the traceability of timber, stressing that Western countries are complicit in illegal logging in Africa.

Heidi Brock, President & CEO, American Forest and Paper Association, highlighted innovations such as a paper mill with net zero water usage, new technologies for paper padded mailers, and an initiative to raise public awareness of the recyclability of pizza boxes.

Sandra Regina Afonso, Brazilian Forest Service, underscored the potential for non-timber forest products as drivers of the bioeconomy in Brazil. She noted innovations related to social organization within the value chain such as the Amazon Nut Observatory.

James Roshetko, ICRAF-CIFOR, outlined the Asia-Pacific Roadmap on Innovative Technologies for the Forest Sector, highlighting recommendations including: improving monitoring

of forest resources; strengthening regional cooperation; and ensuring coordination across sectors, actors and scales. Mokena Makaka, Dalberg Advisors, stressed that although we need more data, data is not an end in itself; but rather, patterns and insights gained from data will help us understand how to create more equitable societies.

Marcel Starfinger, Technische Universität Dresden, Germany, presented a systematic literature review of cases where trees have been used as collateral for loans, saying tree collateral can play a vital role in supporting smallholder forestry.

Aurelio Padovezi, Università degli Studi di Padova, Italy, presented a theory of change for socially innovative forest and landscape restoration.

Session 4: Scaling up access to finance by smallholders and their organizations to promote sustainable landscapes:

In opening remarks, moderator Ben Vickers, GCF, said smallholders, communities and small- and medium-sized enterprises in low-income countries have struggled to access finance to improve and scale up sustainable practices.

In keynote remarks, Alfred Gichu, Ministry of Environment and Forestry, Kenya, described Kenya's national strategy to achieve 10 percent forest cover, including through the private sector and greater engagement with smallholders.

Garo Batmanian, World Bank, outlined the Dedicated Grant Mechanism established in Mexico, saying it aims to ensure that smallholders receive benefits. He highlighted challenges to scaling up the mechanism, including a lack of organization at the local level.

Petri Lehtonen, Particip, discussed how to address the problem of the small number of bankable projects in the world's poorest countries. She emphasized the need for smallholders to organize, and for enabling conditions to be provided.

Alex Freeland, Komaza, said smallholder farmers are vital in sub-Saharan Africa, and outlined the development of a smallholder financial vehicle for vulnerable people in the forest sector.

David Brand, Forestry Investment Management Business New Forests, said the shifting of economics towards climate is driving a new land-use economy that will require strong community engagement and win-win solutions.

Gustavo Sánchez Valle, Alianza Mesoamericana de Pueblos y Bosques, described a new mechanism, the Mesoamerican Territorial Fund, that aims to address the problem of the global climate finance system not being designed for communities.

Ernesto Sabado Guiang, RTI International, outlined the experience in the Philippines of setting up a landscape-based payment scheme for ecosystem services using a cost-based valuation of ecosystem services.

Sub theme 4: Forests and human health and well-being: revisiting the connections

Session 1: Overview of the connection of forest ecosystems to human health, well-being and social stability: Liisa Tyrväinen, Natural Resources Institute, Finland, moderated the session.

Hasu Lim, Korea Forest Service, highlighted the wave of new and emerging zoonotic diseases as a direct threat to human

health, noting that this has caused USD 100 billion in economic damage in the last two decades. He discussed a growing interest in urban forestry as a way of dealing with degradation, and outlined the Republic of Korea's policy on urban forests as well as customized forest welfare, which has resulted in increasing forest cover.

Bharati Pathak, Chairperson, Federation of Community Forest User Groups, Nepal, reflected on community forestry to promote forest ecosystems, human health, wellbeing and societal stability. She called for institutional strengthening of community forestry groups and noted the need to enhance good governance.

Matilda van den Bosch, Barcelona Institute for Global Health, Spain, emphasized the need for more trees and less medicine, pointing to evidence on green spaces being good for health. She observed that mental health issues are more common in cities, and green spaces can reduce the risk of ADHD.

Highlighting the importance of urban parks, Bishop Ngobeli, Johannesburg City Parks and Zoo, South Africa, explained that the COVID-19 lockdown had made people appreciate urban green space, and a Presidential program has resulted in more than 10 million trees being planted.

Thomas Astell-Burt, University of Wollongong, discussed the net health benefits from tree planting. He explained that in Australia, the prevalence of loneliness among adults has reached 40 percent in the last few years, and a recent analysis highlights that increasing tree coverage reduced the incidence of loneliness by half.

Ulrika Stigsdotter, University of Copenhagen, Denmark, noted that landscape architecture is increasingly evidence-based, with the natural environment being designed to promote health and support therapies. She advocated body-integrated and nature-based psychotherapy, where various nature activities and experiences are used as therapeutic tools.

Session 2: Forests for human health: This session featured presentations from: Melanie Adamek, Head, Institute for Forest Medicine and Forest Therapy, Germany; Francesco Riccardo Becheri, Founder and Scientific Director, Pian dei Termini Forest Therapy Station, Italy; Amy Ickowitz, CIFOR; Qing Li, President, Japanese Society of Forest Medicine; Domyung Paek, Center for Occupational and Environmental Diseases, Green Hospital, Republic of Korea; Won Sop Shin, Korea Forest Therapy Forum; and Maxine Whittaker, James Cook University.

Key points raised during the discussion included that forests can support people's health in multiple ways, but there are also risks related to infectious diseases, safety and security, with people working or living in forests particularly vulnerable to risks. Panelists noted that evidence from various national contexts, including Republic of Korea, Italy, Germany, and Japan, shows that forest-based health practices such as forest medicine, forest bathing, and forest therapy yields enormous health benefits at local, national, and global levels. On measures that will enhance the contributions of forests to human health and wellbeing, they noted engagement and forest-based training of key actors such as medical practitioners; partnership and collaboration among sectoral actors; data, knowledge and

information sharing; and promoting forest-based health practices including through integration of national health and forest policies.

Session 3: Forests for securing livelihoods: Ronnakorn Triraganon, The Center for People and Forests (RECOFTC), moderated the session. Elizabeth Nsimadala, East Africa Farmers Federation, delivered a keynote presentation on the role of farmers in climate change mitigation, the economic value of forests and the linkages between forests and human health. She noted that Uganda lost half its forest cover between 1990 and 2015 and if current trends continue in Tanzania, all the domestic forests will disappear within 50-80 years.

Apollinaire William, Albertine Rift Conservation Society Network, highlighted a 20-year agroforestry for livelihoods project in the Rulindo and Bugesera Districts of Rwanda. The project, which will benefit more than 30,000 households and create 5,000 green jobs, aims to build resilient ecosystems for carbon sequestration and to empower a network of community groups as champions of change for inclusive and sustainable livelihoods.

Ambrish Mehta, Action Research in Community Health and Development, India, underscored the need for secure tenure of rights to enable local communities to lift themselves out of poverty and protect forests. He highlighted the Forests Rights Act, 2006, which recognizes individual forest rights, and explained that community rights ownership gives rights to collect, use and sell minor forest products like bamboo.

Ma. Estrella Penunia Banzuela, Secretary General, Asian Farmers' Association for Sustainable Rural Development, noted: customary tenure, food security and livelihoods are inextricably linked; many customary tenure policies face implementation challenges; and livelihoods in customary tenure areas have environmental functions but are undermined by insecure customary tenure recognition.

Daniel Desire Ouedraogo, TreeAid, Burkina Faso, highlighted a non-timber forest products project as a key tool for improving food security and nutrition in arid zones in Burkina Faso. He noted that around 30,000 households had been involved in the project, which has diversified income streams through: creating forested areas; intensive production of moringa plants and baobab fruit; and capacity building activities.

Lisa Huyen, Co-founder, Viet Nam Star Aniseed Cassia Manufacturing and Exporting Joint Stock Company, explained that there is high potential, but lack of investment and manufacturing technology, to enhance the value of non-timber forest products in the country. Highlighting her company's activities, she noted that: 300 local jobs had been created; only organic fertilizers and high-quality cinnamon seedlings are used; and more than 1000 farmers are trained annually.

Session 4: Forests for social cohesion: This session was moderated by Femy Pinto, Executive Director, Non-Timber Forest Products Exchange.

Fabiola Martha Muñoz Dodero, Coalition for Sustainable Production, Peru, said deforestation can only be addressed by creating opportunities for other income generating activities, and



Fabiola Martha Muñoz Dodero, Coordinator of the Coalition for Sustainable Production, Peru

noted the need for tropical agriculture that does not compete with forests.

Qiang Ma, FAO, highlighted social protection as a strategy for mitigating poverty, food insecurity and vulnerability to shocks in developing countries. She explained that forest and farm producer organizations and other community-based organizations can contribute to the design and implementation of, and access to, national social protection policies.

Gertrude Kabusimbi Kenyangi, Executive Director, Support for Women in Agriculture and Environment, observed that women and other marginalized groups such as Indigenous Peoples, the poor, youth, and people with disabilities, continue to experience ongoing exclusion in forest use. She said women often do not benefit from forest-related investments and face large inequalities, but countries with a higher number of women-led NGOs are more likely to experience lower levels of deforestation.

Myline Macabuhay, Asian Farmers Association for Sustainable Rural Development, noted that many young people are not attracted to agriculture and forestry because of perceived low earning potential. She highlighted her organization's efforts to mobilize and provide leadership training to young farmers in Asia, noting that youth have lots of ideas on making farms productive and on resource allocation to sustainably transform food systems.

Erdogan Atmis, Bartın University, Turkey, presented on gender differentiation in rural development and cooperatives of Turkey. He explained that forest villagers are the lowest income group in Turkey. He said women's cooperatives were established to boost their participation in the workforce, and they mainly work in the food sector and take a bottom-up approach, while men's cooperatives are characterized by a top-down approach. He called for reducing taxes, increasing the competitiveness of women cooperatives, and creating incentives to enable young people to participate.

Session 5: Forests for humanity and peace: This session was moderated by Ki Weon Kim, Kookmin University, Republic of Korea.

Jessica Vega Ortega, Global Indigenous Youth Caucus, underscored that Indigenous Peoples have been safeguarding forests and biodiversity for generations, calling for action to maintain their connection to Indigenous lands, traditional

knowledge, and cultural identities. She stressed the need for youth to be involved in planning and decision-making.

Mariano Castro Jimenez, CBD, said Parks for Peace are a category of transboundary conservation areas dedicated to the promotion, celebration and commemoration of peace and cooperation, highlighting the potential of conservation as an instrument for alleviating conflict.

Ina Vandebroek, University of the West Indies, emphasized that forests sustain cultural heritage and connect rural and urban areas through markets for non-wood forest products.

Dipayan Bhattacharyya, World Food Programme, outlined a collaborative project on restoring degraded land in a refugee camp through integrated reforestation, after a sudden influx of refugees caused rapid deforestation which in turn led to conflicts between refugees and local communities over access to firewood.

Sub theme 5: Managing and communicating forest information, data and knowledge

Session 1: Towards open and transparent reporting and dissemination of forest data: Dirk Nemitz, UNFCCC Secretariat, highlighted the need for more in-country reviewers for the UNFCCC, and noted the Enhanced Transparency Framework is the foundation of the Paris Agreement.

Pascal Martinez, GEF, emphasized the need for institutional coordination and capacity building.

Anssi Pekkarinen, FAO, said the FAO Global Forest Resources Assessment contains national level statistics, and updating is easier with the Forest Resources Assessment reporting platform.

Bob Kazungu, Ministry of Water and Environment, Uganda, noted the challenge of who gets the data, highlighting the need for data sharing protocols and for better training for collection of forest data in many sectors. Humberto de Mesquita, Brazilian Forest Service, said the FAO initiative on Building global capacity to increase transparency in the forest sector (CBIT-Forest) had helped improve data transparency for the Brazilian National Forest Inventory.

José Armando Alanis-de la Rosa, National Forestry Commission, Mexico, noted challenges related to socioeconomic information. Jong Su Kim, National Institute of Forest Science, Republic of Korea, said his country still faces pressure and has a decreasing forest area over time, mostly due to population dynamics and agricultural expansion.

Session 2: Forest monitoring in action (I) - 'Eyes on the forest' - remote sensing technologies, innovations and initiatives: This session was moderated by Anssi Pekkarinen, FAO.

Karine Hertzberg, Norway's International Climate and Forests Initiative, elaborated on the Initiative's Satellite Data Programme and the advantages of high-resolution data for improving and validating datasets.

Rémi D'Annunzio, FAO, presented on FAO's system for earth observations, data access, processing and analysis for land monitoring (SEPAL) platform, an open source, big data platform for land and forest monitoring. Daddy Kipute, GIS consultant, Democratic Republic of the Congo, elaborated on the use of remote sensing to trace changes, level and even drivers

of degradation in areas with artisanal small-scale forestry in the Congo Basin.

Laura Duncanson, University of Maryland, presented NASA's Global Ecosystem Dynamics Investigation (GEDI), a free, open-source project specifically designed to collect data on forest structure from space. Belinda Arunarwati Margono, Ministry of Environment and Forestry, Indonesia, spoke on deforestation measurements through remote sensing in Indonesia, allowing for monitoring of deforestation and deforestation early warning.

Inge Jonckheere, FAO, presented a white paper on sample-based area estimation. Oswaldo Ismael Carrillo Negrete, SilvaCarbon, elaborated on improved methodological approaches to estimate deforestation rates in Mexico, showing contrasting results from using different approaches.

Rajit Gupta, Central University of Rajasthan, presented on the use of full-waveform Global Ecosystem Dynamics Investigation Lidar (GEDI) LIDAR data in deciduous forest growth variables estimation and modeling in Gujarat, India.

Cristino Tiburan, Institute of Renewable Natural Resources, University of the Philippines, explained successes in modeling future scenarios of forest cover in selected watersheds in the Philippines.

Discussion and questions from the floor centered on the importance of, *inter alia*: ground and field data to calibrate satellite data; precise geolocation and transparency in the data sets; publicly available and open-source data; and policy measures to improve monitoring tools for biodiversity or ground cover data.

Session 3: Forest monitoring in action (II) - 'into the forest' - field-based assessments: This session was moderated by Joowon Park, Kyungpook National University.

In keynote remarks, Christoph Kleinn, University of Goettingen, Germany, said forest information has been increasing rapidly but little work has been done to examine its impact on decision making. He noted that while remote sensing is rapidly increasing in resolution quality and frequency, field work is still needed for many things such as species identification and socio-economic data collection.

Several speakers reported on national forest inventories. Zaheer Iqbal, Bangladesh Forest Department, said Bangladesh's national forest inventory was self-sufficient in design, implementation and analysis, measuring nearly 1900 plots over two years.

Lobzang Dorji, Ministry of Agriculture and Forests, Bhutan, noted the physical difficulties in conducting forest inventories in Bhutan, with its steep and high terrain. Saah David, Forestry Development Authority, Liberia, reported that Liberia undertook its first national forest inventory recently in its three main communities.

Rebecca Tavani, FAO, said while lessons are being learned in socio-economic surveys, these still need strengthening, for example to include gender aspects and to provide the data needed by policymakers. Anatoly Shvidenko, International Institute for Applied Systems Analysis, said Russian forests appear to be expanding, possibly driven by increasing temperatures.

Pierre Emmanuel Leclercq, Director General, French National Forest Office ONF International, said Côte d'Ivoire's national forest inventory has 3000 plots countrywide in three density classes, and initial results suggest that the forest estate has shrunk.

Session 4: Monitoring the forests to restore ecosystems: This session was moderated by Khalil Walji, ICRAF.

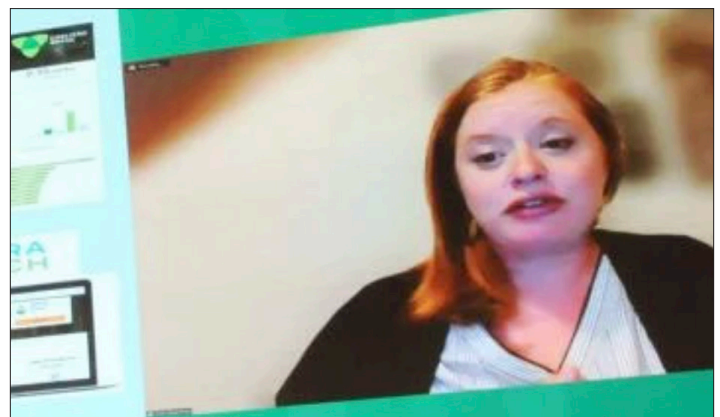
In a keynote presentation, Julian Fox, FAO, presented on the global indicators for monitoring ecosystem restoration and the Framework for Ecosystem Restoration Monitoring platform and registry.

Jillian Gladstone, Coordinator of the Global Restoration Observatory, introduced the work of the Observatory, a global network of data providers, NGOs and practitioners convening to strengthen capacity, tools and systems used to monitor the restoration of landscapes, highlighting the benefits of having these many actors being able to work together. Leigh Winowiecki, ICRAF, underscored the importance of coupling on-the-ground monitoring, remote-sensing, and citizen science, and engaging stakeholders in the monitoring process. Clara Rowe, CEO, Restor, presented on Restor, an open science platform for monitoring ecosystem restoration and conservation, and emphasized the importance of further work on social indicators.

On private sector engagement, Gill Einhorn, Head, It.org, identified greenwashing as a limit to investment and underscored minimum criteria to avoid it, including transparent and comparable pledges, and going beyond self-reporting and incorporating spatial reporting. She said sound monitoring catalyzes investment, and work on socio-economic indicators is key.

Andrew Wilcox, Unilever, reported on Unilever's commitments to zero deforestation and stressed the need for transparency in supply chains and for collective action, highlighting the Forest Data Partnership. Rémi D'Annunzio, FAO, further elaborated on FAO's role in the Forest Data Partnership.

Patrick Ndungu Mugi Mugi, FAO, called for focusing on qualitative as well as quantitative aspects and underscored coordination and sound data input. Adriana Vidal, IUCN, elaborated on IUCN's Restoration Barometer. Dennis Garrity,



Jillian Gladstone, Global Restoration Observatory, presents remotely.



Rémi D'Annunzio, FAO

ICRAF, presented on natural regeneration approaches in global reforestation efforts and the Global EverGreening Alliance, emphasizing monitoring systems should distinguish among restoration types.

Ki Hyung Park, National Institute of Forest Science, Republic of Korea, spoke on restoration cooperation between his country and China, stressing the need for long-term monitoring and assessment; lesson-learning and field investigation to understand causes of failure; and comprehensive and accessible field-data collection.

Session 5: Strengthening communication and education:

This session was moderated by Henry Bonsu. The first panel discussion was led by: Robert Grace, Founding Partner, M&C Saatchi Abel; Ingwald Gschwandtl, Global Coordination Group of the Regional Forest Communicators Network; Maria De Cristofaro, FAO; Jennifer Hayes, USDA Forest Service Rocky Mountain Research Station; and Marianela Arguello Leiva, Tropical Agricultural Research and Higher Education Center, CATIE.

On communicating effectively, participants emphasized: thinking about the perceptions that require shifting; considering the conversation you want to create, and determining how you want the audience to feel. The need to understand the power of new media and key influencers was also highlighted. Participants were encouraged to avoid complexity, communicate simply, and consider using social media platforms like TikTok, which has a global, youthful target audience. The effectiveness of pivoting from fear to hope-based communication, particularly when sharing science-based information, was also discussed, as well as the role of audio, visual and storytelling to enhance communication. Local relevance and preferences were mentioned as essential for reaching audiences.

Alexander Buck, Executive Director, IUFRO, opened the second half of the session. He highlighted the Global Forest Education Project led by FAO, ITTO, and IUFRO. He recommended: including more forest related topics in primary and secondary curricula, providing easy-to-access learning materials, increasing stakeholder involvement in curricula development; and addressing the barriers to enrolment of women and ethnic minorities in forest education.

The presentation was followed by reactions and discussion from the panel comprising: Janet Martires, FAO Kids-to-Forests initiative, the Philippines; Leila Rossa Mouawad, Forest communications student; Magdalena Jovanovic, International Forestry Students Association; and Christoph Kleinn, University of Göttingen, Germany. Issues raised included: the need to focus on outdoor activities as part of the school curricula; forestry being a male dominated sector; shifting negative perceptions of forestry; generating relevant forest information; and understanding how decision makers use forestry information.

Sub theme 6: Forests without boundaries: enhancing management and cooperation

Session 1: Setting the stage: landscape approach and cooperation in forest management: In a keynote speech, Tony Simons, CIFOR-ICRAF, outlined a method for tracking changes in afforestation over time using direct comparisons of satellite pixels. He reported on innovative forest projects, including the Regreening Africa with Trees project, which aims to restore 1 million hectares over five years, and the establishment of the Managalas conservation area in Papua New Guinea.

Frank Rijsberman, GGGI, outlined collaborations with, *inter alia*, Indonesia on developing carbon accounting for mangroves and Ethiopia on improving coffee agroforestry. He stressed that the forest economy is a significant source of green jobs. Magdalena Jovanovic, IFSA, called for looking beyond the economic aspects of forestry, shifting towards more inclusive management, including intergenerational and cross-sectoral cooperation.

John Parotta, IUFRO, stressed that in order to account for the full value of forests, methodologies should be expanded to take account of a whole range of ecosystem services including the social and cultural besides carbon. Sheam Satkuru, ITTO, urged cross-sectoral approaches, moving towards a circular economy, and coherent approaches to knowledge management. She highlighted education as a key factor in making the forestry sector more attractive.

Session 2 Forest-water connections to achieve the SDGs: Emelyne Cheney, UNEP, moderated this session.

Amy Duchelle, FAO, noted that as forests decline, so does rainfall, affecting regional and global precipitation patterns, and this has consequences for at least eight SDGs. She suggested using a “water lens” in considering forest management, and taking a cross-sectoral policy approach.

Meine van Noordwijk, CIFOR-ICRAF, noted linkages between water governance and achieving broader social objectives. He described the relationship between water security, tree cover, and maintaining healthy soils. Basanta Shrestha, International Centre for Integrated Mountain Development (ICIMOD), described the importance of water security for mountain communities, noting that 60-80 percent of these communities depend on springs for irrigation and drinking water, but that these are drying up.

Wolde Mekuria, International Water Management Institute, said loss of tree cover results in water stress and loss of

ecosystem services, as observed in the African Rift Valley. He highlighted how payment for ecosystem services and other incentives can help reverse this trend.

By video, Jefferson Hall, Smithsonian Tropical Research Institute, described how reforestation can mitigate climate change and protect water and biodiversity, citing a project conducted on the Panama Canal.

Leyla Zelaya Alegria, UNEP, described how restoration of coffee plantations had led to improved riparian forest health, and said that it is crucial to incorporate local and traditional knowledge.

Malanding Jaiteh, Ministry of Environment, Climate Change and Natural Resources, the Gambia, said the Gambia is highly vulnerable to climate change and that water availability is highly seasonal, and noted changes affecting which species can be planted, and what NbScan be employed.

Session 3: Partnerships with Indigenous Peoples and local communities that deliver SFM in fragile ecosystems:

This session was moderated by Nathalie Faure, RECOFTC, and featured presentations from David Ganz, Executive Director, RECOFTC; Basanta Shrestha, ICIMOD; Grace Wong, Research Institute for Humanity and Nature; Marc Kristof Dumas-Johansen, GCF; Hye Yoon Seo, National Institute of Forest Science, Kangwon National University; and Chay Senkhammoungkhoun, RECOFTC.

Panelists discussed the challenges, opportunities and lessons learned for SFM in fragile ecosystems with a landscape perspective and a focus on local communities and Indigenous Peoples.

Key points raised during the discussion included: the need to incorporate different types of knowledge systems for forest management, reflecting different cultures, types of governance and geographies; the importance of participatory development and trust-building that enforces partnerships to preserve fragile ecosystems; and that local communities should be perceived as rights holders rather than stakeholders.

Session 4: Partnerships and collaboration for SFM: This session was moderated by Gary Dunning, Yale University, US, and featured presentations by: Milagre Nuvunga, Micaia Foundation, Mozambique; Nathalia Granato Loures, Brazilian Tree Industry; Carlos Salinas Montes, Amazon Cooperation Treaty Organization; Ricardo Calderon, Asian Forest Cooperation Organization; Earlene Cruz, Kitchen Connection; Everton Vieira Vargas, Government of the State of Pará, Brazil; José Carlos da Fonseca Jr., Brazilian Tree Industry; Paola Deda, UNECE; and Ana Belén Noriega, Secretary-General, PEFC Spain.

The panelists shared innovative partnerships and projects that support the sustainable management of forests, seek nature-based solutions, and promote a circular economy. The discussion centered around the questions of: the benefits of different kinds of governance structures; challenges for sustaining these initiatives; and how to engage with stakeholders to overcome challenges.

Points highlighted in the discussion included: the need to continue engaging with a wide range of dialogues and to further expand the range of engagement; the importance of making

partnerships more visible not only within the country and region in which they are operating, but everywhere, in order to share learnings; and the need to engage with different and new areas of activities, such as the Forests4Fashion Initiative, to make activities more scalable.

Session 5: The way forward – enhancing partnerships for SFM: This session, moderated by James Astill, started with a performance by violinist Do Yoon Gu.

Thomas Hofer, FAO, outlined key messages, including that forest science has a responsibility to provide evidence of our dependence on nature; the need for integrating broader landscape approaches; and the importance of partnerships on governance and funding.

Panelists then discussed in pairs, with Juan Carlos Jintiaich, COICA, and Adriana Lucia Santa Méndez, Director, Directorate of Forests, Biodiversity and Ecosystem Services, Colombia, addressing the role of Indigenous Peoples. They underscored the need to: recognize Indigenous Peoples' rights, including land rights; ensure their permanent place in both international and national arenas; and support education and training.

On private sector engagement, Erick Luwia, Indonesia Furniture Industry and Handicraft Association, and Maria Paula Sarigumba, Veritree, said there is willingness but insufficient knowledge of how to engage. They stressed cross-sectoral linkages, innovation and youth, and said transparency, traceability and accountability are key.

On science's contribution, Amy Duchelle, FAO, and Alfred Gichu, Ministry of Environment and Forestry, Kenya, spoke about making the benefits of forests other than carbon more visible; understanding baselines; monitoring performance; policy-relevant science; and linking global policies and NDCs with local level actions.

In a keynote speech, Maria Helena Semedo, FAO, said SFM must reach beyond the forest sector and emphasized forests' role in building resilience and empowering economies as an integral part of the land-use and agricultural landscape system.

Hans Hoogeveen, FAO Independent Chairperson of the Council, called for being bolder, since current efforts are not delivering what's needed by 2030. Highlighting abundant policy at the global level, he called for on-the-ground implementation based on NDCs, private sector involvement, and international coordination under a single UN Forests.



Adriana Lucía Santa Méndez, Director, Directorate of Forests, Biodiversity and Ecosystem Services, Colombia

In a high-level keynote speech, HRH Princess Basma bint Ali called for honest and transparent collaboration and for ensuring local communities and Indigenous Peoples are centered. She emphasized the need to widen the definition of forests to include drylands and arid landscapes, raise the profile of forests' benefits, especially regarding water, and ensure they are recognized as a key solution to climate change adaptation and mitigation.

Astill concluded by saying that collaboration is not about institutions, but about pushing forests up the agenda, emphasizing their importance, and highlighting the resources that forests need.

The session ended with a performance by Eun Hye Nam, Arirang Master.

Concluding Plenary

Sustainable Pathways for Building a Green, Healthy, and Resilient Future: The concluding plenary session, held on Friday, 6 May, was introduced by Peter Csoka, FAO Associate Secretary General, and moderated by Henry Bonsu. Participants summarized key messages from the meeting and discussed ways forward.

Maria Helena Semedo, FAO, emphasized the sense of urgency and of possibility and called for: catalyzing and scaling-up investment; innovation; strengthened institutions; learning from Indigenous Peoples and rural communities; cross-sectoral systemic approaches; and integrating forestry in development strategies.

Serena Fortuna, FAO, noted the “huge investment gap” for addressing deforestation and land degradation and the need for: innovative and sustainable financing; bankable projects; enabling environments; avoiding perverse incentives; concessional finance; and social and environmental safeguards, including for local communities, women and youth.

Tae-Hun Nam, Deputy Minister, Korea Forest Service, Republic of Korea, reported on the ministerial forum on sustainable wood, where national policies and experiences on using wood sustainably from the Republic of Congo and Kenya were shared.

Participants agreed that sustainable production mitigates climate change and offers solutions across value chains, and that scaling up bioeconomies by using sustainable wood could replace carbon-intensive sectors. Amongst other things, participants called for the inclusion of sustainable wood-based solutions in Nationally Determined Contributions (NDCs) by 2030.

Luc Gnacadja, Lead, UN Decade Science Task Force, presented on the UN Decade for Ecosystem Restoration, noting that this transcends just planting trees and that the potential of ecosystem restoration should not be used as an excuse to degrade the environment.

Adriana Lucia Santa Méndez, Ministry of Environment and Sustainable Development, Colombia, presented on the outcomes of discussions on forests and health and wellbeing. She noted calls to include green areas in urban regions and the connection between the health of forests and the health of people.

Noting that most fossil-fuel products can be made with wood, Jane Molony, Executive Director, South African Paper Manufacturers Association, highlighted: support for developing countries to establish wood-processing industries; certification; eco-regulations for innovation and reuse; and changing the perception which links wood products to deforestation.

On turning the tide, Estelle Fach, Central African Forest Initiative Secretariat, emphasized the importance of: making

changes to the agrifood system; understanding deforestation drivers; the need for certification; strategic action reflected in national plans; and delivery of financial flows pledges.

On NbS, Juan Carlos Jintiach, Coordinator, COICA, Ecuador, stressed the role of local communities and Indigenous Peoples and called for: strengthening the links between modern science and traditional knowledge; transparency in mobilizing finances; and monitoring and engagement by women and youth.

On green growth, Garo Batmanian, World Bank, emphasized: good governance and local rights protection as preconditions to investment; the need to look at the entire supply-chain; and the need to mobilize so-called “patient capital” and blended finance.

On forests and health, Fabiola Martha Muñoz Doderó, Coalition for Sustainable Production Coordinator, Peru, underscored the need to raise awareness of all forests' benefits and the importance of mainstreaming forests in public health policies, forest-based therapies, and traditional knowledge.

On the role of science, Jennifer Hayes, US Department of Agriculture (USDA) Forest Service Rocky Mountain Research Station, noted proposals to reinforce data collection efforts and called for “a new narrative on forests,” increased capacity building for forest communicators, awareness raising amongst urban populations on benefits that forests offer, and forest education at all levels.

On forests without boundaries, Nathalie Faure, RECOFTC, emphasized the importance of integrated landscape management taking into account the interests and concerns of local people to enable forests to play their key role. She underscored forests as providers of green jobs and the need to consider the full range of benefits they offer including social and cultural values.

On climate change, conflict and food security, Robert Nasi, CIFOR, said that subsidizing the fossil fuel industry is not acceptable, and neither are subsidies directed at food and agricultural systems responsible for deforestation. He noted calls for recognizing the rights of Indigenous Peoples, cautioned against short vested interests, and underscored the importance of collective action and collaborative partnerships.

Eun-sik Park, XV WFC Secretary-General, highlighted outcomes from the roundtable on the PFI, citing benefits forests provide, their contribution to peace building and the opportunities presented by the Initiative.

Peter Gondo, UNFF, described forests as “a huge pharmacy for local communities.” He highlighted the need to focus on



Tae-Hun Nam, Deputy Minister, Korea Forest Service

integrated forest management and landscape restoration as a component of responsive COVID-19 recovery measures. He also noted the need for investments in landscape restoration and SFM to prevent the emergence of new zoonotic diseases.

Phosiso Sola, CIFOR-ICRAF, described bioenergy as a critical and better option, resulting in major socio-economic outcomes and community benefits. She noted the need to develop, invest, improve production and utilization of traditional solid biomass fuels and underscored the need for evidence-based data and stronger collaboration and coordination among the relevant stakeholders.

On youth, Analí Bustos, Monte Alegre Natural Reserve Coordinator, Argentina, underscored the need for investment in career development and building capacity of young professionals; mentorships; and platforms for information-sharing.

On the circular bioeconomy, Carlos Faroppa, Ministry of Meat, Agriculture and Fishing, Uruguay, highlighted the catalytic role of forests in the new circular economy if cross-sectoral strategies are in place, and called for strengthening the shift from fossil-based materials and clear, measurable sector targets.

On rural finance, Elizabeth Nsimadala, President, East Africa Farmers Federation, emphasized collective, strong and coordinated small-holders participation through strengthening forest and farmer producer organizations' technical capacities, to enable them to assist members' access finance and understand risk, as well as targeted interventions engaging women and youth.

On sustainable investment, Mokena Makeka, Principal, Dalberg Advisors, highlighted blended financial models and the mobilization of green finance, particularly for climate-smart solutions, growing cities, and land restoration for mitigation and adaptation.

On fires, Emelyne Cheney, UNEP, highlighted the AFFIRM mechanism and underscored the importance of: integrated fire management and networks; investments in detection, preparedness and prevention; and better understanding of factors driving wildfires.

Cécile Ndjebet, Founder and President, African Women's Network for Community Management of Forests and Wangari Maathai Forest Champions 2022 winner, stressed African women's commitment to contribute to the UN Decade for Restoration goal of planting 20 million trees, lamenting the lack of resources.

Presentation of Congress Outcomes

In this session, moderated by Eun-sik Park, Secretary-General, Korea Forest Service, participants presented and discussed outcomes of the XV WFC.

Peter Csoka, Associate Secretary-General, FAO, presented the outcomes of the Congress, including: detailed proposals for action following the six sub-themes of the Congress; a Ministerial Call on Sustainable Wood, signed by the Republic of Korea, Cameroon, Japan, Austria, Peru, and Gabon; a youth call for action; and the Seoul Forests Declaration. He stressed the overarching message from the Congress is that "there is no time to lose; action should be taken now."



Analí Bustos, University of Buenos Aires, Argentina

Makhotso Mageline Soty, Deputy Minister of Forestry, Fisheries and the Environment, South Africa, stressed the need for more holistic and cross-sectoral approaches and boldly moving to implementation. She welcomed youth and student participation in the Congress, saying "they are the future."

Zac Goldsmith, Minister for Pacific and the Environment, UK, citing problems including subsidies supporting highly destructive land uses, urged governments to commit to using all the levers at their disposal to protect and restore ecosystems. John Parrotta, IUFRO, emphasized that science has a crucial role to play in effective conservation, restoration and sustainable management, and said that forest education at all levels is critical. Juan Carlos Jintiaich, COICA, underscored the need to respect Indigenous land rights, noting that 80 percent of biodiversity is being preserved by Indigenous Peoples, and that Indigenous and local communities are directly connected with nature.

Choi Mu Yeol, Korea Forestry Smallholders Association, called for improved support systems for foresters, such as tax exemptions when foresters have managed their forests for more than eight years; increasing the proportion of domestically sourced wood products; promoting the circular economy; and promoting the inclusion of young foresters, especially women.

Georg Schirmbeck, President, German Forestry Council, highlighted forests' capacity to support climate change mitigation and said actively managed forests are better for biodiversity than those that are not actively managed.

Amos Amanubo, FAO, outlined the Youth Call for Action, "Work With Us," resulting from the youth outreach process. It invites all forest sector actors to: enhance access to forestry education and career development programs and forestry education; increase access to financial opportunities and enable entrepreneurship; support gender equality and empower all young women in the forest sector; and include youth voices in policy- and decision-making processes.

The congress endorsed the outcomes by acclamation.

Closing Ceremony

During the closing ceremony, moderated by broadcaster Jooyeon Cho, delegates viewed a video of highlights of the XV WFC. A representative of Osman Kahveci, General Director,



Makhotso Magdeline Sotyu, Deputy Minister of Forestry, Fisheries and Environmental Affairs, South Africa

General Directorate of Forestry, Turkey, announced Turkey's interest in hosting the next meeting.

In a video message, Ibrahim Thiaw, Executive Secretary, UN Convention to Combat Desertification (UNCCD), underscored that forests are vital land ecosystems, positioning UNCCD COP 15 as an urgent call to action to turn the tide from land degradation to land stewardship.

Maria Helena Semedo, FAO, stressed three pathways through which forests can play a crucial role in addressing the overlapping crises the world faces: ending deforestation and maintaining forests; restoring degraded lands and expanding agroforestry; and sustainably using forests and building green value chains.

HRH Princess Basma bint Ali of Jordan emphasized that water is the most basic human right, because without it there is no life at all. She questioned how we can claim to be civilized if we cannot even sustainably manage our resources and provide a safe future for the next generation.

In concluding remarks, Byeong-Am Choi, Minister, Korea Forest Service, said all stakeholders must ensure the momentum that started at the XV WFC continues into the future. He said key messages include: the need to sustainably produce and consume wood in order to reduce carbon emissions; the key role played by forestry in contributing to human health; and the need for forestry management based on data. He closed the meeting at 5:00pm.

Upcoming Meetings

17th Session of the UN Forum on Forests (UNFF 17):

UNFF 17 will include policy discussions on the implementation of the UN strategic plan for forests 2017-2030, including activities in support of the thematic priorities for the biennium 2021-2022. The meeting will also consider preparations for the midterm review, in 2024, of the effectiveness of the international arrangement on forests in achieving its objectives, including the communication and outreach strategy of the UN strategic plan for forests 2017–2030. **dates:** 9-13 May 2022 **location:** New York City, US **www:** un.org/esa/forests/forum/index.html

15th session of the Conference of the Parties to the UN Convention to Combat Desertification (UNCCD COP

15): UNCCD COP 15 will focus on the theme, 'Land. Life. Legacy: From scarcity to prosperity.' Programme highlights will include a high-level segment with the participation of Heads of State, environment ministers, private sector and civil society representatives who will discuss how to accelerate the global land restoration agenda, future-proof land use and tackle the growing impacts of drought. The Abidjan Legacy Programme will also be announced by Côte d'Ivoire as COP host. **dates:** 9-21 May 2022 **location:** Abidjan, Côte d'Ivoire **www:** unccd.int/convention/conference-parties-cop

62nd Global Environment Facility (GEF) Council Meeting:

The GEF Council, which meets twice annually, develops, adopts and evaluates the operational policies and programs for GEF-financed activities. It also reviews and approves the work program (projects submitted for approval), making decisions by consensus. The 62nd Council Meeting will be the final Council Meeting under the GEF's seventh replenishment. **dates:** 20-24 June 2022 **location:** virtual **www:** thegef.org/events/62nd-gef-council-meeting

Ninth Session of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES-9):

The ninth session of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES-9) will consider the thematic assessment of the sustainable use of wild species, and the methodological assessment regarding the diverse conceptualization of multiple values of nature and its benefits, including biodiversity and ecosystem functions and services. The IPBES-9 Plenary will also consider the scoping report for a methodological assessment of the impact and dependence of business on biodiversity and nature's contributions to people. **dates:** 3-9 July 2022 **location:** Bonn, Germany **www:** ipbes.net/notification/save-the-date/ipbes-9

High-level Political Forum on Sustainable Development

(HLPF) 2022: The HLPF is the main UN platform on sustainable development. It has a central role in the follow-up and review of implementation of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). All UN Member States as well as representatives from civil society organizations participate in the HLPF, which meets under the auspices of the UN Economic and Social Council (ECOSOC). The 2022 HLPF will hold in-depth reviews of five SDGs: 4 (quality education), 5 (gender equality), 14 (life below water), 15 (life on land), and 17 (partnerships for the Goals). **dates:** 5-15 July 2022 **location:** New York City, US **www:** sustainabledevelopment.un.org/hlpf

World Water Week 2022: World Water Week 2022 will be held on the theme 'Seeing the Unseen: The Value of Water,' and is built on a global need to not only see, but to understand, and – more importantly – value water. Organized by the Stockholm International Water Institute (SIWI), the World Water Week 2022 theme will be captured in three main perspectives: the value of water for people and development; the value of water for nature and climate change; and the financial and economic value of water. **dates:** 23 August – 1 September 2022 **location:**

Stockholm, Sweden **www:** worldwaterweek.org/news/save-the-date-for-world-water-week-2022

UN Biodiversity Conference (CBD COP 15) (Part 2): This Conference comprises the 15th meeting of the Conference of the Parties (COP 15) to the Convention on Biological Diversity (CBD), the tenth Meeting of the Parties to the Cartagena Protocol on Biosafety (Cartagena Protocol COP/MOP 10), and the fourth Meeting of the Parties to the Nagoya Protocol on Access and Benefit-sharing (Nagoya Protocol COP/MOP 4). CBD COP 15 will review the achievement and delivery of the CBD's Strategic Plan for Biodiversity 2011-2020. It is also anticipated that the final decision on the post-2020 global biodiversity framework will be taken, together with decisions on related topics including capacity building and resource mobilization. **dates:** 29 August – 9 September 2022 **location:** Kunming, China **www:** cbd.int/article/new-dates-cop15-virtual-2021-facetoface-2022

26th Session of the FAO Committee on Forestry (COFO 26): The biennial sessions of COFO bring together heads of forest services and other senior government officials to identify emerging policy and technical issues, to seek solutions, and to advise the FAO and others on appropriate action. **dates:** 3-7 October 2022 **location:** Rome, Lazio, Italy **www:** fao.org/unfao/govbodies/gsbhome/committee-fo/en/

FLARE network (Forests & Livelihoods: Assessment, Research, and Engagement) 8th Annual Meeting: The FLARE Secretariat together with the Keough School of Global Affairs at the University of Notre Dame will host the FLARE 8th Annual Meeting, which aims to share, discuss, and build connections around leading-edge research and developments on forests and livelihoods issues around the world. **dates:** 7-10 October 2022 **location:** Rome, Italy **www:** forestlivelihoods.org/annual-meeting-2022/

UN Climate Change Conference 2022 (UNFCCC COP 27): COP 27 was originally expected to take place from 8-20 November 2021. Due to the COVID-19 pandemic, COP 26 was rescheduled from November 2020 to November 2021. As a result, COP 27 will take place from 7-18 November 2022. **dates:** 7-18 November 2022 **location:** Sharm el-Sheikh, Egypt **e-mail:** secretariat@unfccc.int **www:** unfccc.int/calendar/events-list

UN 2023 Water Conference: On 28 November 2018, the UN General Assembly (UNGA) Second Committee adopted by consensus a resolution calling for a midterm review of the Water Action Decade at UNGA 77 in 2023. Officially known as the UN 2023 Water Conference, the UN Conference on the Midterm Comprehensive Review of the Implementation of the Objectives of the International Decade for Action, 'Water for Sustainable Development,' will take place to coincide with World Water Day and will focus on the objectives of the Decade as laid out in the Secretary-General's Plan: Water Action Decade 2018-2028. **dates:** 22-24 March 2022 **location:** New York City, US **www:** sdgs.un.org/conferences/water2023

More events are at <http://sdg.iisd.org/events/calendar>

Glossary

ASEAN	Association of Southeast Asian Nations
AFFIRM	Assuring the Future of Forests with Integrated Risk Management
CBD	Convention on Biological Diversity
CIFOR	Centre for International Forestry Research
COFO	Committee on Forestry
COICA	Coordinator of Indigenous Organizations of the Amazon River Basin
COP	Conference of the Parties
CPF	Collaborative Partnership on Forests
ECOSOC	Economic and Social Council
FAO	Food and Agriculture Organization
GBEP	Global Bioenergy Partnership
GCF	Green Climate Fund
GGGI	Global Green Growth Institute
GEF	Global Environment Facility
ICRAF	World Agroforestry Centre
ICIMOD	International Centre for Integrated Mountain Development
IRENA	International Renewable Energy Agency
ITTA	International Tropical Timber Agreement
ITTC	International Tropical Timber Council
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
IUFRO	International Union of Forest Research Organizations
MRV	Monitoring, reporting and verification
NbS	Nature-based solutions
NDCs	Nationally determined contributions
PEFC	Programme for the Endorsement of Forest Certification
PFI	Peace Forest Initiative
RECOFTC	The Center for People and Forests
REDD+	Reducing emissions from deforestation and forest degradation, plus the sustainable management of forests and the conservation and enhancement of forest carbon stocks in developing countries
SDGs	Sustainable Development Goals
SFM	Sustainable forest management
UNCCD	United Nations Convention to Combat Desertification
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
USDA	United States Department of Agriculture
WFC	World Forestry Congress