

World Forests, Society and Environment

Interview with Dr. Pia Katila,
Coordinator of IUFRO's Special Project on World Forests, Society and Environment (IUFRO-WFSE)

Dr. Katila is an expert in international forest policy, governance, and sustainable development with a special focus on developing countries. She works at Luke, the Natural Resources Institute Finland, based in Helsinki, where the WFSE Project has always been hosted. Visit: <https://www.iufro.org/science/wfse/>



2021 is a special year for WFSE. The Project was initiated 25 years ago in 1996 and was approved as a Special Project of IUFRO 20 years ago in 2001. Congratulations to you as the current Coordinator on these anniversaries! Can you briefly outline why the Project was started in the first place and explain why it is located in Finland?

WFSE has indeed a long history. It was initiated in the Finnish Forest Research Institute (Metla) in 1996 by Professor Matti Palo as a joint initiative between Metla, European Forest Institute (EFI) and United Nations University (UNU). The main aim was to address and look for solutions to global forest-related challenges such as deforestation, forest degradation, biodiversity loss and climate change as well as forest-related social and economic issues.

From the beginning, core principles of WFSE have been to increase international collaboration among scientists and experts working on forest-related issues, and to bring together scientists with different backgrounds and expertise and from different parts of the world.

WFSE has a focus on sustainable forest-related development and livelihoods, but it is not the only player in this field. What makes your approach unique?

WFSE is an open, global, network of scientists, experts and practitioners. It provides an independent platform for broad participation and collaboration. WFSE addresses its topics from different perspectives, in a holistic, interdisciplinary manner, and by bringing together ecologists, economists, social and political scientists and anthropologists.

The work is based on the collaboration of a large number of colleagues from different parts of the world, many of which come from the research and development organizations you refer to as players in this field, but also beyond. So, one of the key characteristics of WFSE that differentiates it from the other 'players' is the wide collaboration among a large number of scientists and experts.

For example, the development of WFSE's latest major publication "**Sustainable Development Goals: Their Impacts on Forests and People**" involved 6 editors and 17 author teams,



Restoration of degraded forest reserve. Photo Form Ghana Ltd.

each of which was responsible for the developments of a particular chapter, altogether involving 120 scientists and experts from over 60 universities and research and development organizations. In addition, 38 scientists participated in the peer review of the different chapters of this publication.

Since your term as a Coordinator started, WFSE's work has not only involved analyzing and synthesizing existing scientific knowledge; it has also included undertaking new research. How has this changed the Project?

Yes, since the beginning WFSE work focused on synthesizing existing scientific knowledge, and that is still an important part of our work. This is also important for identifying knowledge gaps, which WFSE has then partially addressed by undertaking new research, e.g., by conducting case studies, and cross case analyses, or by undertaking new analyses of existing data using new perspectives and posing new research questions. This has facilitated bringing in new perspectives to the forest-related debates and supported interdisciplinary analyses of forest-related issues and the interlinkages between them.

WFSE produces and disseminates scientific publications, policy and information briefs, and capacity-building materials. How do you select the scientists who work for WFSE and how do you find your topics? Do you have any current publication plans?

WFSE is a fully open network, all organizations and individuals are welcome to contribute to the project's activities. The work is based on voluntary contributions and the main criterion is the scientific quality. Normally, when we initiate the work on a new topic, we invite international scientists and experts in that specific topic and related fields, to collaborate in developing the publications. The contents and approach are then further discussed and developed in meetings and workshops.

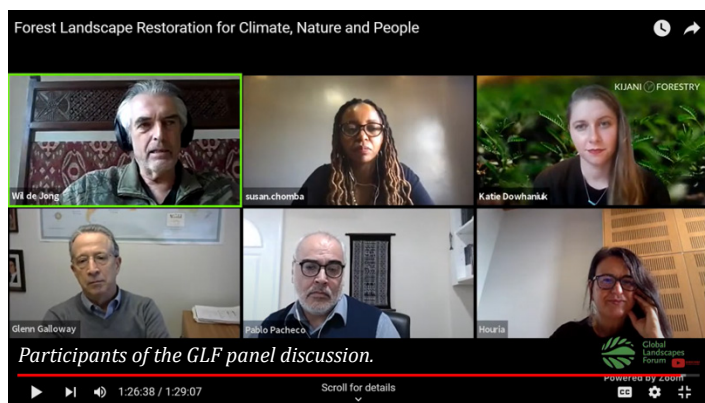
We focus on broad topics at the forest, society and environment interface; topics recognized by the scientific community as important and having significant policy implications, but which appear not to be receiving adequate attention from the policy community. These topics are closely related to and can have important implications for the issues discussed in the global development and environmental policy processes.

WFSE is now working on a comprehensive overview and assessment of the current state of knowledge regarding forest restoration under the working title **“Restoring forests for sustainable development - Policies, practices, impacts and the way forward”**. The chapters of this book aim at providing a comprehensive overview of the current state of knowledge regarding interacting social, economic, political and ecological aspects of restoring forests. This broad approach and bringing together the different perspectives will support finding new perspectives and insights for advancing socially and ecologically sustainable restoration. This book will be published in 2022.

Learn more under “current activities” at:
<https://www.iufro.org/science/wfse/>

WFSE has just held successful sessions at the Global Landscapes Forum (GLF) Climate conference and at the UN Climate Change summit in Glasgow. What were these sessions about?

At the GLF Climate WFSE organized a panel discussion with the title **“Forest landscape restoration for climate, nature and people”**. The panelists discussed crucial issues and ways forward in advancing sustainable and equitable forest and landscape restoration and clearly demonstrated the complexity of the issue and interests involved.



IUFRO News in its 50th Year

The leading article of IUFRO News Vol. 31, 2002, issue 4, had the title **“The Year of Changes”**. It highlighted the new visual image of IUFRO, the new location of IUFRO HQ in Mariabrunn, the start of the search for a new Executive Secretary, and the call for the “continuation of change” by then IUFRO President Risto Seppälä.

It also included a comprehensive article about IUFRO-WFSE, the Special Project on Forests, Society and Environment. The article informs about an important “change” in IUFRO, namely the fact that WFSE, established in 1996 and integrated into IUFRO as a Special Project in 2001, became fully operational in 2002. Hundreds of scientists had already been involved since its foundation and many more have been cooperating until today to facilitate timely and critical analyses of the interrelationship

The discussion focused on the current forest restoration efforts, which restoration benefits/outcomes are pursued, how the costs of restoration are distributed among different actors, who bears the costs of restoration and who actually benefits from forest restoration, what are the challenges and trade-offs of restoration at local level, and who are the important actors in restoration efforts, who participates in them and in related decision-making, and how should different actors be brought together?

The organizations represented in this event were CIFOR-ICRAF, WRI, WWF, University of Florida, Kyoto University, and Kijani Forestry.

Visit: <https://www.iufro.org/science/wfse/wfse-news/#c33367>

At the UN Climate COP 26, WFSE was part of a joint side event, together with Rainforest Alliance and World Conservation Society. This panel discussion was titled **“Thriving together: how strong alliances achieve climate resilient landscapes”**.

The panel emphasized the role of multisector alliances as key in achieving climate resilient landscapes and livelihoods and that indigenous and local communities and smallholder farmers need to be included and treated as equal stakeholders in efforts towards resilient landscapes and supported by synergistic measures and policies that respect and strengthen local rights, livelihoods and economic opportunities.

The panel included representatives from CIFOR-ICRAF, RA, Kyoto University and Cafédirect, a UK-based alternative trading organization.

Visit: <https://www.iufro.org/science/wfse/wfse-news/#c33368>

How do you see the future development of WFSE? Are there any specific topics you would like to address?

We are planning to continue the work on forest and landscape restoration and in the next phase look more closely at what is actually happening on the ground, how restoration is implemented in different locations and how the practice reflects the recommendations and good practices presented by different organizations and in the scientific literature.

Dr. Katila, thank you very much for the interview!



between world forests, society and environment, as you can also read in the interview with Coordinator Pia Katila above.

ITTO and IUFRO Release Learning Modules to Encourage Forest Landscape Restoration

The International Tropical Timber Organization (ITTO) and IUFRO have released a free series of learning modules for high-school and university students to guide further understanding on forest landscape restoration (FLR).

FLR involves using holistic approaches to restore ecological functioning of degraded landscapes and simultaneously creating diverse, sustainable socio-economic benefits for people living in the landscapes on a wider scale. Putting it into practice, however, is not so easy. FLR has many dimensions, and educating future generations is crucial for its success.

Released as a contribution to the 2021–2030 UN Decade on Ecosystem Restoration, the new learning modules developed by ITTO and IUFRO have been crafted to raise awareness among the next generation of professionals and policy- and decision-makers of the vital role that FLR will play in restoring degraded landscapes. The modules contain the latest knowledge on FLR, drawing on publications such as the *ITTO Guidelines for Forest Landscape Restoration in the Tropics*; *IUFRO's Practitioner's Guide for Implementing Forest Landscape Restoration*; *IUFRO's Occasional Paper No. 33–Forest Landscape Restoration Implementation: Lessons Learned from Selected Landscapes in Africa, Asia and Latin America* and *FAO's Sustainable Financing for Forest and Landscape Restoration e-course*.



High school students learn about forest values during a field trip to the Lanjak Entimau Wildlife Sanctuary in Sarawak, Malaysia.
Photo: Sarawak Forest Department

The modules can be used by high schools and universities across the tropics and elsewhere to boost curricula in science, social science, agriculture, climate change, environmental studies, forestry, geography, and planning and development studies.

Find FLR learning modules and handouts (in English only) at: <https://www.iufro.org/science/special/spdc/netw/flr/lmflr/>

To read the full article, click [Press Release!](#)

ESCAMP Supports Forest Landscape Restoration (FLR) Mentorship in Sri Lanka

The Sri Lankan Forest Department, Ecosystem Conservation and Management Project (ESCAMP) project, with the collaboration of IUFRO is implementing a two-year program aiming to address the current shortage of trained forest landscape restoration practitioners in the country.

Under this capacity development program, it is expecting to train 300 senior level and middle level officers attached to all key departments, ministries and other institutions in the island. ESCAMP is providing technical support for this training program, which includes high-level and mid-level government participants from relevant institutions including the Forest Department. The International Union for Conservation of Nature (IUCN-Sri Lanka) provided logistical support to ESCAMP. Find out more at: <https://www.escamp.lk/escamp-supports-forest-landscape-restoration-flr-mentorship/>

Also, as part of a comprehensive media campaign, ESCAMP has produced a seven-episode series of docudramas which are currently running on Sri Lankan TV showing the learning journey of a father and daughter who meet with technical specialists in different parts of Sri Lanka to learn about various aspects of forests and ecosystems. Here's the list of these episodes which include English subtitles on YouTube:
Environmentally Sensitive Areas - [LINK](#); *Converting HEC to HECOEX* - [LINK](#); *Landscape management* - [LINK](#); *Value of Sri Lanka's forests* - [LINK](#); *Livelihood creation to safeguard forests* - [LINK](#); *Ecosystems and their connection to zoonotic diseases* - [LINK](#); *Ecotourism and ecosystem conservation* - [LINK](#)

First Meeting of the Global Forest Expert Panel on Forests and Human Health

By Dikshya Devkota, GFEP Project Manager

Following a successful Scoping Meeting in August 2021, renowned scientists with diverse expertise were invited to join the Global Forest Expert Panel (GFEP) on Forests and Human Health. The Expert Panel comprises a wide range of expertise including, epidemiology, public health, urban forestry, mental health and recreation, resource valuation, traditional knowledge, and food and nutrition, to mention a few.

The first meeting of the GFEP on Forests and Human Health was convened virtually on 9-11 November 2021. Twenty



Photo by Emma Simpson on Unsplash

participants, including fifteen Panel Members and the GFEP team, attended the meeting. The purpose of the meeting was to discuss conceptual approaches and methodologies, refine and further develop the thematic outline of the assessment, and allocate tasks to authors. During the three-day meeting, the Expert Panel discussed the framing and scope of the report, overlapping and cross-cutting topics, as well as methodological issues and the use of terminologies (e.g., “forests”, “health”, etc.). Given the diversity of the Expert Panel and the complexity of the topic, the meeting involved rich deliberations on several aspects of the assessment.

The Panel Members were also introduced to the Terms of Reference and GFEP Rules of Procedure by the GFEP team. They were briefed on their roles in the development of the assessment report and allocated to chapter groups; and Coordinating Lead Authors for each chapter were selected. Following the

first meeting, the Panel Members will commence the scientific work of the Expert Panel and, immediately, towards the next milestone of submitting annotated outlines of the chapters by December 2021.

The GFEP assessment report on Forests and Human Health is expected to be published in March 2023. This study will contribute to the implementation of the 2030 Agenda for Sustainable Development by highlighting the nexus between SDG 3: Good Health and Well-Being and SDG 15: Life on Land, as well as relevant links to other SDGs.

More information about the assessment, including the list of Panel Members and minutes of the meetings, are available at: <https://www.iufro.org/science/gfep/gfep-initiative/panel-on-forests-and-human-health/>

40th Anniversary Conference of IUFRO Research Group 4.05.00 Managerial, Social and Environmental Aspects of the Forest-based Sector for Sustainable Development

Report by Lidija Zadnik Stirn (University of Ljubljana, Slovenia), Coordinator of Research Group 4.05.00, and Pavlína Pancová Šimková (Mendel University, Brno, Czech Republic), Alternate IUFRO International Council Representative of Czech Republic
<https://www.iufro.org/science/divisions/division-4/40000/40500/>

On 4-6 October 2021, the annual conference of IUFRO Research Group (RG) 4.05.00 Managerial Economics and Accounting and its Working Parties (WP) - 4.05.01: Managerial, social, and environmental accounting, 4.05.02: Managerial, social and environmental economics, 4.05.03: Managerial economics and accounting in Latin America, 4.05.04: Forest-based value chains, 4.05.05: Social Innovation and Entrepreneurship) - was held online from Mendel University in Brno, Czech Republic. **Special thanks go to Pavlína Pancová Šimková, Kateřina Holušová, Jitka Meňházová, Dalibor Šafařík and Tomáš Pospíšil for making the conference such a success!**

Brno is also the place where the Research Group was established in 1981. On the occasion of its 40th anniversary, a special session was devoted to the history of the Group and its Working Parties. IUFRO Executive Director Alexander Buck extended congratulations on behalf of IUFRO and highlighted the impressive continuity and - to use a forestry term - “sustainability” of the RG’s activities. He expressed sincere thanks to all the current and former Coordinators, Deputy Coordinators and members of the Research Group and the five Working Parties associated with it and “virtually” handed over an Anniversary Certificate to recognize the achievements of the Group in the past 40 years.

General welcome addresses were delivered by Dalibor Šafařík, Head of the Department of Forestry and Wood Economics and



Photo by Tomáš Pospíšil

Policy, John Parrotta, President of IUFRO, Donald Hodges, Division 4 Coordinator and Lidija Zadnik, Coordinator of RG 4.05.00.

The scientific part of the conference mainly addressed the following topics: economic analyses of forests; economic and accounting tools for planning, controlling, innovations and evaluating the performance of forest management according to the multi-functionality of forests; climate change; biodiversity loss; forest-wood supply chains; employment; social entrepreneurship; forest work safety evolving in economic, social, and environmental contexts within uncertainty and risk.

The forestry sector is significantly affected by environmental change and currently facing one of the biggest crises in recent history. A continuous string of natural disasters increases pressure on forest management scenarios, timber and non-wood forest products trading and pricing, sales policies, labor productivity, and demand and supply responses. These challenges considerably influence the whole value chain. Forest management, timber and non-timber products, and wood markets are confronted with increasing pressure for enhanced managerial skills, planning, logistics, communication, marketing and analysis.

Overproduction and related overall deficiency in demand for wood products also influence the forest-based sector. Furthermore, a shortage of skilled labour to manage the calamitous situation efficiently is significantly affecting the sector. The crisis in forestry has become even more deeply rooted due to the current pandemic, which notably decreases public interest in forest-related issues. It is the duty of the forestry professional and scientific community at the national, European, and global levels to address this highly challenging situation and to propose steps to stabilize the forest-based and wood sectors.

Visit the conference website:
<https://iufro2021.ldf.mendelu.cz/>

A Book of Extended Abstracts, edited by Kateřina Holuřová and issued by MENDEL University, Brno, is available at:
<https://iufro2021.ldf.mendelu.cz/33269-programme>

Find a comprehensive meeting report by RG Coordinator Lidiya Zadnik Stirn and Pavlína Pancová Šimková of Mendel University under “past meetings” at: <https://www.iufro.org/science/divisions/division-4/40000/40500/activities/>

The 2022 conference of RG 4.05.00 will be held in Hamburg, Germany. Lydia Rosenkranz and colleagues from Thünen Institute, Hamburg, Germany, offered to organize the conference. (Find details on page 12 in the IUFRO Meetings section!)

Air Pollution Threats to Plant Ecosystems

Report by Pierre Sicard (ARGANS France), IUFRO Deputy Coordinator 8.04.00 – Air pollution and climate change <https://www.iufro.org/science/divisions/division-8/80000/80400/>

Air pollution and climate change remain a threat to natural ecosystems, urging for international cooperation and unified research efforts. The Mediterranean region, Cyprus, in particular, is key for addressing global goals on plant ecosystems due to its unique biodiversity, e.g., it hosts 20% of the world's total floristic richness and is one of the air pollution and climate change hotspots in the world. Cyprus is projected to face the most adverse climate change effects by 2100.

This is one of the reasons why the conference on *Air Pollution Threats to Plant Ecosystems* took place in Paphos, Cyprus, on 11-15 October 2021.

Meeting website: <https://www.cyprus2021.com/>



The hybrid conference was successfully organized by the association ARCHES-Conseils, and co-organized by IUFRO and the International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops. It gathered 93 participants (73 on site, 20 online) from 27 countries and was kindly supported by the LIFE project AIRFRESH (LIFE19 ENV/FR/000086), Cyprus Convention Bureau, Cyprus Deputy Ministry of Tourism, MDPI open journals Atmosphere, Climate, and Forests, and ARCHES-Conseils.

The different sessions allowed all experts in the interactions between atmosphere and plant ecosystems to meet, address complex effects of air pollution and climate change on forest ecosystems, and discuss future strategies and priorities for the coming decade to improve health, sustainability, and productivity of plant systems worldwide.

Throughout 58 talks, 3 keynote addresses and 26 poster presentations, the current state of knowledge was presented and scientific gaps in the understanding of the interaction of climate change, air pollution and atmospheric deposition and their integrated effects on forest ecosystems were discussed.

Presentations covered the following topics:

- Greening cities (27%)
- Genetic & physiological processes (19%)
- Monitoring & modelling (17%)
- Air pollution & climate change (16%)
- Multiple stressors effects (12%)
- Crops (9%)

Current knowledge on air pollution and climate change effects on plant ecosystems were reviewed and future strategies and priorities (roadmap) to improve health, sustainability, and productivity of plant systems worldwide were identified, including:

- Interaction between monitoring vegetation/forest networks
- Establishment of denser ozone monitoring network in natural forest ecosystems
- Development of models integrating air pollution and climate change data
- Generation of flux-based critical levels for vegetation protection
- Long-term monitoring & experiments: better understanding of biogeochemical & physiological processes under climate change
- More studies addressing combined effects of different biotic & abiotic factors
- Quantification of green infrastructure effects on air quality and thermal comfort in cities

The conference served as an excellent example of effective international collaboration in the research of air pollution and vegetation allowing experts to meet, address complex effects of air pollution and climate change on natural ecosystems, and discuss future strategies and priorities for the coming decade.

Next conference involving Research Group 8.04.00: **ACID RAIN** on 17-21 April 2023 in Japan: <https://www.acidrain2020.org/>

Tree Resistance to Diseases and Pests – Interaction with and Facilitation by the Microbiome

Report by Caterina Villari (University of Georgia, USA), Coordinator of IUFRO WP 7.03.11 Resistance to Insects and Pathogens <https://www.iufro.org/science/divisions/division-7/70000/70300/70311/>
Richard Sniezko (USDA Forest Service, USA), Coordinator of IUFRO WP 2.02.15 Breeding and Genetic Resources of Five-Needle Pines, <https://www.iufro.org/science/divisions/division-2/20000/20200/20215/>, and Deputy of WP 7.03.11; and Dana Nelson (USDA Forest Service, USA)

Tree resistance to pests and pathogens can be driven by different and often interlinked mechanisms, such as the presence of mechanical or chemical direct defenses or the use of indirect defenses, which are mediated by natural enemies of the attacking agent. One aspect that is still fairly unexplored, but that has shown to display a great potential, is the role of the host-associated microbiome in modulating resistance.

The webinar on 13 October 2021 aimed to discuss this particular aspect. It was part of the Division 7 Forest Health Webinar Series and attracted 81 participants. The webinar series was most successfully organized by Tod Ramsfield (Natural Resources Canada) and Irene Barnes (FABI, South Africa), and kindly hosted by FABI.

Meeting website: <https://www.fabinet.up.ac.za/index.php/events/Forest%20Health%20Webinar%20Series>

Three presenters with special expertise on the matter were invited:

Kathrin Blumenstein (University of Göttingen, Germany);
 George Newcombe (University of Idaho, USA); and
 Steve Wakelin (Scion, New Zealand).

Dr. Blumenstein's talk titled *"Diplodia Tip Blight outbreak in Scots pine - influences of the mycobiome and abiotic factors"* summarized the results of a study she recently published in *Frontiers in Forest and Global Change*. Together with a team of collaborators, she investigated the effects of water availability and Scots pine endophytes on the development of *Sphaeropsis sapinea*.

In his talk titled *"Pathogens in the trillion-tree era"*, Dr. Newcombe tackled the controversial question of forest pathology implications of planting a trillion trees, especially considering that planted trees might have an endophyte community that is not well adapted/properly selected for their planting environment, which could negatively impact their ability to cope with diseases.

After discussing the need for forests and forest management solutions to adapt to the changing climatic scenario, Dr. Wakelin talked about *"Pinus radiata: a model tree-microbiome system for a rapidly changing world"* and introduced two ongoing programs at SCION: the *"Tree Root Microbiome Programme"* and *"The Resilient Forest Programme"*.

The Webinar concluded with a panel discussion which, among other items, discussed the idea of a roadmap for approaching the topic of microbiome and plant resistance in the future. As a final consideration, the virtual format seems to have a lot of potential to supplement in-person meetings and to reach scientists who have otherwise difficulty attending the in-person meetings. - Screenshot provided by Caterina Villari




WEBINAR 1 – 13 October 2021
Tree resistance to diseases and pests – Interaction with and facilitation by the microbiome
Division 7 – Forest Health WEBINAR SERIES

Automation in Forest Operations

Report by Raffaele Cavalli (University of Padua, Italy), Coordinator of IUFRO RG 3.01.00 Harvesting and transportation engineering <https://www.iufro.org/science/divisions/division-3/30000/30100/>;
 Ângelo Conrado de Arruda Moura (Asia Pulp & Paper (APP) Sinar Mas, Deputy Coordinator of RG 3.01.00 Harvesting and transportation engineering; and
 Ola Lindroos (Swedish University of Agricultural Sciences), Coordinator of WP Forest robotics and digital forest operations <https://www.iufro.org/science/divisions/division-3/30000/31000/>

Forest operations are evolving rapidly. Thanks to the development of technology a number of applications are now available as fully applicable products or at concept/prototype stages in the area of teleoperation, semi-automation and full automation. As these developments are also common to other areas of production (e.g., mining, harbor activity) exchange of information is necessary between these areas. The aim of the webinar series was to share the state-of-the-art technology both at academic and industry levels, building awareness about opportunities, issues, and the technology of automation and robotics, in special out-door, harsh and unstructured environments.

The webinar series "Automation in Forest Operations" comprised three webinars held on 25 August, 15 September and 20 October 2021. Find recordings at: <https://www.iufro.org/science/divisions/division-3/30000/31000/publications/> It was attended by 330 people from various professional backgrounds coming from at least 37 countries, and addressed three major topics:

Semi-automation

Multi-functional machinery (Portugal),
 Alexandra Marques Hard-Line (Canada),
 Bill Cronley Hortikey and ISO (Netherlands),
 Wim van der Meyden

Teleoperation

Canterbury University (New Zealand),
 Rien Visser ATL-Applied Teleoperation (New Zealand), Paul Milliken Sitech (Brazil), Marx Gutierrez

Full automation/robotics

Autonomous forwarding (Sweden), Ola Lindroos Combitech AB (Sweden), Erik Daren, Per Åkesson, Martin Ryd Automated eucalypt planter (Brazil), Saulo Guerra

Even if the level of technological development of other fields of applications has not yet been reached in forestry, many applications are already available, particularly in the field of teleoperation and semi-automation with the aim to create a safe and productive workplace. This is the case for harvesting and transport operations on sloping terrain and for tree plantation.

When it comes to full automation (robotics/autonomous execution), i.e., operation done without operator input, real-time



Automation in Forest Operations
 Division 3.0 Webinar Series

Mediation
 Dr. Saulo Guerra (FCA/UNESP)

Speakers

Dr. Alexandra Marques (Hard-Line)

Bill Cronley (Hortikey)

Wim van der Meyden (ISO Group)

Advances in automation and digitalization of forest operations in Portugal

Automation in Mining Operations

Automation (young plants) in the professional forest industry

Webinar 1 flyer

and high-resolution data are required to operate both vehicles and actuators (e.g., cranes). Navigation system, vision system and actuator system need to be coordinated in order to realize a truly autonomous machine.

Comparison with solutions used in other production sectors can support the development of automation in forestry operations. Vision and manipulating technologies in horticultural industry, video and data communication network applied in mining and earthwork, overall site functional safety in harbor operations are examples that offer the possibility to be leveraged in order to increase the speed of the digitalization in forestry operations.

3rd IUFRO Acacia Conference 2021

Report by Wickneswari Ratnam FASc, Coordinator of Working Party 2.08.07- Acacia Genetics and Silviculture

<https://www.iufro.org/science/divisions/division-2/20000/20800/20807/>

Non-native acacias have become dominant components of many Southeast Asian plantation landscapes. They are increasingly being threatened by insect pests and pathogens. Regional collaboration in Southeast Asia is urgently needed to lower the arrival and subsequent movement of invasive pests and pathogens and to better manage damage to trees by 'new encounter' or established pests.

Against this background, 620 participants from 29 countries attended the 3rd IUFRO Acacia Conference 2021, which was held as a webinar from Dewan Undangan Negeri Sarawak, Kuching, Sarawak, Malaysia on 26-28 October 2021. The conference was generously organized by the Forest Department Sarawak and offered great virtual study tours.

The theme of the 3rd IUFRO Acacia Conference “**Embracing Transformation for Sustainable Management of Industrial Forest Plantation**” addressed the application of technology and innovation in upstream and downstream R&D. The conference aimed at sharing knowledge, research findings and experience from different disciplines, discussing the current issues on plantation management and ways forward, and strengthening collaboration among participants.

Here are some of the key issues that were discussed:

Over the last four decades acacias and eucalypts have emerged as the two most important genera for plantation wood production in tropical and sub-tropical Asia. In several major planting regions acacias have replaced eucalypts or vice versa to increase productivity or in response to emerging pests and diseases or other threats which severely reduced wood production. However, changing between genera is very challenging for tree breeders; in some cases, it has not been possible to maintain the broad-based genetic resources required to underpin effective breeding strategies. Interestingly, the retention of slash and litter of *Acacia mangium* applied to *Eucalyptus pellita* plantations has increased growth (height, diameter and volume) up to age of 3 years.

Conference participants concluded, among other things, that Asian countries need to maintain long-term breeding programs, and that international cooperation can help to achieve long-term breeding program goals. Furthermore, better sys-

Keynote address by Dr. Sadanandan Nambiar
Credit: Forest Department Sarawak



tems for production and distribution of improved acacia and eucalypts germplasm, as well as an improved information exchange between breeders, forest nurseries and plantation managers are required. The interests of forest nurseries, small growers and wood processing industries need to be aligned well. High productivity in plantations can be achieved by addressing the operational challenges of growers, choice of planting materials (genotype) used, and managing climate and soil of the plantations. Moreover, good site management, the use of high-quality planting materials as well as pest and disease control and application of right fertilizers determine plantation productivity.

Future discussions should address challenges and the way forward and include topics such as integrated applications and management for sustainable wood production, land dispute issues, and the question as to how forest plantations tackle issues including climate change, land degradation, and rural poverty.

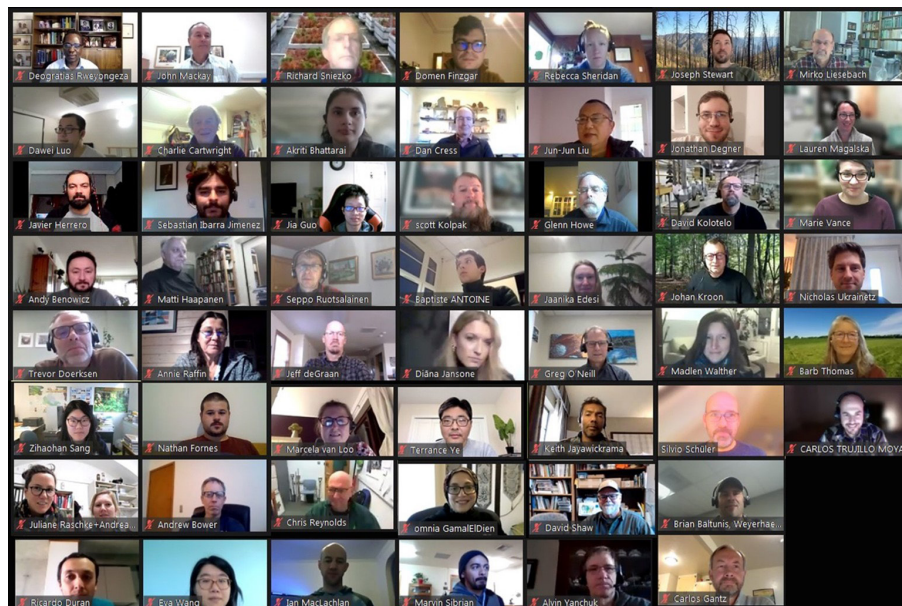
Introduction, Breeding, Propagation and Deployment of Pacific Northwest Conifers Around the World: 70 Years of Progress, Opportunities and Challenges

Report by Dr Keith JS Jayawickrama (Oregon State University), Coordinator of IUFRO Working Party 2.02.05

<https://www.iufro.org/science/divisions/division-2/20000/20200/20205/>

The IUFRO Working Party on Breeding and genetic resources of Pacific Northwest conifers had held two meetings in conjunction with other forest genetics activities, one in 2013 (Forest Genetics 2013) and one in 2016 (Forest Genetics for Productivity Conference 2016). There was interest in a holding a meeting in late 2021, but since the world-wide Covid-19 pandemic has limited international travel since March 2020, a virtual meeting was the only viable and practical opportunity. This turned out to be an excellent solution especially also because the Working Party is generally not large enough to support an in-person meeting on its own.

The virtual meeting on November 8-10, 2021, attracted 110 participants from 16 countries. It was kindly organized by



Screenshot: Group Photo of WP 2.02.05 meeting, Day 2. Credit: LE STUDIUM

Milieux & Diversité: Réseau thématique de recherche en Région Centre Val de Loire (MIDI), and LE STUDIUM Loire Valley Institute for Advanced Studies, and also supported by LIECO GMBH & CO KG, the Forest Genetics Council of British Columbia and IUFRO. Meeting website:

<https://pnwconifers2021.sciencesconf.org/resource/page/id/2>
The Book of Abstracts is available at: <https://www.iufro.org/publications/proceedings/meetings-2021/#c33053>

IUFRO All-Division 1 Online Discussion

Report by Pil Sun Park (Seoul National University) Deputy Coordinator of IUFRO Division 1 Silviculture, and Jens Peter Skovsgaard (Swedish University of Agricultural Sciences SLU), Coordinator of Division 1

<https://www.iufro.org/science/divisions/division-1/10000/>

Research on silviculture is often conducted at tree or stand level. However, recent forest-related issues require a scale-up of silvicultural research at forest and landscape levels to deal with challenges such as climate change adaptation or the long-term procurement of sustainably produced forest products while maintaining or even enhancing biodiversity and ecosystem services.

Therefore, the all-Division meeting on 16-18 November 2021 was titled **“Scaling-up from tree and stand level research to sustainable silviculture at forest and landscape level”**, and 79 participants from 28 countries joined to discuss challenges and new approaches in silvicultural research.

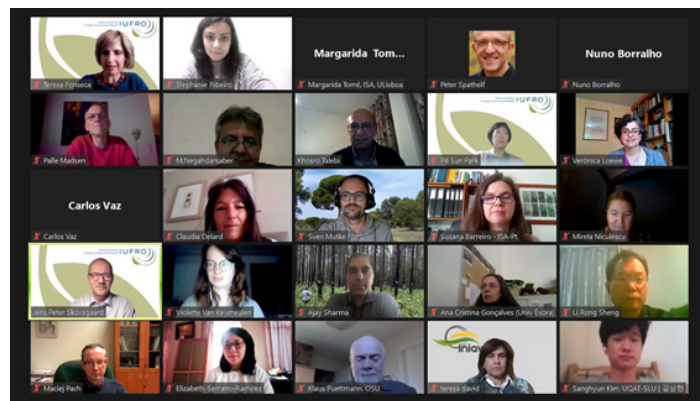
These presentations and discussions focused on scaling-up from stand to landscape level to cope with diverse societal demands for timber production and ecosystem services. Balancing intensive silviculture and ecosystem services can be achieved by scaling up silviculture from stand to landscape level. A landscape level approach could be applied to deal with multi-objective forest management, restoration of intensive plantations to naturally sustaining uneven-aged stands, group selection silviculture, aquifer management, old-growth forest management, and silvicultural treatment for fire resilience. Participants expressed and discussed the significance of re-

Topics:

The meeting covered a wide range of topics, including provenance variation, IUFRO trials, species introduction, genetics, breeding, seed orchards, biotic threats including drought and adaptation to climate change, to name but a few. The following species were mentioned: Coastal Douglas-fir, Western Hemlock, Western Red Cedar, Sitka Spruce, Interior Spruce, Lodgepole pine, Ponderosa Pine, Radiata Pine, Western White Pine, Sugar Pine, Coast Redwood, Noble Fir, Port-Orford-Cedar, Incense Cedar, Whitebark Pine, White Fir, Foxtail Pine

Conclusions:

There remains interest in introducing PNW conifers as exotics, as well as establishing new provenance tests, with added motivation from climate change. There are places where PNW conifers seem to add little value. The most advanced programs are in the 4th cycle of breeding and testing. Large seed orchard programs are in place for some species. Genomics, other molecular genetics efforts, and one somatic embryogenesis program were described. Foundational functions such as cone and seed processing should not be neglected. Disease resistance programs have made excellent progress with resistant seed being used for several PNW species - and the programs show a path forward for others.



gional studies at a global level. The importance of right species selection and thinning were emphasized to attain a wider range of benefits including soil fertility, better biomass productivity and disturbance resistance.

Intensive silviculture often uses the same species in various regions. The comparison of species behavior among various regions can be conducted at landscape level. Acacia, Fagus, and Pinus were among the most mentioned species in the presentations, and they represented commercial plantation species worldwide, native species, and native/introduced plantation species, respectively.

All presentations and discussions demonstrated a shift of topical issues in silvicultural research from timber biomass towards diverse ecosystem services, although timber biomass remains an important topic with a view to carbon sequestration. Silvicultural research is expanding from stand to landscape and even to global level.

The three-day conference offered interesting presentations highlighting short- and long-term study work. It became evident that the development of silvicultural techniques requires long-term research; it is also encouraging to see that many researchers from diverse regions have been involved in long-term studies.

Find a comprehensive report at: <https://www.iufro.org/science/divisions/division-1/10000/activities/>

Find the video recordings of the three sessions at: <https://www.iufro.org/science/divisions/division-1/10000/publications/>

IUFRO World Day Session:

Population Genetics and Genomics Research for Conservation, Climate Adaptation, Sustainable Management and Breeding of Tropical Trees

Report by Modhumita Dasgupta (Institute of Forest Genetics and Tree Breeding, India), Deputy Coordinator and Om P. Rajora (University of New Brunswick, Canada), Coordinator, IUFRO WP 2.04.01 Population, Ecological and Conservation Genetics <https://www.iufro.org/science/divisions/division-2/20000/20400/20401/>

Tropical and subtropical forests have been subjected to a high degree of genetic erosion due to anthropogenic pressures, changes in land-use patterns, illegal and unscientific harvesting, habitat loss and lack of regeneration due to fire and grazing, rendering them vulnerable to biotic and abiotic pressures and decline. Knowledge of demographic drivers and population dynamics of tropical trees still remains elusive since most studies are restricted to a few species in the Neotropics.

The emerging population genetics and genomics approaches can address these critical issues and facilitate much needed conservation and sustainable management and utilization of tree genetic resources. Under this theme, IUFRO Unit 2.04.01 on Population, Ecological and Conservation Genetics organized a session as part of the IUFRO World Day on 29 September 2021. The session was hosted by the Institute of Forest Genetics and Tree Breeding, Coimbatore, India. A total of 55 participants attended the session and seven speakers from India, Canada and Malaysia shared their research experience.

The session was opened with a lead presentation by Prof. Om P. Rajora, who discussed the challenges and opportunities for

forest tree genetics and genomics research and applications for conservation, climate adaptation, breeding and sustainable management of tropical forest trees by giving examples from his own research.

He identified the need of applying genetics and genomics concepts, technologies and approaches for identifying species; understanding population genetic characteristics and dynamics, effects of forest harvesting and natural disturbances, genetic basis of climate adaptation and genetic responses to climate change; identifying genes underlying economic and ecological traits, and conservation genetic units; and applying genomics in tree breeding. He emphasized the need for close international collaborations and leveraging the technologies and resources developed for temperate and boreal forest trees.

Several presentations were given by researchers from the Institute of Forest Genetics and Tree Breeding (IFGTB) and Forest Research Institute (FRI) of the Indian Council of Forestry Research and Education (ICFRE).

These presentations included an overview of Forest Genetics and Biotechnology Research at ICFRE by Mr. A. S. Rawat, Director General of ICFRE, genetics and genomics research for understanding population demography, adaptive potential and accelerated trait-based breeding of two commercially important species, teak (*Tectona grandis*) and sandalwood (*Santalum album*) by Dr. R. Yasodha and Dr. Modhumita Dasgupta from IFGTB, and population genetics of subtropical chir pine (*Pinus roxburghii*) by Dr. H.S. Ginwal from FRI.

Dr. Suma Arun Dev from Kerala Forest Research Institute presented her research on genomic strategies for enhancing adaptive potential of threatened cane genetic resources in India. Prof. Dr. Wickneswari Ratnam, Honorary Professor at Universiti Kebangsaan Malaysia, highlighted the novel tools, such as drones, sensors, artificial intelligence and machine learning and 3D/ 4D printing, that could be effectively used for more precise biodiversity assessment and conservation and sustainable management of forest trees of Southeast Asia.

Report abridged by the editor; find out about the conclusions of the session at: <https://www.iufro.org/science/divisions/division-2/20000/20400/20401/activities/>

Congratulations to Shirong Liu, IUFRO Vice-President!

Empowering Forests with Multiple Functions Ranging from Wood to Ecological Products and Services through Technical Innovation in Subtropical Forest Ecosystem Management

The 2020 National Science and Technology Award Conference was held at the Great Hall of the People in Beijing on November 3, 2021, and a total of 264 project achievements were awarded, among which only two were from the forest sector.

The interdisciplinary project – *The Cornerstone Technology in Managing Typical Forest Ecosystems in Southern China for Multiple Functions and Its Application* – led by Prof. Liu Shirong, President of Chinese Academy of Forestry (CAF) and Vice President of IUFRO, was awarded the second prize of the State Scientific and Technological Progress Award.

IUFRO World Day Session
“Population Genetics and Genomics Research for Conservation, Climate Adaptation, Sustainable Management and Breeding of Tropical Trees”
 Organizers
 Dr. Modhumita Dasgupta, Deputy Coordinator, IUFRO Unit 2.04.01 - Population, Ecological and Conservation Genetics, Institute of Forest Genetics and Tree Breeding, India
 Prof. Dr. Om P. Rajora, Coordinator, IUFRO Unit 2.04.01 - Population, Ecological and Conservation Genetics, University of New Brunswick, Canada
 29th September, 2021
 Host and Supporting Organization
Institute of Forest Genetics and Tree Breeding
 (Indian Council of Forestry Research and Education, India)

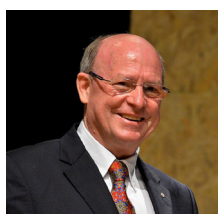


Team members working in experimental field. (Credit: ECTF)

The project involved the synergistic collaboration among CAF, Central South University of Forestry and Technology, Guangdong Academy of Forestry and Sichuan Academy of Forestry, and also benefited from the international collaboration in the knowledge and experience sharing with colleagues from Germany, USA and Canada through IUFRO networking.

Read more at: <https://www.iufro.org/discover/awards/prize-for-shirong-liu/>

Congratulations to Mike Wingfield, IUFRO Immediate Past President!



On 16 November, the University of Pretoria (UP) announced that Professor Mike Wingfield had been named on the annual Highly Cited Researchers™ 2021 list from Clarivate.

Clarivate operates a collection of subscription-based services focused largely on analytics, including scientific and academic research. “The highly anticipated annual list identifies researchers who demonstrated significant influence in their fields, through the publication of multiple highly cited research papers during the last decade.”

Prof. Wingfield, Advisor to the UP Executive and a Forestry and Agriculture Biotechnology Institute (FABI) research professor, features on the prestigious list for the fifth consecutive year. He established FABI as the founding director in 1998 - <https://www.fabinet.up.ac.za/> - and his research focus is on the health of trees globally. He is interested in insect pests and microbial pathogens that threaten the future of naturally occurring and planted forests.

Read more at: https://www.up.ac.za/news/post_3032759-two-up-academics-feature-on-prestigious-clarivate-highly-cited-researchers-list-2021

Publications

Trends in Forest-related Employment and Tertiary Education: Insights from Selected Key Countries around the Globe



The report highlights trends in forest-related employment, including green jobs, in seven selected countries: Brazil, China, Finland, Germany, Indonesia, South Africa and the United States of America, and provides insights into

how forest-related tertiary education in these countries is addressing these trends.

The report is an output of the “Global student networking and green jobs in the forest sector project”, a capacity development

project coordinated by the European Forest Institute (EFI) in collaboration with the International Forestry Students’ Association (IFSA) and the International Union of Forest Research Organizations (IUFRO).

More information about how to download the report is available at: <https://ifsa.net/efi-ifsa-iufro-project/expert-workshop-forest-employment/>

Forest Disturbance Monitoring Using Satellite Remote Sensing

Submissions are invited for a Special Issue of *Remote Sensing*

This Special Issue invites contributions with a focus on the latest research developments and applications in forest disturbance monitoring using satellite data from the tropics to the boreal region.

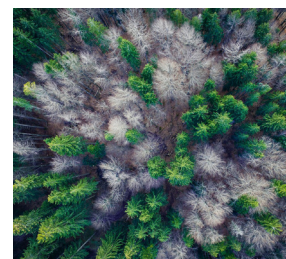


Photo riedelmeier/Pixabay

Submissions that deal with technical advancements in time series analysis and change detection for forest monitoring, but also manuscripts that focus on operational applications are highly welcome. Deadline for manuscript submissions is **28 February 2022!**

Guest editors: Dr. Janik Deutscher, Dr. Jörg Haarpaintner, Dr. Manuela Hirschmugl, Dr. Johannes Reiche
Details: https://www.mdpi.com/journal/remotesensing/special_issues/Forest_Disturbance_RS

Teaknet Bulletin

The latest issue of the bulletin includes a brief report on the Production of Quality Teak Clones by the Institute of Forest Genetics and Tree Breeding (IFGTB), India, and informs about Teaknet’s activities during IUFRO World Day, and much more!



Volume 14, issue 4 of the online newsletter of the International Teak Information Network was published in October 2021 and is available at: <https://www.iufro.org/science/divisions/division-5/50000/50600/50602/publications/#c20880>

Beim nächsten Wald wird alles anders Das Ökosystem verstehen

Publication in German by Hans Jürgen Böhmer, 2021
ISBN 978-3-7776-2922-3
<https://www.hirzel.de/beim-naechsten-wald-wird-alles-anders/9783777629223>

Vegetation ecologist Hans Jürgen Böhmer, University of the South Pacific, is a member of the IUFRO Task Force Monitoring Global Tree Mortality Patterns and Trends as well as Deputy Coordinator of IUFRO Working Party 4.02.01 Resource data in the tropics.

In his book he puts the discussion about the future of forests in Germany in a global and long-term context. He also underlines the need to consider the complexity of the sustainability debate and the importance of taking a long-term perspective.

Adaptive Collaborative Management in Forest Landscapes

Villagers, Bureaucrats and Civil Society

*Editors: Carol J. Pierce Colfer, Ravi Prabhu and Anne M. Larson
Series: The Earthscan Forest Library (Routledge)*

Many forest management proposals are based on top-down strategies, such as the Million Tree Initiatives, Forest Landscape Restoration (FLR) and REDD+, often neglecting local communities. In the context of the climate crisis, it is imperative that local peoples and communities are an integral part of all decisions relating to resource management.

This volume examines the value of Adaptive Collaborative Management for facilitating learning and collaboration with local communities and beyond, utilizing detailed studies of forest landscapes and communities.

Find out more: <https://www.iufro.org/discover/noticeboard/non-iufro-publications/>

Forest Products in the Global Bioeconomy Enabling Substitution by Wood-based Products and Contributing to the Sustainable Development Goals

*By Verkerk, P.J., Hassegawa, M., Van Brusselen, J., Cramm, M., Chen, X., Imperato Maximo, Y., Koç, M., Lovrić, M., Tekle Tegegne, Y.; published by FAO in 2021, ISBN: 978-92-5-135151-2
<https://www.fao.org/documents/card/en/c/cb7274en>*

This report addresses the role of forest products in replacing fossil-based and GHG-intensive products. The overarching objective is to provide recommendations to strengthen the contribution of substitution by forest products to sustainable development.

Position Announcements

<https://www.iufro.org/discover/noticeboard/position-announcements/>

Assistant Professor in Forest Measurements

Apply by 7 January 2022

The Department of Forest Resources Management in the Faculty of Forestry at the University of British Columbia (UBC), Vancouver, Canada seeks a tenure-track Assistant Professor in Forest Measurements.

Details: https://ubc.wd10.myworkdayjobs.com/ubcfacultyjobs/job/UBC-Vancouver-Campus/Assistant-Professor-in-Forest-Measurements_JR4880

Assistant/Associate/Full Professor, Natural Climate Solutions and Nature-Based Carbon Capture

Apply by 7 January 2022

The Yale Center for Natural Carbon Capture (YCNCC), New Haven, Connecticut, USA, invites applications for up to four tenure-track appointments, at any rank (assistant, associate, or full professor) in the natural sciences. The focus of the Center is to foster research on carbon capture and greenhouse gas reduction using ecological and geological approaches.

Details: <https://apply.interfolio.com/98686>

Ph.D. Position in Forest Ecology and Climate Change Adaptation

Apply by 12 January – open until filled

A fully funded Ph.D. position is available and interested candidates may enroll in the Institute of Forestry and Conservation at the University of Toronto or in the Department of Renewable Resources at the University of Alberta.

Details: <https://academic.daniels.utoronto.ca/forestry/wp-content/uploads/sites/4/2021/11/PhD-Opening-Forest-Ecology-and-Climate-Change-Adaptation-%E2%80%93-John-Caspersen.pdf>

PhD Student in Bamboo Forest Carbon Sequestration and Climate Change Mitigation

Open until filled

The Faculty of Forestry, University of British Columbia (UBC), Vancouver, Canada, is seeking a full-time PhD student to conduct interdisciplinary research on bamboo forest carbon management projects focusing on climate change's effect on bamboo carbon productivity under different carbon management strategies, life cycle analysis of bamboo and bamboo products, and their implication for bamboo forest carbon offsets markets.

Details: <https://forestry.ubc.ca/career-opportunities/phd-student-bamboo-forest-carbon/>

IUFRO Meetings

For a full list of IUFRO meetings go to our online calendar at:

<https://www.iufro.org/events/calendar/current/>

Find non-IUFRO meetings on the IUFRO Noticeboard at:

<https://www.iufro.org/discover/noticeboard/>

15-17 Dec 2021

VIII International Conference on Landscape and Urban Horticulture - The role of science in reconciling ecology and technology in Landscape and Urban Horticulture, and the IV International Symposium on Woody Ornamentals of the Temperate Zone

Online, from Catania, Italy

IUFRO [8.00.00](https://www.luh2021.it/), [8.01.02](https://www.luh2021.it/)

Elena Paoletti, [elena.paoletti\(at\)cnr.it](mailto:elena.paoletti(at)cnr.it)

<https://www.luh2021.it/>

Dec-Mar 2022

Webinar Series “Unlocking the Bioeconomy for Nontimber Forest Products”

17 Dec 2021: *Towards a Himalayan Bioeconomy*

13 Jan 2022: *Roles of NTFPs in Poverty Alleviation in China*

2 Feb 2022: *NTFP and Bioeconomy in the US*

22 Mar 2022: *NTFPs and Bioeconomy in the European Union*
Organized by the IUFRO Task Force Unlocking the Bioeconomy and Non-Timber Forest Products

Contact: James Chamberlain, [james.l.chamberlain\(at\)usda.gov](mailto:james.l.chamberlain(at)usda.gov)

<https://www.iufro.org/science/task-forces/bioeconomy-and-non-timber-forest-products/activities/>

Find presentations and recordings from previous meetings at:
<https://www.iufro.org/science/task-forces/bioeconomy-and-non-timber-forest-products/publications/>

Jan-Mar 2022

IUFRO WP 7.03.16 Mentoring Program

Three online symposia highlighting the work of graduate students in the disciplines of behavioral and chemical ecology of forest insects

24 Jan 2022, 12.00 UTC - *Europe and Africa session*21 Feb 2022, 18.00 UTC - *North, Central and South America session*28 Mar 2022, 04.00 UTC - *Asia and Oceania session*Contact: Jeremy Allison, Jeremy.Allison@NRCan-RNCan.gc.cahttps://www.fabinet.up.ac.za/index.php/event/IUFRO_WP_7.03.16_Mentoring_Program/

2-4 May 2022

13th Short Rotation Woody Crops International Conference

Mills River, North Carolina, United States

IUFRO [2.08.04](#)Contact: Ron Zalesny, Ronald.Zalesny@usda.gov<https://woodycrops.wixsite.com/srwc2022>

24-27 May 2022

22nd International Nondestructive Testing and Evaluation of Wood Symposium

Quebec City, Quebec, Canada

IUFRO [5.01.00](#), [5.01.04](#), [5.01.09](#)Contact: Alexis Achim, Alexis.Achim@sbfulaval.caXiping Wang, xiping.wang@usda.gov<https://www.ndtesymposium.org/>

26 Jun – 1 Jul 2022

Foliar, Shoot, Stem and Rust Diseases of Trees - Forest Diseases During Global Crises

Durham, New Hampshire, United States

IUFRO [7.02.02](#), [7.02.05](#)Contact: Salvatore Moricca, salvatore.moricca@unifi.it,Isabel Munk, isabel.munk@usda.gov<https://www.iufro.org/fileadmin/material/science/divisions/div7/70202/durham20-3rd-announcement.pdf>

11-15 Jul 2022

IUFRO LE Symposium at the IALE 2022 European Landscape Ecology Congress: Forest expansion, landscape dynamics and ecosystem services in Europe

Warsaw, Poland

IUFRO [8.01.02](#)Contact: Joao Azevedo, jazevedo@jipb.pt<https://www.iale2022.eu/home.html>

5-7 Sep 2022

Managerial forest economics and accounting as a base for decision making in a changing world

Hamburg, Germany

IUFRO [4.05.00](#)Contact: Lydia Rosenkranz, lydia.rosenkranz@thuenen.deLidija Zadnik Stirn, lidija.zadnik@bf.uni-lj.si<https://www.iufro.org/science/divisions/division-4/40000/40500/activities/>

6-9 Sep 2022

All-Division 7 conference

Lisbon, Portugal

IUFRO [7.00.00](#)Contact: Manuela Branco, mrbranco@isa.ulisboa.ptJosé Carlos Franco, jsantossilva@isa.ulisboa.ptEckehard Brockerhoff, eckehard.brockerhoff@wsl.chTod Ramsfield, Tod.Ramsfield@canada.caMaartje Klapwijk, maartje.klapwijk@slu.se<https://www.iufro.org/fileadmin/material/science/divisions/div7/70000/all-div7-lisbon22-1st-announcement.pdf>

19-22 Sep 2022

Abies & Pinus 2022: Fir and Pine Management in Changeable Environment: Risks and Opportunities. The 17th International Conference on Ecology and Silviculture of Fir and The 6th International Conference on Ecology and Silviculture of Pine

Sarajevo, Bosnia and Herzegovina

IUFRO [1.01.09](#), [1.01.10](#)Contact: Dalibor Ballian, balliandalibor9@gmail.comTeresa de Jesus Fidalgo Fonseca, tfonseca@utad.ptAndrej Bončina, Andrej.Boncina@bf.uni-lj.si<https://www.sfsa.unsa.ba/web/iufro-abiespinus-2022/>

4-6 Oct 2022

Eighth International Poplar Symposium

Online

IUFRO [2.08.04](#)Contact: Ron Zalesny, Ronald.Zalesny@usda.gov<https://www.iufro.org/science/divisions/division-2/20000/20800/20804/activities/>

26-31 Oct 2022

Small-scale Forestry International Conference 2022: Progress in Small scale Forestry beyond the Pandemic and Global Climate Change

Okinawa, Japan

IUFRO [3.08.00](#), [9.06.00](#)Contact: Ikuo Ota, iufro2022okinawa@gmail.com<https://www.iufro2022okinawa.org/>

17-21 Apr 2023

Acid Rain 2020: The Future Environment and Role of Multiple Air Pollutants, 10th International Conference on Acid Deposition

Niigata City, Japan

IUFRO [8.04.01](#), [8.04.03](#), [8.04.06](#)Contact: Hiroyuki Sase, sase@acap.asia<https://www.acidrain2020.org/>

4-8 Jun 2023

All-Division 5 Conference: The Forest Treasure Chest - Delivering Outcomes for Everyone

Cairns, Australia

IUFRO [5.00.00](#)Contact: Roger Meder, rmeder@usc.edu.auAndrew Wong, awong.unimas@gmail.comPekka Saranpää, pekka.saranpaa@luke.fi<https://www.iufro-div5-2023.com/>**Other Meetings**

25 Apr-8 May 2022

Fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity

Kunming, China

<https://wfc2021korea.org/>

2-6 May 2022

World Forestry Congress

Seoul, Republic of Korea

FAO, <https://www.fao.org/forestry/96885/en/>