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## **IUFRO's Focus on the Interaction Between Forests and People**

Interview with Professor Shirong Liu, IUFRO Vice-President for Task Forces, Special Programmes, Projects and IUFRO-led Initiatives

Dr. Liu Shirong, chief scientist in forest ecology, is the President of the Chinese Academy of Forestry, and Vice-President of the Chinese Society of Forestry. In IUFRO, Dr. Liu holds the position of Vice-President for Task Forces, Special Programmes, Projects and IUFRO-led Initiatives. Currently he also works as Deputy Coordinator of the Task Force on Forests and Water Interactions in a Changing Environment.

Dr. Liu, you studied forestry and then focused on ecology for your PhD. Within the field of ecology, you developed a strong interest also in forest hydrology. Why did you decide to pursue this research path?

Forestry provides a wide range of public welfare, which makes it stand out from any other industries. My personal interest in exploring multiple functions of forests, e.g., economic, ecological and social, inspired me to study forestry. I selected forest ecology for my PhD study, because it is a branch of the discipline of ecology studying the relationship between forest and its environment, which is a foundation for silviculture, forest management, conservation and restoration. It provides a knowledge base and understanding of the ecological complexity of forest ecosystems in terms of forest structures and functions and helps find wiser approaches to cope with the challenging issues facing sustainable forest management under a changing environment.

We cannot avoid considering the water factors whenever we study any one field in relation to natural resources. Water is one of the determinants that decide the growth and vitality of forests while, in turn, forests can provide a clean source of water. The interactions between forests and water are not fully known even to date, and it stays an intriguing topic for many forest ecologists and students to carry on with the research.

Both forests and water are integral parts of people's livelihoods and sustainable development, and it is necessary to keep up with the consistent and dynamic research on their interactions under climate change, which may add varying factors to this interrelationship. From the geographical perspective, China is a country short of water resources with large parts of its land situated in arid and semi-arid areas and a larger temporal-spatial variation in precipitation across the country, resulting in droughts and floods occurring in different parts, in particular, under climate change.



Prof. Liu at the carbon flux observation site in warm-temperate oak forest, Baotianman Nature Reserve, Henan Province, PR China. Photo by Sun Pengsen

Research on forest hydrology can help produce scientific evidence about the forests' role in regulating water resources. That's why I entered into the field of forest hydrology.

As the President of the Chinese Academy of Forestry you lead a nationwide forest-related research institution. Do vou still have any opportunity to do research work yourself? If so, what topics are you currently addressing in your research?

It is definitely a big challenge to keep a balance between the administration and research work. Fortunately, the Chinese Academy of Forestry is a well-established national research institution with a robust team, who can assist me in fulfilling my obligations in both administration and research. As the leader of the research institution, I must keep pace with the times and capture knowledge about the up-to-date scientific

findings and research progress and development trends. To a certain degree, doing research myself can be helpful to this end. While, in turn, administration work informs me about the needs of policy making processes towards science research for the good of the public, and thus I can provide the linkage between science and policy.

Currently, my team and I are doing research on two topics, i.e., the hydrological response to forest changes and climate change, and forest-based mitigation and adaptation to climate change.



Subalpine forests and lakes in western Sichuan Province, PR China. Photo by Sun Pengsen



The former explores the impacts of forest vegetation change (e.g., through logging, afforestation and restoration) on water resources under global climate change, and accordingly provides solutions to improving forest ecosystem services and functions.

The latter examines the improvement of the stability and resilience of forests through restoring natural forests and readjusting the composition of planted forests, the ways to increase forests' capacity in carbon sequestration and timber production, while giving full play to their multiple functions including climate change mitigation and adaptation.

You are also a member of several national and international research organizations, one of them being IUFRO, of course. How did you learn about IUFRO and why did you get involved? Would you like to point out any highlights or achievements during your time with IUFRO so far?

IUFRO is a network of forest scientists from all over the world with the longest history in forestry, and it is well known to forest scientists and students. I have known IUFRO since I was studying at university. IUFRO's focus on the interaction between forests and people has attracted me, and I believe also other member scientists, to join in. It has been my great privilege to work with IUFRO after I started my career at the Academy, from which I had numerous opportunities to cooperate with other forest scientists under the umbrella of IUFRO and enrich my professional knowledge and skill through participation in IUFRO meetings, seminars, workshops and congresses.

For example, on the platform provided by IUFRO, my team and I extended our collaboration with scientists from other countries in the field of forest hydrology. Together we made many scientific achievements on the interactions between forests and water, one of which is A Global Review on Hydrological Responses to Forest Change across Multiple Spatial Scales: Importance of Scale, Climate, Forest Type and Hydrological Regime, published in the Journal of Hydrology. The article increased the understanding of hydrological responses to forest cover change at different spatial scales and provided a scientific underpinning to future watershed management in the context of climate change and increasing anthropogenic disturbances. In addition to making use of the platforms provided by IUFRO, during my experience of working with IUFRO, we have also



Congress opening ceremony. Photo by Zhou Xiaoxing



Congress closing ceremony. Photo by Zhou Xiaoxing

jointly contributed to further extend forest science communication and collaboration in Asia and Oceania. In 2016, the IUFRO Regional Congress for Asia and Oceania was organized by IUFRO and CAF together. It attracted over 1,200 scientists, professional foresters, policymakers and forestry students from 56 countries, and explored the role of forest-related research in pursuing sustainable development. It was the first Regional Congress held in Asia and Oceania as well as the largest international event on forest science ever held in China. The Congress successfully promoted the cooperation among forest scientists and related stakeholders in Asia and Oceania, and also enhanced their relationship with IUFRO.

As Vice-President of IUFRO you are also in charge of Task Forces, which aim to advance interdisciplinary cooperation in forest research fields and address key emerging issues. What are in your view some of the most pressing issues related to forests globally and how should IUFRO in general and the Task Forces in particular address them in future?

One of the pressing issues related to forests globally is how to increase forest carbon sinks and ensure stable water resources supply at the same time in the framework of sustainable forest management under a changing environment. In many cases, the two aspects are usually conflicting with each other; it is a kind of trade off and we must seek scientific guidance to address this. IUFRO Task Forces need to give full play to their role in solving such problems, which requires a multidisciplinary approach. It is only with the joint scientific research and robust collaboration among global forest scientists – and this is what IUFRO is doing – that we could successfully reach a synergy between the forest carbon sequestration and forest water supply and achieve the goals of enhancing forests' resilience and ecosystem services under global change.

Your portfolio in IUFRO also comprises Special Programmes, Projects and Initiatives. They help to translate forest-related research to policy makers, practitioners and other stakeholder groups, and also contribute effectively to capacity building and networking especially in economically disadvantaged regions. How do you see their role in IUFRO today and in the years to come?

First of all, I would like to express my sincere thanks to Dr. Michael Kleine, IUFRO Deputy Executive Director, for his



hard work and outstanding contribution to the Special Programmes, Projects and Initiatives. These Programmes, Projects and Initiatives are all cross-regional and cross-disciplinary while they connect the science community with multiple stakeholders including forest practitioners and decision makers, in which way IUFRO has become a platform for much broader participation and collaboration. What's more important is that through these Programmes, Projects and Initiatives, IUFRO improves the equity in access to scientific knowledge and gender balance and helps to build up research capacities of early-career scientists, which enriches the unique characteristics of IUFRO.

The IUFRO World Day digital event on 28 and 29 September 2021 will also include three science policy forums on topical forest-related issues, one for Africa and Europe, one for the Americas, and one for Asia and Oceania. You have kindly taken the lead in developing the latter together with Murdoch University, Australia. Can you give us a short sneak preview of what this forum will be about?

The Asia-Oceania Science-Policy Forum will be held at 15:00-16:30 (UTC+8), on 29 September 2021 and it is intended to explore the science-policy-practice interface for managing forests and water under climate change. The 1.5-hour virtual forum will provide a platform for multiple stakeholders to communicate and share innovative perspectives towards the important roles played by forests and water in the achieve-



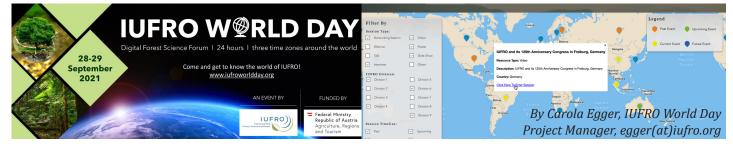
The Black Forest, Germany. Photo by Cai Daoxiong

ment of SDGs under climate change and offer an opportunity for them to start new collaborations.

Two keynote speeches from both scientific and political perspectives will be given and panelists from different countries and genders will share their opinions on the optimal interface among science, policy and practice related to forests and water. As the event is drawing near, I would like to cordially invite all the friends interested in this topic, no matter you are forest scientists, policy makers, students or working in any other fields, to join our discussion at the forum. More information will soon be available on the <a href="IUFRO World Day">IUFRO World Day</a> webpages!

Thank you very much for the interview!

#### First Ever IUFRO World Day Moving Closer - Last Call for Submission of Content



In the 129 years of IUFRO's history it has never been more important to strengthen international research cooperation and solidarity than in these times of global crises. The need to supply the world with the sound and solid knowledge base required to address the multitude of environmental and social challenges has never been stronger.

In the absence of large physical meetings due to the pandemic, IUFRO has decided to hold a <u>worldwide digital forest science</u> forum on 28 and 29 September 2021. This unique 24-hours event will provide ample opportunities to IUFRO members and interested audiences to inform and learn about forest-related research activities in three time zones around the world.

An interactive world map will guide participants through the content of the event. All sessions and static content will be pinned on this map. This feature allows participants to see live sessions and receive information on upcoming events. Additional content such as pre-recorded videos, publications or

posters can be accessed throughout the event within the map. Users will be able to apply different filters to show elements customized to their interests.

Live sessions will comprise high-level science policy forums for Europe/Africa, the Americas and Asia/Oceania on topics such as forest bioeconomy, forest fires and forest and water linkages, respectively. There will also be one central session in each time zone designed to make you familiar with IUFRO, meet officeholders and inform you how to get involved.

**IUFRO** Member Organizations still have the opportunity to submit proposals for static content such as videos, slides or posters showing activities, announcements, publications, recorded webinars or talks etc. All you need to do is submit your content and provide a link. Please fill out the submission form for static content <a href="https://www.iufro.org/events/iufro-world-day/session-content-proposal/">https://www.iufro.org/events/iufro-world-day/session-content-proposal/</a> by 16 August 2021! We are very much looking forward to hearing from you!



# Mondi and IUFRO Partner to Identify Science-based Solutions to Tackle the Impact of Climate Change on Forests

The global packaging and paper company Mondi and the global forest science network IUFRO partner to identify science-based responses to climate-related threats to forests and forest-based industries.

The IUFRO-Mondi partnership, as a global partnership with a pan-European focus, aims to establish a science-business platform where both organizations will work together to address forest-related climate change challenges. This partnership comes at a crucial time when drought, extreme weather events and outbreaks of forest pests and diseases are causing severe damage to forests in many parts of the world.

Photo by Jana Kudrnova on Pixabay



The main focus of the partnership will include: think tank meetings that provide information on and access to the latest data on climate change and SDGs and identify options for response measures to mitigate risks; stakeholder dialogues to share and discuss findings of studies, and engage partners and public, private and civil society stakeholders to identify pathways and options for the way forward; scientific studies, workshops; and regular communications to facilitate best practice sharing.

The full press release is available in English and German at:

https://www.iufro.org/media/latest-releases/

#### Forests, Trees and Poverty Alleviation in Africa: An Expanded Policy Brief

Report by Dikshya Devkota, GFEP Project Manager

Editors: Daniel C. Miller, Doris N. Mutta, Stephanie Mansourian, Dikshya Devkota and Christoph Wildburger

A new policy brief entitled, *Forests, Trees and Poverty Alleviation in Africa* was successfully launched on 9 July 2021 during a virtual side event of the UN High-Level Political Forum on Sustainable Development (UN-HLPF). This expanded policy brief published by IUFRO's Global Forest Expert Panels (GFEP) Programme was prepared by 20 scientists and in consultation with 207 local stakeholders from various groups, including policymakers, international development organizations, civil society and other interest groups.

During the launch, authors and editors of the policy brief Daniel C. Miller and Doris N. Mutta presented the keynote presentation while two lead authors Gillian Kabwe and Laura Vang

Rasmussen shared insights into the major findings of the policy brief and responded to questions from participants. Additionally, three coordinating authors who conducted the stakeholder consultations in Africa presented the needs and views of the stakeholders on the ground.

If you missed the launch, you can watch it here: <a href="https://www.youtube.com/watch?v=E7-XzejkxmI">https://www.youtube.com/watch?v=E7-XzejkxmI</a>

The publication outlines the most important scientific evidence of the nexus of forests, trees, and poverty in Africa, explain the context, and highlight key conclusions to be taken into account by stakeholders across Africa.

The following key messages are highlighted in the policy brief:

- Forests and trees are critical to poverty alleviation in Africa
- Forests and trees can contribute to the well-being of the poor in Africa as they face profound global changes
- The distribution of benefits from forests and trees for human well-being in Africa is inequitable
- Cross-sectoral coordination in land use policies can avoid excessive costs being borne by the poor
- Policy measures exist to enable forests and trees to effectively address poverty goals in Africa, but there is no 'one size fits all' solution.

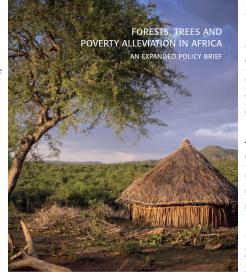
This expanded policy brief contributes to the implementation of the 2030 Agenda for Sustainable Development by highlighting the nexus between SDG 1: No poverty and SDG 15: Life

on land, as well as links to other relevant SDGs.

Further information and the policy brief are available for download at:
https://www.iufro.org/science/gfep/regional-activities/forests-trees-and-poverty-alleviation-in-africa/

Also find a report on the launch and recorded statements of speakers at: https://enb.iisd.org/sdgs/HLPF2021/side-events/forests-trees-and-poverty-alleviation-in-africa/9July2021

Global assessment report (2020): https://www.iufro.org/science/gfep/gfep-initiative/panel-on-forests-and-poverty/





## GreenRisk4ALPs Mountain Forest Conference

Report by Michaela Teich, Coordinator of the <u>IUFRO WP 8.03.02</u> – Snow and avalanches

*Meeting website:* https://cmi.eventsair.com/greenrisk4alps/

The online meeting on 28-29 June involved IUFRO Units 8.03.02 Snow and avalanches and 8.03.00 Natural hazards and risk management and was hosted by the Austrian Research Centre for Forests (BFW), Department of Natural Hazards, and sponsored by Interreg Alpine Space project GreenRisk4ALPs (ASP635). It attracted 199 participants from 25 countries from around the world.

The GreenRisk4ALPs project (https://www.alpine-space.eu/projects/greenrisk4alps/en/home) was initiated in 2018 to develop strategies and innovative decision support tools to include protective forests into integrated risk management for natural hazards in the Alpine space. After three years of fruitful scientific collaborations and continuous exchange with practice and policy, the final project conference aimed to connect, discuss and move forward together with managing mountain forests sustainably as an effective protection measure against natural hazards, while also providing other important ecosystem services. This process particularly involves translating scientific knowledge into policy and management actions as well as into the public perception.

In addition to the GreenRisk4ALPs project, several European projects were presented, addressing the topics of nature-based solutions and forest composition in a changing climate such as ROCK the ALPS (https://www.alpine-space.eu/projects/rockthealps/en/home), PHUSICOS (https://phusicos.eu/), ALPTREES (https://www.alpine-space.eu/projects/alptrees/en/home) and AlpES (https://www.alpine-space.eu/projects/alpes/en/home).

Representative of key actors, organizations and networks, e.g., from the Natural Hazards Working Group of the Alpine Convention (PLANALP), the EU Strategy for the Alpine Region (EUSALP), the Interreg Alpine Space program, the Global Mountain Safeguard Research program (GLOMOS), the International Union for Conservation of Nature (IUCN) and the IUF-RO were involved in an active dialogue and a panel discussion addressing the question: "Natural hazard risk: Saving the Alpine future with or without protective forests?"

Key results of the GreenRisk4ALPs project were presented and discussed such as the Protective Forest Assessment Tool - FAT

(https://gr4a.geocodis.com/) – an online decision support tool which allows a cost-benefit analysis of forest-based solutions in comparison to avoidance strategies and technical measures, and Flow-Py (https://zenodo.org/record/5027275#. YO2lCegzaUk) – an open source





Rock avalanche in the GreenRisk4ALPs Pilot Action Region "Gries am Brenner / Vals" in Austria, endangering infrastructure, adjacent to protective forest reducing rockfall risk. Credit: Barbara Žabota, University of Ljubljana

simulation tool for gravitational mass flows that can be used to model protective functions and effects of forest.

In addition, experts from different Alpine countries presented their methods and approaches to support an ecosystem-based risk management such as remote sensing technologies for a rapid assessment of a stand protective effects after disturbance or interactive avalanche protective forest maps.

All experts agreed that climate change and socio-economic developments represent major challenges for the future of protective forests, and that close cooperation between science, practice and policy is a prerequisite for overcoming these challenges together and in an iterative exchange. The "GreenRisk4ALPs Mountain Forest Conference" provided an important exchange platform and showed new contact points to continue the work started in the GreenRisk4ALPs project to establish risk-based strategies for trans-Alpine protective forest and natural hazard risk management.

Moreover, it was highlighted that a successful integration of scientific knowledge into practice always requires practical relevance, scientific fit and implementation opportunities, i.e., decision support tools will only be used in practice, if they are relevant to daily practical work, if practitioners have tools to use them in practice, and if the legal framework allow for their application. The integration process itself will only be successful, if knowledge transfer is structured, selective and targeted, and a key part of any scientific project.

All presentations including discussions, and the panel discussion can be viewed on the BFW YouTube channel: <a href="https://www.youtube.com/user/Waldforschung">https://www.youtube.com/user/Waldforschung</a> and will be available

soon with further descriptions in the Virtual Proceedings of the GreenRisk4ALPs Mountain Forest Conference at <a href="https://www.alpine-space.eu/projects/greenrisk4alps/en/outputs/virtual-conference-proceedings">https://www.alpine-space.eu/projects/greenrisk4alps/en/outputs/virtual-conference-proceedings</a>

Fred Berger (8.03.00) and Michaela Teich (8.03.02) during discussion with panel members. Credit: Anne Hormes, BFW



#### **Linking Growth Models with Remote Sensing Data**

Report from a IUFRO session at the 2021 Western Mensurationists Meeting by Mathieu Fortin and Woongsoon Jang, Deputy Coordinators of <u>IUFRO Working Party</u> 4.01.02 – Growth models for tree and stand simulation

The **Western Mensurationists Meeting** took place digitally on June 21-22 and was attended by 152 participants from North and South America, Asia, Africa and Europe. The meeting involved IU-FRO Units 4.01.02 - Growth Models for Tree and Stand Simulation / 4.01.00 - Forest mensuration and modelling.

*Meeting website:* <a href="https://">https://</a>

mensurationist.net/2021-western-mensurationists-meeting/



Group photo taken on zoom at the end of the meeting. Credit: Richard Zabel, Western Forestry and Conservation Association

On the first day of the meeting IUFRO had a session on "Linking growth models with remote sensing data". In the session, attendees discussed how remote sensing techniques can be used to develop and improve growth and yield models in order to manage our forests in cost-effective ways. Recent studies from different regions of the world were presented, and new ideas were exchanged. The meeting also provided a social/mentorship session for junior researchers and students.

#### Some of the key issues discussed during the session were:

- The use of diverse remote sensing techniques to model crown and canopy structure
- The use of remote sensor-mounted unmanned aerial systems in forest inventories

 The incorporation of collected remote sensing data into empirical or process-based growth and yield models

#### Here are some of the main conclusions:

- Confirmed tree/stand responses to management practices through remotely collected data
- LiDAR with unmanned aerial systems implied a promising strategy for accurate and efficient inventory and spatially explicit projections
- Sought integration of remote sensing data into existing growth and yield models or process-based models for large-scale forest management

A special issue on the topic of this IUFRO session will be published in the Canadian Journal of Forest Research.

#### **Celebrating Environment Day 2021**

The Department of Forestry & Natural Resources, **Panjab Agriculture University, India**, in collaboration with the Indian Society of Geomatics, Ludhiana Chapter organized an awareness campaign on restoration of ecosystem on June 5, 2021.

On this occasion, around 2100 plants were raised at the University Seed Farm and the activity was coordinated by Dr SK Chauhan, Prof. & Head of the Forestry Department and Deputy Coordinator <u>IUFRO Agroforestry Unit 1.04.00</u>.

Mr. Rohit Mehra, Assistant Commissioner Income Tax initiated a unique activity of enhancing forest regeneration through seed balls, developing plant clinic/tree ambulance facility, making of eco-bricks and establishing vertical gardens.

Swoyambhu Man Amatya, IUFRO Agroforestry Unit Coordinator put the emphasis on protecting environment and mother nature otherwise the developing nations would be the major sufferers.



Also find a report on the IUFRO co-sponsored celebration of Biodiversity Day at PAU Ludhiana, India at: <a href="https://www.iufro.org/science/divisions/division-1/1000/10400/activities/">https://www.iufro.org/science/divisions/division-1/1000/10400/activities/</a>



#### **Building Capacities in Forest Landscape Restoration in Latin America**

From 31 May 2021 to 25 June 2021 an online course was held in Spanish on the practice of forest landscape restoration. Thirty young scientists and professionals with interest and involvement in forest landscape restoration from Argentina, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Panama, Paraguay and Peru participated actively in the virtual sessions.



Participants during the last session of the course (provided by CATIE)

The course was an initiative of IUFRO-SPDC (Special Programme for Development of Capacities), implemented by CATIE, and with the collaboration of World Resources Institute (WRI), the Latin-American Forestry Students Association (ALECIF), the International Forestry Students' Association (IFSA) and the Joint IUFRO-IFSA Task Force on Forest Educa-

tion. Find the full workshop report and further information at: <a href="https://www.iufro.org/science/special/spdc/tw/pract/">https://www.iufro.org/science/special/spdc/tw/pract/</a>
Also read:

https://catie.ac.cr/en/catie-news/4631-building-capacities-in-forest-landscape-restoration-in-latin-america.html

# Forest Landscape Restoration and Climate Change in Latin America

Report by Rene Zamora Cristales, Coordinator IUFRO RG 3.09.00 Sustainable Operations for Forest Landscape Restoration <a href="https://www.iufro.org/science/divisions/division-3/30000/30900/activities/">https://www.iufro.org/science/divisions/division-3/30000/30900/activities/</a>

The online seminar entitled "La contribución de la restauración de paisajes a la adaptación a las consecuencias del cambio climático y su papel en los NDC" was held in Spanish on 23 June and included a presentation of the latest UNASYLVA issue to Latin America.

*Meeting website:* https://initiative20x20.org/es/events/lacontribucion-de-la-restauracion-de-paisajes-la-adaptacion-los-efectos-del-cambio

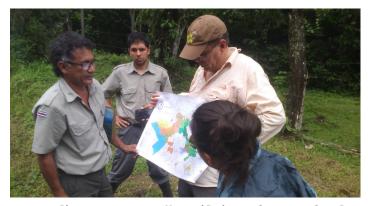
The meeting involved IUFRO Division 8 Forest Environment and Research Group 3.09.00 Sustainable Operations for Forest Landscape Restoration and was kindly hosted and supported by World Resources Institute, Initiative 20x20 and FAO.

The impacts of climate change in Latin America and the Caribbean already have serious economic, social and environmental consequences. Many of these impacts, such as the destabilization of rainfall patterns, the extension of periods of drought, the rise in sea level, and changes in the integrity of

ecosystems, among others, are in practice irreversible even if the objectives are achieved. This online seminar shared innovative restoration strategies that contribute to the adaptation to global change of the countries of the Latin American region. Multifunctional management options are needed to find innovative and sustainable solutions, both operational and cost effective, to achieve sustainability objectives in the medium and long term of landscape restoration.

FAO Assistant Director René Castro and experts Carolina Gallo Granizo (Spain), Adriana Soto (Colombia), Milena Rodriguez (Costa Rica), Alejandro Deeb (USA), José Gobbi (Argentina) and Walter Vergara (USA) discussed strategies to use restoration as an adaptation measurement to reduce vulnerability. The session was moderated by Sandra Luque (Argentina/France), Victoria Rachmaninoff (USA) and René Zamora (Guatemala).

UNASYLVA's latest issue on landscape restoration was launched for the Latin America region in Spanish. It addressed questions such as: Why is important to restore degraded landscapes, especially the ones severely affected by human activities? What adaptation measurements could be more effective against climate change effects to reduce vulnerability and prioritize restoration operations and actions.



Planning restoration in National Parks near Guanacaste, Costa Rica. Photo by René Zamora

#### **Main conclusions:**

- Evolving carbon markets can provide incoming resources for landowners and landholders to restore their land and adapt to climate change effects.
- Prioritizing key areas for restoration to reduce vulnerability to extreme weather events needs to be considered when planning landscape restoration
- Climate change can also affect the restoration activities that are suitable for each location. Changes in precipitation and temperature will require adaptive management when planning restoration species selection and methods.
- Reforestation, agroforestry, silvopastures are strategic interventions to help reduce vulnerability to landslides and flows specially in susceptible areas due to soil conditions, tree cover and actual practices.

The organizers (Coordinator of Division 8 and Coordinator of Division 3.09 and deputy coordinators) will develop an outline of a review paper to restoration-based adaptation. This will be submitted to a peer-reviewed World Resources Institute Report for consideration.



# International Virtual Workshop on Latest Advances in Evolution and Adaptation of Fagaceae and Nothofagaceae

Report by Oliver Brendel, INRAE, Coordinator of IUFRO WP 2.08.05 – Evolution and adaptation of Fagaceae and Nothofagaceae (shortened by the editor)

Find the full report at: <a href="https://www.iufro.org/science/divisions/division-2/20000/20800/20805/activities/">https://www.iufro.org/science/divisions/division-2/20000/20800/20805/activities/</a>

Due to the international COVID health crisis, an in-person meeting of the IUFRO Working Party 2.08.05 "Evolution and Adaptation of Fagaceae and Nothofagaceae", planned for January 2021 in Oaxaca, Mexico, had been postponed until mid-2022. To keep abreast with the latest findings, a virtual workshop was held on June 23, 2021.

Due to the large span of time-zones covered by the working party, the duration of

the meeting was limited to two hours and a format was used, where five presentations were pre-recorded and made available to registered participants one week before the actual workshop. During the workshop, a quick overview for each talk was presented by the speaker and then opened for discussion. Questions, comments, and discussion were also submitted by Slack prior and during the workshop.

#### Tritrophic interactions from Fagaceae up

Graham Stone, Edinburgh University, UK presented recent work in Southeastern China (Yunnan and Sichuan), which has revealed many new and undescribed oak gallwasp species (Hymenoptera; Cynipidae; Cynipini), both on oaks (Quercus) and on other Fagaceae (Castanea, Castanopsis and Lithocarpus). (...)

## Forming an interdisciplinary network of allies to help prevent and monitor pathogens in the oak family (Fagaceae)

Ryan Huish, University of Virginia's College at Wise, US, presented the Oak Conservation Alliance, a collaborative network incorporating interagency collaborations and citizen science (and other methods such as remote sensing, GIS, etc.) into monitoring diseases threatening the family, and trying to help the family evolve in the future in the presence of these new/spreading diseases. (...)

## Genome wide evidence of rapid evolution of oaks during the Anthropocene

Antoine Kremer, INRAE Pierroton, France, presented the implementation of a retrospective approach in European white oak populations using whole genome sequences to track traces of selection during the last 350 years from the Little Ice Age

to the Anthropocene. (...)

#### Nothofagus in Patagonia, where do we stand? An overview of our population genetics research in Argentina

Paula Marchelli, IFAB Bariloche, Argentina, presented an update of the research lines of their group, with the objective to understand the responses of Nothofagus species to current drivers of global change.



Quercus dentata. Photo by Keiko Kitamura

## Physiological and molecular bases of the responses of South American Nothofagus to the environment

Maria Veronica Arana, IFAB Bariloche, Argentina, presented an update of the research lines of their group, with the objective to understand the responses of tree species to changes in the environment. They showed current projects, which are aimed at exploring phenotypic, genetic (molecular) and environmental variation of relevant plant traits. (...)

Over sixty scientists participated in the virtual workshop, across all three continents (Asia, Europe and the Americas, including Argentinians who study Nothofagus!). The meeting format was successful and well accepted, with many participants very happy about the opportunity to view the pre-recorded presentations at their leisure before the meeting and to review parts for improved clarity and comprehension.

The roughly fifteen minutes devoted to discussion never provided enough time to cover all the questions. The Slack channels created for each talk were convenient for off-line discussions both during and after the meeting.

A follow-up meeting with a similar format is planned for October and the next in-person meeting is tentatively proposed to be held in mid-2022 in Oaxaca, Mexico as originally planned in 2021.

# Humusica 2021: Soil Biodiversity and Management - Practical Tools and Actions for Facing the Future

Report by Augusto Zanella, Deputy Coordinator IUFRO WP 8.02.03 – Humus and soil biodiversity <a href="https://www.iufro.org/science/divisions/division-8/80000/80200/80203/">https://www.iufro.org/science/divisions/division-8/80000/80200/80203/</a>

The online meeting was kindly hosted by the Department TE-SAF of the University of Padua, Italy, on June 24 and 25 attracted 50 participants from Italy, Austria, France, Switzerland, Brazil and China.

Meeting website: https://www.iufro.org/fileadmin/material/science/divisions/div8/80203/webinar-humusica21-programme.pdf

The initiative was taken to highlight the release of the three-language updates of TerrHum, an app to classify forest humus forms (iOS and Android, free). Soil is the main storage bank for organic carbon on which humans can intervene to



mitigate global warming. Furthermore, it is in the superficial part of the soil that a large part of the planet's biodiversity is found, without forgetting its importance in the field of microorganisms.

The webinar was organized in three sessions, one dedicated to TerrHum and the classification of humus forms and two to the themes of biodiversity and climate warming on the second day. Testimonials on the use of TerrHum have shown that the app works well but that it needs at least one field trip of a classification expert with potential users of the app. The greatest difficulty lies in recognizing the diagnostic horizons. It is necessary that at least the first time, users see how these horizons are made in the field.

## For soil biodiversity, the main issues were the following:

- a soil richer in living beings is also more efficient as a carbon sink, as a water reserve and as a resource for food production;
- a soil that is richer in life is also healthier for humans and for the quality of the products;
- there are easy methods of estimating soil biodiversity; the example of the QBSart (Biological Quality of the Arthropod Soil) was illustrated.



What to do after a storm that has landed the trees of a forest to give strength to the ground and restore as quickly as possible in the woods? The recommendations of an Austrian expert on the subject: keep the ground covered as much as possible even leaving fallen trees in the woods.

#### As for climate warming, there has been a lot of discussion:

- on the consequences of fire on soil dynamics (and vice versa);
- on the influence of soil on the resistance to climate change of tropical trees;
- on the water cycle and the diffusion of contaminants in the soil;
- on the resilience of agricultural fields according to the type of management.

#### **Calls for participation!**

## The Amazon We Want: Public Consultation Deadline 14 August!



Photo by Jose Eduardo Camargo on Pixabay

The Amazon is the world's largest rainforest and river system, vital to the planet's climate stability and home to an irreplaceable wealth of biodiversity, much of which is still unknown. It provides critical ecosystem services to the eight sovereign countries and one overseas territory that encompass it, and also to the globe. Deforestation and forest degradation have risen in recent decades, especially

driven by the expansion of cattle ranching, agriculture, mining, and infrastructure development. Many scientists warn the Amazon as a whole may be approaching a tipping point of irreversible collapse.

In response to these challenges, a group of over 200 preeminent scientists from the region have united to form the Science Panel for the Amazon (SPA). The Panel is convened by the United Nations Sustainable Development Solutions Network (SDSN). Recently, the Panel has issued a comprehensive, first-of-its-kind scientific assessment of the state of the Ama-

zon, current trends, and recommendations for the long-term well-being of the ecosystem and its people. These initial findings as well as a draft version of their full report is now open for public consultation.

The SPA encourages stakeholders to provide meaningful input to aid the development of a better and more complete report.

*Details:* https://www.theamazonwewant.org/public-consultation-on-the-draft-of-the-report-of-the-science-panel-for-the-amazon/

# IPBES Call for Experts to Assess Interlinkages among Biodiversity, Water, Food and Health and Causes of Biodiversity Loss

If you wish to nominate experts, please complete the nomination procedure by 6 September!

The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) secretariat is inviting expert nominations for participation in the thematic assessment of the interlinkages among biodiversity, water, food and health (nexus assessment) and the thematic assessment of the underlying causes of biodiversity loss and the determinants of transformative change and options for achieving the 2050 Vision for Biodiversity (transformative change assessment).

Please find more information regarding the required expertise at <a href="https://ipbes.net/sites/default/files/2021-07/em\_2021\_17">https://ipbes.net/sites/default/files/2021-07/em\_2021\_17</a> <a href="https://ipbes.net/sites/default/files/2021-07/em\_2021\_17">nominations nexus transformative en\_0.pdf</a>



#### **Key Factors for Forest Biodiversity**

IUFRO Working Party (WP) 8.02.01 is sharing a form for collecting information from researchers interested in following/sharing topics and issues related to "Key factors for forest biodiversity". The WP activities focus on 3 main subsequent thematic areas:

- Key Ecological Factors for Forest Biodiversity
- Forest Diversity Monitoring at Different Spatial Scales
- Forest Biodiversity Indicators

By completing the short form at <a href="https://forms.gle/RT8ThFnC43P2o8]t8">https://forms.gle/RT8ThFnC43P2o8]t8</a>, the WP intention is to create an international research network on multi-taxon forest biodiversity monitoring and indicators and promote the widest knowledge sharing on forest biodiversity.

More information about the WP is available at: https://www.iufro.org/science/divisions/division-8/80000/80200/80201/

#### **Open Science and the UNESCO Initiative**

IUFRO, as a member of the International Science Council (ISC), is happy to inform about the Open Science and the UNESCO Initiative and the statement made by ISC delegates. In this statement to the UNESCO Special Committee meeting on Open Science, 6-12 May 2021, the delegation explores how the recommendation and potential cascading interventions by Member States could develop along two divergent pathways: <a href="https://council.science/current/news/open-science-and-the-unesco-initiative/">https://council.science/current/news/open-science-and-the-unesco-initiative/</a>

#### **Publications**

# Launch on 12 August: Building a Successful Forestry Career in Africa: Inspirational Stories and Opportunities



In 2020 the Young African Forestry Professionals Publication Project (YAFP) with the overall goal to motivate and inspire young people to pursue forest-related studies and careers in Africa by showcasing career options and young African role models working in forest-related fields was created. Now its new book titled "Building a successful forestry career in Africa: inspirational stories and opportunities" is going to be launched. It features 23 inspiring stories from aspiring and established forestry professionals from

12 countries from Africa, information on tertiary institutions in Africa offering forest-related degree programs, forest-related networking organizations, tips on obtaining scholarships and potential forest-related career choices.

The Joint IUFRO-IFSA Task Force on Forest Education is cordially inviting participation in the virtual book launch taking place on 12th August 2021 at 12:00 GMT, via Zoom. Registration: <a href="https://us06web.zoom.us/meeting/register/tZIsdeqgpj4oHN1PdXDu7FOxtNMc-0i5dvYp">https://us06web.zoom.us/meeting/register/tZIsdeqgpj4oHN1PdXDu7FOxtNMc-0i5dvYp</a>

#### Why Boreal Forests Matter



Communication brochure on the role of boreal forests in sustainable development published by FAO and UNECE and prepared in collaboration with the UNECE/FAO Teams of Specialists on Boreal Forests: https://unece.org/sites/default/files/2021-07/Why%20Boreal%20Forests%20Matter.pdf

#### Staying on Top in Academia

A Primer for (Self-)Mentoring Young Researchers in Natural and Life Sciences



By Arne Pommerening, Swedish University of Agricultural Sciences, Deputy Coordinator of IUFRO Division 4 Forest Assessment, Modelling and Management. This is a useful handbook and reference to go with mentoring programs: <a href="https://www.springer.com/gp/">https://www.springer.com/gp/</a> book/9783030654665

#### **New Bamboo Standard**

In June 2021, the International Organization on Standardization (ISO) published a new standard on structural design with bamboo poles. The standard, which is a significant step forward for bamboo construction around the world, was developed with support from INBAR staff and members of INBAR's Bamboo Construction Task Force. INBAR is a Member Organization of IUFRO. For more information, please visit: <a href="https://www.inbar.int/iso-22156-2021/">https://www.inbar.int/iso-22156-2021/</a>

## The Tree Cutting Emissions from Brazilian Beef

Article published by BBC's Future Planet: <a href="https://www.bbc.com/future/article/20210629-the-australian-tree-cutting-brazilian-beefs-emissions">https://www.bbc.com/future/article/20210629-the-australian-tree-cutting-brazilian-beefs-emissions</a>

Brazil is the world's largest exporter of beef, providing almost 20% of the world's exports. Researchers at the state-owned Brazilian Agricultural Research Corporation Embrapa, a Member Organization of IUFRO, have been searching for a way to counteract the emissions from the country's massive cattle herd – culminating in 2020 with a certified brand of Carbon Neutral Beef.

#### What is a Forest?

This fact sheet published by the Forest Information System for Europe: <a href="https://forest.eea.europa.eu/">https://forest.eea.europa.eu/</a>

Discusses, explains and compares definitions of forests: <a href="https://forest.eea.europa.eu/documents/what is a forest">https://forest.eea.europa.eu/documents/what is a forest</a>



#### **Scientific Papers**

## Coronavirus, Macroeconomy, and Forests: What Likely Impacts?

By Sven Wunder, David Kaimowitz, Stig Jensen and Sarah Feder (2021)

Published in Forest Policy and Economics

Much uncertainty persists about how the coronavirus (COVID-19) and its derived crisis effects will impact both the economy and forests. Here we conceptualize a recursive model where an initial COVID-19 supply-side shock hits first the Global North that, mediated by country-specific epidemic management strategies and other (fiscal, monetary, trade) policy responses feeds through to financial markets and the real economy. https://doi.org/10.1016/j.forpol.2021.102536

## Biodiversity and Ecosystem Functioning in Agroforestry Systems

Schwarz J, Schnabel F & Bauhus J (2021). A conceptual framework and experimental design for analysing the relationship between biodiversity and ecosystem functioning (BEF) in agroforestry systems. Basic and Applied Ecology.

https://doi.org/10.1016/j.baae.2021.05.002

Research over the last decades has provided compelling evidence for positive effects of plant diversity on the functioning of forests and agroecosystems and this information is increasingly used to design production systems that provide a wide range of ecosystem services. However, there is still little quantitative information on Biodiversity Ecosystem Functioning (BEF) relationships in agroforestry systems.

## Russian Forest Sequesters Substantially More Carbon than Previously Reported

Members of IUFRO Working Party 8.01.06 Boreal and Alpine Forest Ecosystems contributed to this new publication: Schepaschenko D., Moltchanova E., Fedorov S., Karminov V., Ontikov P., Santoro M., See L., Kositsyn V., Shvidenko A., Romanovskaya A., Korotkov V., Lesiv M., Bartalev S., Fritz S., Shchepashchenko M., Kraxner F. (2021) Russian forest sequesters substantially more carbon than previously reported. Scientific Reports. 11, 12825. DOI 10.1038/s41598-021-92152-9.

https://www.nature.com/articles/s41598-021-92152-9

#### **Journals and Calls for Contributions**

## Call for Contributions! Woodlands: Ecology, Management and Threats

Edited by Ian D. Rotherham published by Nova Science Publishers. Inc.

This is an invitation to submit a chapter proposal (abstract 150-500 words) for the upcoming publication entitled, Woodlands: Ecology, Management and Threats, which will be published as both a hardcover and e-book. The topic, chapter title, and approach are at your discretion. The nature of the volume is planned to be an "advances" type, and the scientific community is the intended audience.

For further details, please contact:

Ian Rotherham, ianrotherham36(at)gmail.com

#### Special Issue of Land: Call for Manuscript Submission Decision Support Systems (DSS) for the Analysis of Pathways that Optimize Ecosystem Services Provision

Deadline 30 November 2021!

This Special Issue is sponsored by IUFRO Unit 4.04.04 - Sustainable Forest Management Scheduling. Please submit studies on (1) basic physiology and stand dynamics and (2) operational treatments and impacts that provide evidence of influences on forest resiliency and productivity.

*Guest editors:* Ljusk Ola Eriksson, Swedish University of Agricultural Sciences; José G. Borges, University of Lisbon; Harald Vacik, University of Natural Resources and Life Sciences, Vienna

*Details*: https://www.mdpi.com/journal/land/special\_issues/ecosystem\_services\_provision

## Submissions for a Special Issue of Forests: Silviculture and Management of Boreal Forests

Deadline 30 November 2021!

Please submit original research and review papers covering a range of topics relating to the silviculture and management of boreal forests that demonstrate and compare short-term and long-term outcomes of practices in relation to their impacts on tree growth, yield, biodiversity, economics, resilience, and other values.

Guest editor: Phillip G. Comeau, Department of Renewable Resources, University of Alberta, Edmonton, Canada

Details: https://www.mdpi.com/journal/forests/specialissues/Silviculture Management Boreal Forests

## Forest Policy and Economics: Recent Journal Developments

On behalf of the Editorial Team, Editor-in-Chief of FP&E, Lukas Giessen (Technical University Dresden, Germany, and Coordinator of IUFRO Research Group 9.05.00 - Forest policy and governance) reports that with 223 articles published in 2020 the journal achieved an all-time high in mere article numbers. The Cite Score has increased to 6.5. The recently established article category of Commentaries hosts science-based, peer-reviewed, short communications.

https://www.journals.elsevier.com/forest-policy-and-economics

#### **Positions**

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

#### **MASBio Postdoctoral Research Fellow**

Closing date: 15 August 2021

The position is hosted by Colorado State University and the U.S. Forest Service, Rocky Mountain Research Station, with multiple places offered for possible duty locations. The Postdoc will work closely with other MASBio team members who are responsible for biomass harvest and logistics, supply chain modeling, techno-economic analysis, and life cycle assessment

Details: https://jobs.colostate.edu/postings/89661



#### **Assistant Professor of Forest Pathology and Forest Health**

Closing date: 31 August 2021

The State University of New York College of Environmental Science and Forestry in Syracuse, NY, USA invites applications for an academic-year (10 mo) tenure-track position. The successful candidate will be expected to build an internationally recognized extramurally funded research program in forest pathology.

*Details*: https://www.iufro.org/fileadmin/material/discover/nb-ForPathPositionESF.docx

## Two Postdoctoral Research Fellowships in the Forest Management under Global Change (FORCHANGE)

Closing date: 20 September 2021

A call is now open for the award of research group at the Forest Research Centre of the School of Agriculture of the University of Lisbon (CEF), Portugal. The research will focus on wildfire management and forest planning decision support.

*Details*: https://www.isa.ulisboa.pt/en/cef/highlights/news/two-postdoctoral-scholarships

#### **Graduate Research Assistantship in Forest Logistics**

Closing date: for 2022 spring enrollment October 1 (international) and December 1 (domestic)

The Department of Forestry in the College of Forest Resources and the Forest and Wildlife Research Center at Mississippi State University, USA, are seeking applicants for a funded M.S. assistantship. The successful candidate will work under the direction of Dr. Shaun Tanger and Dr. Eric McConnell in the area of forest logistics, which includes topics related to timber production, timber procurement, forest operations, and economic development

*Details*: https://www.iufro.org/fileadmin/material/discover/nb-mississippi-state-MS-Assistantship TangerMcConnell.pdf

#### Courses

https://www.iufro.org/discover/noticeboard/university-courses-summer-schools-and-webinars/

#### **MSU Forestry Non-credit Online Courses**

The Michigan State University Department of Forestry is pleased to offer the following non-credit course options for Fall 2021 and Spring 2022 for individuals interested in online, self-paced learning. These courses are a great fit for those looking to expand their knowledge on topics of forestry outside of a degree-granting program.

Find out more about available courses:

https://www.canr.msu.edu/for/non-credit-courses/

### **IUFRO Meetings**

For a full list of IUFRO meetings go to our online calendar at: <a href="https://www.iufro.org/events/calendar/current/">https://www.iufro.org/events/calendar/current/</a>
Find non-IUFRO meetings on the IUFRO Noticeboard at: <a href="https://www.iufro.org/discover/noticeboard/">https://www.iufro.org/discover/noticeboard/</a>

Past Meeting

IUFRO Division 6 Webinar: Being a Forest Scientist during a Global Pandemic, on 25 June 2021, 14.00-15.00 hrs Cen-

tral European Time. Recording: <a href="https://www.youtube.com/watch?v=Gn1YA3xORMs&t=3533s">https://www.youtube.com/watch?v=Gn1YA3xORMs&t=3533s</a>

12 Aug 2021, 12:00 GMT

**Book Launch: Building a Successful Forestry Career in Africa: Inspirational Stories and Opportunities**Online

Joint IUFRO-IFSA Task Force on Forest Education Registration: https://us06web.zoom.us/meeting/register/tZIsdeqgpj4oHN1PdXDu7FOxtNMc-0i5dvYp

16-18 Aug 2021

#### 20th Commonwealth Forestry Conference

Vancouver, BC, Canada, online

IUFRO 9.03.07, 9.03.00, <u>9.00.00</u>, 6.10.01, <u>6.00.00</u>

Contact: Stephen Wyatt, stephen.wyatt(at)umoncton.ca;

Janette Bulkan, janette.bulkan(at)ubc.ca

https://cfc2021.ubc.ca/

16-20 Aug 2021

2021 IBFRA Conference: Changing Boreal Biome – Identifying emerging trajectories and assessing vulnerability and resilience of boreal ecosystems and their socio-economical implications.

Online, United States IUFRO 1.01.08, 8.01.06

Contact: IBFRA2021, ibfra2021(at)gmail.com https://sites.google.com/alaska.edu/ibfra2021

18 Aug 2021

## International Symposium on Ecosystem Restoration for Green and Peace Asia

online and Alpensia, Pyeongchang, South Korea IUFRO <u>1.10.00</u>

Contact: Ho Sang KANG, silvi(at)chol.com; hosang.kang(at) gmail.com

https://www.iufro.org/science/divisions/division-1/10000/11000/activities/

18 Aug 2021

#### Webinar: Forest Roads in Brazil

Online

IUFRO 3.01.02

By Darlon Orlamunder,

Klabin Forest

4:00pm to 5:00pm BRT and 7:00pm

to 8:00pm UTC

https://www.iufro. org/science/divisions/

division-3/30000/30100/30102/

25 Aug 2021 15 Sep 2021 20 Oct 2021

#### Webinar Series "Automation in Forest Operations"

Webinars 1-3

IUFRO 3.00.00, 3.01.00

Contact: Angelo Conrado de Arruda Moura, angelomoura(at)hotmail.com, Raffaele Cavalli, raffaele.cavalli(at)unipd.it, Ola Lindroos, ola.lindroos(at)slu.se





28-29 Sep 2021

#### **IUFRO World Day**

Online in three time zones IUFRO <a href="https://www.iufroworldday.org/">https://www.iufroworldday.org/</a>

Deadline for submissions of static content by IUFRO Member Organizations: **16 August 2021** https://www.iufro.org/events/iufro-world-day/static-content-

https://www.iufro.org/events/iufro-world-day/static-content-submission/

Contact: Carola Egger, egger(at)iufro.org



## Training School - Assessing Multi-Taxon Diversity in Forest Ecosystems - COST Action CA18207 Bottoms-Up

Arezzo, Italy IUFRO <u>8.02.01</u>

Contact: Francesco Chianucci, fchianucci(at)gmail.com Sabina Burrascano, sabina.burrascano(at)uniroma1.it https://www.bottoms-up.eu/en/networking-tools/training-schools.html

11-15 Oct 2021

#### **Air Pollution Threats to Plant Ecosystems**

Paphos, Cyprus

IUFRO 8.04.00 and Working Parties

Contact: Pierre Sicard, pierre.sicard(at)arches-conseils.fr <a href="https://cyprus2021.com/">https://cyprus2021.com/</a>

9 Nov 2021

#### Historical Landscape Ecology - Challenges for the Twentyfirst Century

On-line seminar, 10 am to 5 pm (UK Wintertime) IUFRO 9.03.00

Hosted by the Biodiversity Research Group & IALE Historical Landscape Ecology Working Group

Call for papers: syeconet(at)gmail.com, by 30 September Contact: Ian Rotherham, ianrotherham36(at)gmail.com <a href="https://www.ukeconet.org/hle.html">https://www.ukeconet.org/hle.html</a>

22 Nov - 1 Dec 2021

## Mediterranean Forest Health in the Context of Global Change

Online course

IUFRO 7.03.14, 7.03.06

Contact: Massimo Faccoli, massimo.faccoli(at)unipd.it <a href="https://edu.iamz.ciheam.org/ForestHealth/en/">https://edu.iamz.ciheam.org/ForestHealth/en/</a>

24-28 Apr 2022

#### IUFRO – Extension & Knowledge Exchange 2021 Conference

Asheville, North Carolina, United States IUFRO <u>9.01.03</u>

Contact: William G Hubbard, whubbard(at)umd.edu <a href="https://conferences.coned.ncsu.edu/eke2021/">https://conferences.coned.ncsu.edu/eke2021/</a>

5-9 Jun 2022

15th International Christmas Tree Research and Extension Conference

Fallen Leaf Lake, CA, United States

IUFRO 2.02.09

IUFRO)

**IUFRO** 

Science Forum

**₩®RLD DAY** 

Worldwide Digital Forest

Contact: Bert Cregg, cregg(at)msu.edu https://www.iufro.org/science/divisions/ division-2/20000/20200/20209/activities/

19-25 Jun 2022

10th Meeting of the IUFRO Working Party 7.02.09: "Phytophthora in Forests and Natural Ecosystems"

San Francisco and Sacramento, United States IUFRO 7.02.09

Contact: Matteo Garbelotto, matteog(at)berkeley.edu

https://www.iufro.org/science/divisions/division-7/70000/70200/70209/activities/

19-22 Sep 2022

Fir and Pine Management in Changeable Environment: Risks and Opportunities - Joint Conference of IUFRO Working Parties "Ecology and Silviculture of Fir" and "Ecology and Silviculture of Pine"

Sarajevo, Bosnia and Herzegovina

IUFRO 1.01.09, 1.01.10

Contact: Dalibor Ballian, balliandalibor9(at)gmail.com Teresa de Jesus Fidalgo Fonseca, tfonseca(at)utad.pt Andrej Bončina, Andrej.Boncina(at)bf.uni-lj.si https://www.iufro.org/science/divisions/ division-1/10000/10100/10109/activities/

### **Other Meetings**

23-27 Aug 2021

**World Water Week: Building Resilience Faster** 

Online

Organized by SIWI

Note: New study jointly prepared by FAO, IUFRO, Joint Research Center of EC, USFS and others will be presented on 25 August.

https://www.worldwaterweek.org

3-5 Nov 2021

World Forum for Women in Science (WFWS) and 6th International Conference for Women in Science Without Borders (WISWB) (not only for women)

Nairobi, Kenya

Virtual conference hosted by the University of Embu

Call: +254 705 945 408

Contact: wiswbconference2021(at)embuni.ac.ke

https://wiswbconference.embuni.ac.ke

2-6 May 2022

XV World Forestry Congress (WFC 2021)

Theme: Building a Green, Healthy and Resilient Future with Forests

Seoul, Republic of Korea

Hosted by Korea Forest Service, Republic of Korea (KFS);

organized by KFS and FAO

Contact: info(at)wfc2021korea.org https://wfc2021korea.org/index.html