

Biodiversity - the Foundation for a More Resilient Future

Interview with the Coordination Team of the IUFRO Forest Biodiversity Research Group 8.02.00

On 22 May the world is celebrating the **International Day for Biological Diversity**. This year's slogan is "We're part of the solution #ForNature". However, if we look at the unprecedented loss of biodiversity the world is facing today and we recognize that this loss is mainly due to human activities, it seems more likely that "we human beings are part of the problem", if not "the" problem.

The [IUFRO Research Group \(RG\) "Forest Biodiversity"](#) addresses the influence of human-made and natural disturbances on biodiversity and explores the relationship between forest biodiversity and ecosystem processes and functions. Its research aims to contribute to strengthening the resilience and adaptive capacity of forests to anthropogenic impacts, natural disasters, and the effects of climate change worldwide, and eventually to halting and reversing the loss of biodiversity.

In line with this goal, several more specialized Working Parties (WPs) connected with the Research Group are looking into various aspects of forest biodiversity:

- WP 8.02.01 *Key factors and ecological functions for forest biodiversity*
- WP 8.02.02 *Forest biodiversity and resilience*
- WP 8.02.03 *Humus and soil biodiversity*
- WP 8.02.04 *Ecology of alien invasives*
- WP 8.02.05 *Wildlife conservation and management*
- WP 8.02.06 *Aquatic biodiversity in forests*
- WP 8.02.07 *Bioenergy production systems and forest biodiversity*
- WP 8.02.08 *African wildlife conservation and management (AWCM)*

Dr. Kamal GANDHI, University of Georgia, USA

Kamal's research mission is to enhance forest sustainability and productivity by managing forest insects and diseases and maintaining native biodiversity. Her lab group works on the community and population ecology of forest insects under the context of impacts of natural and anthropogenic disturbances on forest biodiversity. Her research on native and exotic forest insects has a strong applied and dual focus where she assists with both integrated pest management and insect conservation issues.

Dr. Anne OXBROUGH, Edge Hill University, UK

Anne's research explores the juxtaposition between biodiversity, ecosystem functioning and resilience in response to environmental change with focus on the sustainable management of ecosystems in forestry and agriculture. Anne is a specialist in arthropod ecology, and she has worked extensively with botanists and ornithologists, adopting a multi-taxon approach to biodiversity research.

Dr. Kamal Gandhi



Dr. Anne Oxbrough



Dr. Maria Santos



Dr. Anna Barbati



Dr. Maria SANTOS, University of Zurich, Switzerland

Maria's research focuses on bringing Earth System Sciences to the Anthropocene. She examines social-ecological processes, their coupling and their reliance on biodiversity and ecosystem services and how this coupling enables sustainability. Maria's expertise is at the intersection between ecology, remote sensing, political sciences and economics, with a particular focus on biodiversity as a common good.

Dr. Anna BARBATI, University of Tuscia, Italy

Anna's research focuses on the application of remote sensing and forest sampling strategies to forest monitoring, with a focus on forest biodiversity indicators. Recent interests concern interactions between biodiversity components that can be modified by ordinary forest management (number of dominant forest tree species and forest stand structure heterogeneity), ecosystem services (wood and non-wood products, forest biomass, carbon sequestration, habitat provision), and resilience to climate change.

Q: What are the strongest human-made drivers of forest biodiversity loss and what are the most critical consequences? (Answers by Anne, Maria and Kamal)

The strongest anthropogenic drivers of forest biodiversity loss are land use change (through deforestation), overexploitation (through use of forests for timber and non-timber forest products), and invasion by high impact alien species. The most critical consequences are local population extinctions and the rearrangement of the biological interactions fundamental to maintaining forest ecological communities and their functioning.

It may come as a surprise not to mention climate change here, because this is the output of the synthesis report produced by IPBES, which mentions the rank order of the main global change drivers' effects on biodiversity. Of course, climate change is and will affect forest biodiversity, as it will lead to niches shifting, disappearing or new niches emerging. These will, in the short to long term affect forests as we know them.

Q: How does the loss of forest species, habitats and ecosystem services affect people and economies? (Anne, Maria, Kamal)

Many livelihoods are dependent on forests, and perhaps we are not fully aware of the extent to which we require forests. Forests are fundamental for the water cycle, carbon storage, a large fraction of the oxygen that other organisms depend on, provide timber and other seeds, fruits, etc. which sustain food and infrastructure, as well as energy for our households and industries.

Forests also have benefits to health and wellbeing, through landscape aesthetics, recreational use or simply the intrinsic value and enjoyment of nature. During the global pandemic, these services have been valued more than ever before. These services are inherent to forests having a diverse set of organisms, which are interacting and whose functions are crucial to forest integrity and resilience. For instance, specialist invertebrates help to break down nutrients in leaf litter promoting forest productivity through their vital role in nutrient cycling, whereas different plant species may have different roles in the evapotranspiration or water interception, driving carbon allocation within plant tissues, rate of decomposition and soil carbon uptake.

Losses of species, habitats, and ecosystem services from forests thus affect many people and a large portion of the global economy. For instance, forest-based energy is a large sector in global economies and the losses of the sector due to loss of forest biodiversity are yet unknown.

Q: How can we reliably measure and determine the state of biodiversity in various contexts to build up the scientific evidence needed for appropriate action? (Anne, Maria, Kamal)

Biodiversity has many dimensions, and incorporates the full diversity of life, from genes to ecosystems, and so reliably measuring even a small portion of diversity in an ecosystem is an immense task, and often not possible. Instead, we utilize a range of indicators across spatial scales to represent a forest type, it's condition or the value of a set of forests across a landscape which can be scaled up to give global assessments of biodiversity. The most common methods are aimed at species and determining site level biodiversity where field methods are employed to directly or indirectly observe species or individuals.

More recently, as the costs of molecular methods have decreased, metrics of genetic diversity, within a population have come to the fore-front. Again, this involves field sampling to collect materials from which DNA can be extracted. We can use



Roman Grac on Pixabay

these site-based approaches to apply to ecosystems/larger scales. Remote sensing is now being used as a complement to field surveys to observe and monitor the state of biodiversity.

Understanding the state of biodiversity also means understanding the functions and processes that drive biodiversity, and experiments and models are most fundamental. Experiments allow determining causality that is attributed to the effect of a given manipulation to a system. Models provide conceptual and stylized thinking on how the processes can be occurring. Together, these four ways of measuring and understanding biodiversity are inseparable.

Q: What can the loss of only one species mean for a forest ecosystem, and does it make sense to reintroduce this species? (Anne, Kamal)

Sometimes this can mean very little, other times it can be crucial to the functioning of that ecosystem, leading to a fundamental change in the services provided or even alter the type of ecosystem present. It all depends on how crucial that species is to carry out a particular function and whether other species can take its place.

For instance, for many ecosystems functions we predict that there are many organisms carrying out that role, therefore if one is lost, the ecosystem will remain healthy and persist. This is known as functional redundancy. However, if a species is critical to that function, for instance, a keystone species or an ecosystem engineer, then its loss may be catastrophic. In this case, reintroduction of that species may be vital to ensure persistence of ecosystem properties.



22 MAY 2021
BIODIVERSITY DAY
We're part of the solution #ForNature



Ronald Kötz on Pixabay

Maintaining biodiversity will help ensure that we have functional redundancy in our forest ecosystems, i.e. many species are able to carry out roles. Where this is not possible, it is vital that keystone species and ecosystem engineers are a priority for both sustainable forest management and conservation efforts.

Q: Why are invasive alien species considered such a big threat to forest biodiversity? (Kamal)

Invasive alien species are considered the second biggest threat to native biodiversity worldwide, next to habitat loss. This is primarily because invasive species compete directly or indirectly with native species for the same resource. For example, herbivorous invasive species can result in mortality and loss of native plants on which many biota may be dependent on for food, shelter, or reproductive activities. Invasive species can greatly alter forest composition and structure and further interact with other disturbance agents to cause greater habitat damage, thus exerting indirect impacts on native species. In many instances, invasive species can also directly cause mortality of native species by feeding or preying on them.

Q: What does it take to strengthen the resilience and adaptive capacity of all types of forests to human-made disturbances, natural disasters, and the impacts of climate change worldwide? (Anne, Kamal, Anna)

For most ecosystems we do not know their level of functional redundancy, so crucial questions like related to how many species can we lose before the ecosystem or a major function is no longer viable remain unanswered. However, we are beginning to understand the role of biodiversity in recovery following major forest disturbances (fire, disease, clearcutting, and climate change). Further, research suggests that maintaining genetic, species, and ecosystem diversity across a range of scales, is the best way to ensure resilient forests that can adapt to change. Thus, biodiversity is crucial to the continuation of our forest ecosystems across the globe and our efforts should

seek to maximize the local biodiversity within any given habitat.

Forest management should therefore seek for a diversification of forest stands in terms of (native) tree species composition and structure to adapt to climate change. There is a growing body of evidence that mixed stands are a smarter alternative to forestry models based on monocultures, from many points of view: higher productivity, higher temporal stability, higher resistance and resilience to disturbances, and a more diverse portfolio of ecosystem services.

Q: How should we strike a balance between forest protection and forest management? (Anne, Kamal, Anna)

These two concepts do not need to be mutually exclusive. If forests are valued for all the ecosystem services that they provide, not just economic outputs (e.g., related to timber production) vs. protection of species, then we will begin to see that both are one and the same goal, rather than opposing paradigms. This requires cooperation amongst the global forest community to drive policies that encompass the range of services we want to see from forests affecting multiple disciplines, forest users, landowners, forest industry, governments, and wider society. We need to address the major question - what do we want our forests to be and most importantly how can we best manage our forests to maximize resource sustainability while maintaining ecological benefits?

In addition, we must not forget that biodiversity is the species, but also the habitat they live in and the process that maintains their habitat. To counteract biodiversity loss, especially of red-listed species depending on forest continuity, a partial set aside of the landscape for forest protection will be always necessary to ensure the long-term preservation of forests of very high value for conservation biology e.g., last remnants of old-growth forests.

Q: In 2021 the UN Convention on Biological Diversity will adopt a post-2020 global biodiversity framework as a major step towards the 2050 Vision of "Living in harmony with nature". What are your plans as IUFRO Research Group to contribute to accomplishing this global vision? (Kamal)

The kinds of questions that our research group is asking in terms of what are the best metrics to monitor biodiversity, how do we build resilient ecosystems especially under climate change, what are the major socio-economic barriers to maintaining biodiversity, etc. are directly linked to the UN 2050 Vision of "Living in harmony with nature".

We are creating a position statement on forest biodiversity loss, how we can unite globally to overcome and ameliorate the current situation to create positive pathways for maintaining and enhancing biodiversity. Further, we are working on new networks with other similar initiatives around the world e.g., the Bonn Challenge and the UN Decade of Restoration, and are planning a workshop in early 2022 to discuss multifaceted issues on biodiversity worldwide.

We Need Forests to Address Global Crises - IUFRO at UNFF16

Report by Junaid Peters, *Dare to Explore!* trainee at IUFRO HQ and Gerda Wolfrum, IUFRO

The [United Nations Forum on Forests \(UNFF16\)](#) convened virtually from 26-29 April 2021 to discuss the important role of forests in providing services that are crucial to tackling global crises such as the ongoing COVID-19 pandemic, the biodiversity crisis and climate change. This year's forum had a strong focus on the progress of the UN Strategic Plan for Forests 2030. The [Global Forest Goals Report 2021](#) launched during the event offered a first evaluation of where the world stands in implementing the plan. The report stressed that progress in protecting the world's forests and the people who rely on them is at risk due to the escalation of the global crises.



In a statement during the High-Level Roundtable on 26 April, **IUFRO President John Parrotta** emphasized the growing need to harness the potential of forests to help address these current global crises and contribute to the attainment of the Sustainable Development Goals. The forest science community has much to offer in this effort. Over many decades, it has generated a wealth of reliable data, information, knowledge and experience – all of which are needed to make the most of the opportunities to “Build Back Better”. IUFRO called on UNFF16 and member states to strengthen engagement with the scientific community. **It is essential that the voices of the international scientific community be heard by, and inform, the work of policymakers, practitioners, and the general public.**

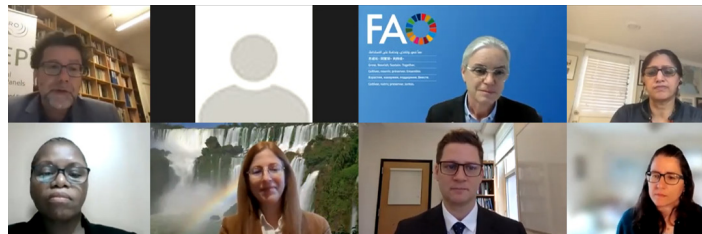


Furthermore, efforts must be made to ensure that sustainable forest management is fully integrated into recovery strategies. In her statement **IUFRO scientist Dr. Stefanie Linser**, University of Natural Resources and Life Sciences, Vienna, Austria, outlined **success factors for criteria and indicators for sustainable forest management, including adequate political support for monitoring**, which assists in

ensuring there is sufficient available data. She also mentioned the need to innovatively present data, depending on the needs of the target groups.

During the forum, **IUFRO President Dr. Parrotta** also highlighted the role of IUFRO as an active member of the Collaborative Partnership on Forests (CPF). The IUFRO-led CPF joint initiative known as GFEP - Global Forest Expert Panels, for example, has produced seven global scientific assessments since 2009 on many key forest-related issues, including its most recent assessment on Forest and Poverty, launched in October 2020. The results of these assessments have informed policy decisions in global forest-related forums and discussions, including at the UNFF16, where outcomes and key messages of **“Forests, Trees and Eradication of Poverty: A GFEP Global Assessment Report”** were shared with

participants from almost every continent at a virtual side event on 26 April: <https://www.youtube.com/watch?v=M8kLPAz7aDE> (recording)



Globally, one out of every ten people lives in extreme poverty, and if the current trend continues, it is projected that the number of people directly affected by poverty will reach 840 million or one-ninth of the world's population by 2030. It is jarring statistics like this that has pushed “Ending Poverty in all its forms everywhere”, to the top of the United Nations 2030 Agenda for Sustainable Development.

At the **GFEP side event** authors of the report presented different scientific evidence of how forests contribute to the alleviation of poverty and engaged in a lively discussion with the audience. According to Professor Daniel C. Miller, University of Illinois at Urbana-Champaign, and Chair of the Global Forest Expert Panel on Forests and Poverty, the report highlights five key messages:

- Forests and trees are critical to end poverty;
- Benefits of forests are unevenly distributed;
- Forests and trees can help the poor face profound global changes;
- Inadequate land use policies may lead to excessive costs borne by the poor;
- Measures exist to enable forests to address poverty goals and also suggest that the first step decision makers should take is the basic recognition of the importance of forests and trees, and to see them as allies in the fight against poverty.

During the webinar, participants were also presented with an exclusive early insight into an upcoming GFEP policy brief, **“Forests, Trees and Poverty Alleviation in Africa: An Expanded Policy Brief.”** In her closing remarks, Mette Løyche Wilkie, Director of Forestry Policy and Resources Division, FAO, and Chair of the Collaborative Partnership on Forests (CPF), said that “More than 90% of wood that is cut in Africa is used as wood fuel, primarily to cook the daily meals.” Her remarks did not only show clearly just how forests directly impact the livelihoods of human beings, they also underscored the timeliness of GFEP's focusing especially on Africa in its new policy brief.

On the sidelines of UNFF16, the [Collaborative Partnership on Forests also released a joint statement](#) outlining the impacts of deforestation as well as the opportunities and actions required to reverse it.

IISD Summary:

<https://enb.iisd.org/sites/default/files/2021-05/enb13217e.pdf>

Forest Roads in Japan

Summary of Seminar 4 of the IUFRO 3.01.02 Seminar Series, by Dr. Kevin Lyons

The seminar series **Forest Roads: Regional perspectives from around the world** provides regional perspectives on the design, construction and management of forest road systems. The intent is to provide the participants with regional views of what forest roads are and the major factors affecting them. Recordings of the presentations are available at: <https://www.iufro.org/science/divisions/division-3/30000/30100/30102/>

The fourth seminar on April 14 was presented by Dr. Hideo Sakai, who focused on **Forest Roads in Japan**. He emphasized that after understanding the geological structures and natural conditions, route location and road construction must be practiced on safety areas under low-cost initiatives.

Japan's islands fundamentally consist of accretionary wedges. When the stratum of accretionary wedges inclined, dip slopes and opposite slopes were produced. Granite magma intruded into the accretionary wedges, and later granite itself became decomposed soil.

High annual precipitation of nearly 2000 mm caused by monsoon rains attacks forest roads, and innovative technologies for road construction are required.

For the inclined stratum at *Shimanto* belt, which is composed of sedimentary rocks, deep excavation for preparing the structural foundation of the road was invented. After deep excavation until the depth of ensuring road width, about 30 cm thick blocks of compacted subsoil were piled up. It is difficult to



Photograph by Dr. Hideo Sakai

make a high cutting slope at a smooth soil area, and the retaining wall by log structure is effective both for cutting and filling slopes at spur roads.

Underground water coming out through crushing zones is often troublesome. When the crushing zone and dip slope overlap, the valley head is unstable, the area is prone to land slide and it is dangerous to construct a road. When crossing the crushing zone by simple structures, a cage or L-shaped steel retaining wall is effective, because the weight of stones and rocks in the structure presses down the road foundation with high water permeability. It is important to adopt the most appropriate roading method according to soil, geology and terrain conditions prior to realizing sustainable forestry.

The next webinar on "Forest Roads in New Zealand" will be held on 1/2 June 2021. Find out more here: <https://www.iufro.org/science/divisions/division-3/30000/30100/30102/>

Forests in Fukushima and Chernobyl - People, Wildlife and Landscape

Report by Shoji Hashimoto, Coordinator of [IUFRO WP 8.04.07 - Radioactive contamination of forest ecosystems](#), and Toshiya Matsuura, regional representative for Japan and Oceania of [IUFRO WP 8.01.02 - Landscape ecology](#)

This spring the 35th anniversary of the Chernobyl and the 10th anniversary of the Fukushima nuclear power plant accidents were commemorated. In the contaminated areas forest is the key ecosystem. The radioactive contamination affects everything in the landscape. Since vegetation, human activities and wildlife closely interact with each other, and these interactions shape ecosystems and landscapes, it is essential to take integrated approaches to address the impacts of nuclear disasters.

On 14 April a webinar ([watch the video](#)) was organized as a collaboration between two IUFRO Working Parties addressing landscape ecology and radioecology. The webinar aimed to look at the two nuclear disasters from various angles, particularly from a landscape perspective. Hundred participants from fifty countries were present during the virtual meeting.

There webinar consisted of four main talks:

Dr. Shoji Hashimoto provided a general introduction to the two nuclear disasters and outlined the problem.

Dr. Takeo Tadono talked about the land cover changes detected from the space. He briefly explained the satellite remote sensing technology and showed several typical changes in land cover, such as changes of arable lands to grasslands in some areas, and the installation of solar panels in some ex-cropland. He emphasized the need for continued monitoring.

Prof. Haruka Fujiwara elaborated on how the Fukushima accident affected the local people's lives in Fukushima's Satoyama, the rural landscape with forests and arable lands around

Fukushima formed through close interaction between nature (forests) and people. She also gave examples of grass-roots activities, including forestry, in a local community.

Prof. Mike Wood gave an update on the situation of wildlife in Chernobyl and emphasized the importance of communication and education. A rich diversity of wildlife can be seen in the Chernobyl area after 35 years and a similar increase in wildlife is also found in Fukushima. Although the state of nature and public interest are not the same in Chernobyl and Fukushima, the two regions can learn from each other.

For more information, visit the [meeting website](#).

Forests in Women's Hands

Report from the international networking conference on 12-13 April online from Waldcampus Austria, involving IUFRO Task Force [Gender Equality in Forestry](#), by Gerda Wolfrum, IUFRO

Forestry and forest research have been male domains for centuries and are to some extent still considered as such by many. Only very recently, about 20 years ago, a movement started to make the role of women in forest-related fields more visible and stronger. Women's networks were created and the body of knowledge in gender research began to increase. Today it is impressive to see how many networks and activities exist to promote gender equality, but there is still a long way to go and more networking also on an international level is needed.

The conference "Forests in Women's Hands" can certainly be considered as another important step on this way. The online event on 12-13 April 2021, which was coordinated by BFW (Austrian Research Centre for Forests) and jointly organized by Forstfrauen, IUFRO and IFSA, with the support of the Austrian Federal Ministry of Agriculture, Regions and Tourism, and Walddialog brought together about 260 participants, mainly but not exclusively women, from all over the world, including forest owners and managers, forest researchers and policy experts, with a large representation of youth.

The keynote address titled "(Un)doing gender in and through forestry networks - processes of inclusion and exclusion" was presented by *Associate Professor Gun Lidestav* (photo below) at the Swedish University of Agricultural Sciences and Coordinator of the IUFRO Task Force Gender Equality in Forestry.

International Workshop on Integrated Forest Insects and Pest Management & Forest Restoration

Co-organized by the Department of Forest Policy Implementation, Ministry of Environment and Tourism, Mongolia, and IUFRO Units [1.10.00](#) and [7.02.07](#), and in collaboration with FAO Asia-Pacific Forest Invasive Species Network, and sponsored by the Asian Forest Cooperation Organization (AFoCO) and FAO, the workshop on 6 April 2021 aimed to share knowledge and experiences on integrated forest insects and pest



Screenshot of a slide from Prof. Lidestav's presentation

She explained that "Gender is usually understood as something *we are*. However, we need to reach an understanding of gender as something *we do* all the time and in interaction and relation with others." Regarding expectations for tackling challenges of gender imbalance in the sector, she said, "As a researcher, I expect that change will not come fast and easy. Rather, different forms and expressions of resistance will be seen when predominant norms, behavior, privileges and structures are made visible and are contested."

The inspiring digital setting, the welcoming atmosphere and the variety of interesting program elements of the event including, among others, an engaging panel discussion, brainstorming in a world café setting, the marketplace of initiatives, chatrooms and also films about fabric and clothes made from forest-based products, offered participants ample opportunities to hear about best practice examples, exchange knowledge and strengthen their own networks.

Discussions covered opportunities and challenges for gender equality, achievements and needs, latest findings and research gaps, as well as hindering and supportive political framework conditions that perpetuate or change the level of gender equality in forest related fields. A word cloud produced by all participants at the end of the meeting visualized well what everyone had enjoyed most about the event and what is considered important on the way forward: engaging, interacting, networking!

Links to the [conference program](#) and a [media release](#) in German.

management and the operational management of invasive forest insects, especially in the Northeast Asian region (i.e. DPR of Korea, Russia, Mongolia, Kazakhstan, China and Republic of Korea).

[Click here to read the full report](#) by Dr. Ho Sang KANG, Coordinator of IUFRO Research Group 1.10.00!



Siberian moth
(*Dendrolimus sibiricus*).

Photo by
Viacheslav
Kharuk

Exploring the Role of Urban Forests for Sustainable Cities and Human Health Urban Forestry Days, 23 – 24 March 2021

Report by Vera Knill, Trainee / EFI Resilience Programme

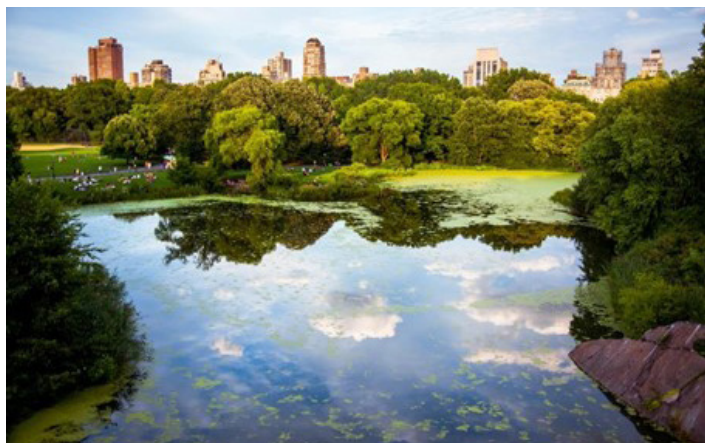
Two days of diverse integrated urban forestry activities brought together researchers, practitioners and policymakers from around Europe and beyond to explore the role of urban forests for a transition towards sustainable cities, and to discuss linkages between urban green, health and well-being. Hosted by the European Forest Institute (EFI), the European Forum on Urban Forestry (EFUF) and the Horizon 2020 CLEARING HOUSE project, and supported by IUFRO Division 6, the two-day collaborative event brought together 750 participants from over 68 different countries online to explore the latest developments in urban forestry.

Integrated Urban Forest Management

During the first conference day, interactive discussions shed light on integrated urban forest management. A range of experts from many different disciplines gave valuable insights into the importance of urban forests for the transition towards more sustainable cities. Following the [keynote sessions](#), a lively [panel discussion](#) revolved around the benefits of urban and peri-urban forests. The debates highlighted challenging issues related to the development of urban green areas, the strong link between urban forests and the perceived attractiveness of a metropolitan area, and the importance of citizen's engagement in building metropolitan green spaces.

Urban Forests as Health Infrastructure

The second day focussed on the latest research on the impact of forests on both physical and mental human health. Speakers outlined [what medical science is telling us about forests](#) as health infrastructure, followed by a thematic workshop on [forests and urban greenspaces in pandemic times](#), discussing citizens perceptions and usage patterns of forests and urban green spaces through different geographical contexts. One of the highlights was to see the launch of #EFUF2021, a decentralized networking program running from March to May 2021 with many diverse events. Also, the [myEFUF app](#) was launched during the second conference day.



People enjoying a park with multifunctional GBI; photo by Hector Argüello Canals on Unsplash

Rounding off the second conference day, a virtual excursion brought the participants right into Kottenforst. Located in the southwest of Bonn in North Rhine-Westphalia, 4,000 hectares of peri-urban forest welcome visitors to enjoy nature, recreate, meet people and engage in discussions. A group of urban forestry experts accompanied the visual experience. While live-commenting the virtual excursion, they shed light on environmental education, microhabitats, Martelloscopes and the importance of enabling and enhancing dialogue about forests and forest policy.

After presenting international projects on urban green spaces, trees, human health and well-being, the second conference day concluded on a high by giving a voice to young scientists. Researchers and practitioners from around the globe shared their research comprising manifold topics, from street tree pits to Peruvian ecosystem landscapes and LIDAR data. Find out about the [contributions by young researchers and practitioners!](#)

All presentations and recordings of the Urban Forestry Days are available here: <https://efuforg.wordpress.com/urban-forestry-days-23-24-march-2021/>

The 3rd International Forest Policy Meeting (IFPM3): A Virtual Success Story



Professor Kleinschmit, IUFRO Vice-President, welcomes meeting participants

Knowledge about forest policy and governance is more relevant than ever before. Challenges like climate change, the loss of biodiversity, and diminishing water supply and quality need ambitious policymaking and governance based on broad stakeholder engagement and state of the art scientific expertise. The *3rd International Forest Policy Meeting (IFPM3)* gathered scholars from 33 countries to exchange on conceptual and empirical insights around forest and environmental policymaking. Because of the ongoing pandemic, the event had to go virtual. But also in this new format, the IFPM3 was a success.

Originally set to take place in Copenhagen in April 2020, the IFPM3 had to be postponed in the middle of the first Covid-19 wave. Through some twists and turns the IFPM3 could finally take place online on March 17-18 this year, this time organized by the Chair of Forest and Environmental Policy at the University of Freiburg in collaboration with IUFRO Research Group

9.05.00 Forest policy and governance. SNS Nordic Forest Research supported the meeting financially.

Our initial fears of online meeting fatigue soon faded as a growing number of registrations kept coming in (160+). We also received many panel proposals (15) and individual abstracts, finally amounting to 96 presentations. Instead of impeding collaboration, the virtual format opened the network for participants joining from all continents. Since participants did not have to travel all the way to Freiburg, the online format also had environmental benefits. Read this [blog post](#) for more detailed calculations on saving CO2.

The strength of the IFPMs is in fact our small, tightly knit network, that offers a unique opportunity to present and discuss exciting research in a welcoming and familiar environment. It is particularly welcoming for early-career scientists. The online version was no different in this regard. If anything, it provided young scholars with an open, online venue to present and discuss their research.

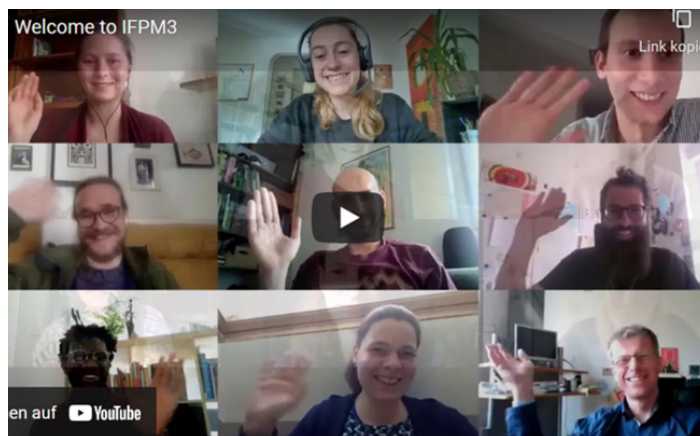
For example, the 3-minute-thesis competition (3 MT) put the spotlight on early-career scientists in the network. Having just 1 slide and three minutes, the seven competing doctoral candidates demonstrated remarkable capabilities to comprise their research into an easily digestible message for both experts and a non-academic public. With the help of the judges, Bas Arts, Eva Lieberherr and Tobias Schulz plus the engaged audience the best contributions went to:

- *Eulàlia Baulenas* (University of Freiburg, Germany): Forest and water policy integration: happily ever after?- Public choice prize & over-all winner
- *Simon Bager* (UCLouvain, Belgium): Fostering sustainable land use through governance interventions in consumer goods value chains- Runner-up.
- *Viviane V. Griesinger* (Södertörn University, Sweden): Networks and their narratives: Environmental activism in the context of Carpathian forest exploitation- 3rd place.

Among the many highlights of the conference was the keynote speech by Aarti Gupta, from Wageningen University, The Netherlands. Gupta inspired an insightful discussion about radical transparency in global environmental governance. Together with the audience, she discussed questions related to who gains from the staggering data collection concerning forests.

Other memorable panels brought up the Covid-19 pandemic and its effects on governance of urban forests (see [blog post](#) by Clive Davis) and the big-scale of small-scale forestry (see [blog post](#) by Kendisha S. Hintz and Marcel Starfinger).

Current topics such deforestation, bioeconomy, and gender were all well-represented in the program and you can read it on the IFPM3 website <https://ifpm3.info/news-3-3/>. It is no exaggeration to say that forest policy and governance research is going strong. There's a bright future in the many competent early-career researchers.



The 4th International Forest Policy Meeting will take place in Bonn (Germany) next year. Inspired by IFPM3's online-format success and openness for international participation, next year's event might go blended i.e., allowing for both in-person and online participation.

The organizing committee in Freiburg wants to thank all participants for their digital engagement and for making the 3rd International Forest Policy Meeting a success despite the physical distance. *Ida Wallin (IUFRO 9.01.07)*, on behalf of the IFPM3 organizing committee at the Chair of Forest and Environmental Policy, University of Freiburg (Germany); *Eulàlia Baulenas, Laila Berning, Alex Giurca, Daniela Kleinschmit, Jakob Kremer, Andy Selter, Matthias Sonnhoff, Metodi Sotirov*

Science and Technology Conference in the Mujib Year

Report by *Dr. Md Sarwar Jahan*, Deputy Coordinator, IUFRO Working Party **5.07.03 Pulp and paper**

The "International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (IC-STB-2021)" took place on 11-13 March 2021 and attracted 715 participants from Bangladesh, Canada, China, Finland, India, Malaysia and the USA. [Meeting website.](#)



Photo: Prof. Dr. Mubarak Ahmad Khan presented a Keynote speech on *Biopolymer for reducing pollution*

On the occasion of the centennial birth anniversary of the founding leader of the country Bangabandhu Sheikh Mujibur Rahman, the government of Bangladesh announced the celebration of 2020-2021 as The Mujib Year. Against this background, BCSIR arranged a three-day scientific conference from 11 to 13 March 2021. Several conference sessions addressed themes of Working Party 5.07.03. Presenters discussed topics related to climate change, biorefinery, problems of using synthetic polymers, recent trends in the pulp and paper industry, increase of lyocell production and finally to SDG achievements.

Congratulations!

Erich Schaitza – New Director General of Embrapa Florestas, Brazil



After having served as interim Director-General since January 2020, Erich Schaitza has now been appointed Director-General of Embrapa Florestas for two years. During his career as a researcher specialized in forest engineering, he has also worked in the fields of communication and business and headed Embrapa's

office in Africa for three years. Erich Schaitza was a member of the 2019 IUFRO World Congress Organizing Committee and is a member of the current IUFRO Board holding the position of President's Nominee. [Click to read more](#) (in Portuguese)!

Robert Kozak – New Dean of the Faculty of Forestry at University of British Columbia, Canada



Dr. Robert Kozak, a professor in the Department of Wood Science at the UBC Faculty of Forestry, has been appointed as the new Dean of the Faculty of Forestry for a five-year term, commencing September 1, 2021. Dr. Kozak has received several awards and distinctions, including the IUFRO Scientific Achievement Award, and the UBC Killam Teaching Prize on two occasions. He also was Deputy Coordinator of IUFRO Research Group 5.10.00 *Forest products marketing and business management* from 2005 – 2014. Source: <https://academic.ubc.ca/dean-faculty-forestry>

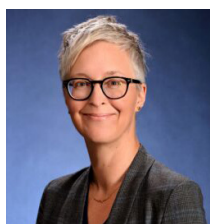
Mike Wingfield – New Member of Marcus Wallenberg Prize Selection Committee, Sweden



One of the three new members of the MWP Selection Committee is former IUFRO President Mike Wingfield, the Founding Director of the Forestry and Agricultural Biotechnology Institute, FABI, at the University of Pretoria, South Africa. In an MWP media release Professor Wingfield said, "I have worked in forest research for all of my career and know how important it is to recognize the accomplishments of forest researchers. (...) And there are many forest researchers in the world deserving recognition."

[Click to read more!](#)

Shannon Hagermann – Receives UBC Inaugural Faculty of Forestry Research Award



Dr. Shannon Hagerman, Associate Professor in the Department of Forest Resources Management of the University of British Columbia, Canada, and Deputy Coordinator 9.05.10 *Nature conservation & biodiversity*, received this new award for her ground-breaking research on themes of interconnected conservation and

social-ecological change, with implications for governance and policy. [Click to read more!](#)

Publications

IUFRO Japan News No. 129

Issue No. 129 features forest education. Check articles by Alexander Buck, the Executive Director of IUFRO, and by Mariko Inoue, a finalist in the Global Competition on Best Practices in Forest Education. A third stimulating article reports on the smart increment borer (Smartborer™, PAT. P.), sharing the author's experience of realizing his research concept and actually developing the product.

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

Latest on the IUFRO Blog!

<https://blog.iufro.org/>

Doctor Recommended: Systematic Evidence Evaluation on Forest Landscape Restoration

Systematic reviews originally emerged in the field of medical science to synthesize and evaluate all available evidence to arrive at the best (most informed) decision. This process, which brings together information from a range of sources and disciplines, also plays an important role in informing debates and decisions on forests and environment.

With a view to improving forest policy and practice, the online course "[Systematic Evidence Evaluation on Forest Landscape Restoration](#)" was organized as a collaboration between IUFRO's Special Programme for Development of Capacities (IUFRO-SPDC) and Oxford Systematic Reviews (OXSREV), from March 22-26, 2021.



The diverse group of participants enriched the learning experience by providing perspectives from different countries, cultures and backgrounds. All attendees were able to participate in the course for free, thanks to generous financial contributions from the US Forest Service.

[Click to read more!](#)

Helping Ensure that Forest Bioenergy is Environmentally Sustainable



Photo by Brigitte Oberlik-Burtscher

Read our latest guest blog:

Can removal of woody materials from forests for renewable bioenergy production be environmentally sustainable?

A recent review in *Energy, Sustainability and Society* demonstrates that a wide range of environmental and social values can be protected when harvesting forest biomass, such as harvest residues, salvaged sub-merchantable trees, diseased or dead trees, and whole-tree thinnings.

One of the authors of the original study, Dr. Viktor Bruckman, is the Deputy Coordinator of the Former IUFRO Task Force "Forest Biomass Network".

Using a Social Science Lens on the Forest Bioeconomy

IUFRO Spotlight #88

A recent special section in *Ambio: A Journal of Environment and Society* pulls together studies that look at how, for example, perceptions of the forest-based bioeconomy differ across countries and social groups. It's important, say the special section editors, because it opens the door to more inclusive,



locally and socially relevant bioeconomy policies and strategies. The special section is entitled "[Social dimensions of a forest-based bioeconomy: A summary and synthesis](#)".

Cover design for *Ambio* special section by Alex Giurca

Research Papers

The Destructive Tree Pathogen *Phytophthora ramorum*

Dr. Thomas Jung, head scientific researcher of the Phytophthora Research Centre (PRC) at the Faculty of Forestry and Wood Technology of Mendel University in Brno, Czech Republic, and Deputy Coordinator of [IUFRO WP 7.02.09](#) - *Phytophthora diseases on forest trees*, led the work of an international team of experts into discoveries that will deeply impact phytosanitary measures currently in place in the European Union (EU) and worldwide for regulating global plant trade. These findings were recently published in *The Journal of Fungi*, 7, 226: "[The destructive tree pathogen *Phytophthora ramorum* originates from the laurosilva forests of East Asia.](#)"

Genetic Aspects Linked to Production and Use of Forest Reproductive Material (FRM)

Several IUFRO officeholders are among the authors of this EUFORGEN publication, including Katri Himanen, Hojka Kraigher and Paraskevi Alizoti. This work is the result of an

international collaboration rooted in EUFORGEN for more than two decades. It is built on the firm belief that the genetic element is decisive for the creation of a resilient forest capable of surviving threats and adapting to changes, thus enabling the evolution of ecosystems and the conservation of the productive landscape. [Click here to read more!](#)

Growth and Allocation of Woody Biomass in Forest Trees Based on Environmental Conditions

Edited by Luigi Todaro, Angelo Rita and Alessio Collalti (Deputy Coordinator [IUFRO WP 8.04.04](#) - *Modelling and risk assessment*): <https://www.mdpi.com/books/pdfview/book/3631>

Forest ecosystems are important because of their key role in reducing atmospheric greenhouse gas concentrations by storing a large amount of carbon in biomass and soils. It is important to understand the factors that influence both growth and biomass allocation to develop environmental policies and useful forest management practices to cope with climate change.

Calls for Submissions for Special Journal Issues

Long-term Productivity and Landscape Processes of Mixed Conifer Forests

Submissions are invited for a Special Issue of *Forests*. The deadline is 19 December 2021.

Guest editor: Warren Keith Moser, Rocky Mountain Research Station, US Forest Service

Details: <https://www.mdpi.com/journal/forests/special-issues/productivity-landscape-mixed-conifer>

Forest Operation in the Tropics: Timber and Non-timber Forest Products

The *Jurnal Manajemen Hutan Tropika* in collaboration with [IUFRO RG 3.07.00](#) - *Forest Operation in the Tropics* invites potential authors to publish different research results, thoughts, and original ideas related to forest operation in the tropics in a special issue. The deadline is 22 February 2022 and the guideline for submission preparation is available at: <https://journal.ipb.ac.id/index.php/jmht/about/submissions>

Positions

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

PhD Position: Accounting for Land Use Dynamics in the Calculation of Carbon Substitution by Wood Products

Apply by 31 May 2021

PhD position to investigate the relationship between substitution effects in wood products and leakage effects, in particular those related to land-use changes abroad. Methods will rely on using large-scale numerical simulation models of the forest and land-use sectors.

Institution: INRAE (BETA laboratory) & CIRED
Duty station: Nancy & Paris, France

Details: https://efi.int/sites/default/files/files/members/2021/Phd_position_032021.pdf

Courses, Summer Schools

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

MSU Forestry Non-credit Online Courses – Summer 2021

Apply by 24 May 2021

The Department of Forestry, Michigan State University, is pleased to offer non-credit course options 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. Courses are taught at three levels: introductory (lower division undergraduate), intermediate (upper division undergraduate), and advanced (graduate). All participants that complete a course will receive a “Certificate of Completion.”

<https://www.canr.msu.edu/for/continuing-education/>

Master of Science in Tropical Forestry at TU Dresden

Application deadlines:

1 April - 31 May (international applicants, from outside the EU)

1 April - 15 July (applicants from the EU)

The course is taught in English at Technische Universität Dresden (TUD), one of the 11 German Universities of Excellence. The Master course qualifies future decision-makers and change agents to develop sustainable forest management strategies and implement development-relevant interventions in rural and peri-urban areas.

https://tu-dresden.de/bu/umwelt/forst/inter/tropen?set_language=en

Contact: tropentutor(at)mailbox.tu-dresden.de

Forest and Landscape Restoration Courses

FAO E-learning Academy

This course has been developed to equip practitioners with the capacity to design, plan and implement monitoring systems for FLR interventions.

<https://elearning.fao.org/course/view.php?id=687>

IUFRO Meetings

Obtain IUFRO recognition and promotion of your event!

Organizing your in-person or virtual conference, workshop, or other activity as an official IUFRO event raises its profile and allows for broader participation and recognition than it may otherwise attract.

Check the Toolbox on your Unit's webpage and find out more under “Documents for meetings”: <https://www.iufro.org/fileadmin/material/science/divisions/toolbox/iufro-recognition-and-promotion-of-your-event.pdf>

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/>

Search forest-related events in GFIS at: <https://www.gfis.net>

Forest Roads: Regional perspectives from around the world



Forest Roads in New Zealand

Jun 1, 2021, 5:00pm to 6:00pm UTC

Jun 2, 2021, 5:00am to 6:00am NZST

Webinar by Campbell Harvey and Dr. Rien Visser, University of Canterbury, New Zealand

[IUFRO 3.01.02](https://www.iufro.org/science/divisions/division-3/30000/30100/30102/)

More information and recordings: <https://www.iufro.org/science/divisions/division-3/30000/30100/30102/>

2 Jun 2021

IUFRO Session “Know-how needed for successful forest landscape restoration in Africa” at GLF Africa: Restoring Africa's Drylands - Accelerating Action from the Ground Up (2-3 June)

Online

<https://events.globallandscapesforum.org/agenda/africa-2021/02-june-2021/know-how-needed-for-successful-forest-landscape-restoration-in-africa/>

19-25 Jun 2021

NEW DATE! 5th International Conference on Soil, Bio- and Eco-Engineering

online and Zollikofen, Switzerland

IUFRO [8.03.00](https://www.iufro.org/science/divisions/division-8/80000/80200/80203/activities/) and IUFRO [8.03.01](https://www.iufro.org/science/divisions/division-8/80000/80200/80203/activities/)

Contact: Alexia Stokes, alexia.stokes(at)cirad.fr

<https://www.bfh.ch/en/news/events/5th-international-conference-on-soil-bio-and-eco-engineering/>

24-25 Jun 2021

Webinar: Humusica 2021 – Soil: biodiversity and management - Practical tools and actions for facing the future

Online

IUFRO [8.02.03](https://www.iufro.org/science/divisions/division-8/80000/80200/80203/activities/)

Contact: Augusto Zanella, augusto.zanella(at)unipd.it

<https://www.iufro.org/science/divisions/division-8/80000/80200/80203/activities/>

11-15 Jul 2021

IUFRO LE Symposium at the IALE 2021 European Landscape Ecology Congress: Forest expansion, landscape dynamics and ecosystem services in Europe

Warsaw, Poland

IUFRO [8.01.02](https://www.iufro.org/science/divisions/division-8/80000/80100/80102/activities/)

Contact: Joao Azevedo, jazevedo(at)ipb.pt

<https://www.iufro.org/science/divisions/division-8/80000/80100/80102/activities/>

16-18 Aug 2021

**20th Commonwealth Forestry Conference –
Sessions for IUFRO Divisions 6 and 9**

Vancouver, BC, Canada, online

9.03.07, 9.03.00, [9.00.00](#), 6.10.01, [6.00.00](#)

Contact: Stephen Wyatt, stephen.wyatt@jumoncton.ca

Janette Bulkan, janette.bulkan@ubc.ca

<https://cfc2021.ubc.ca/>

28-29 Sep 2021

IUFRO World Day - Digital Forest Science Forum 2021

Online in three time zone groups

IUFRO Member Organizations, please express your interest in participation by 31 May here: <https://www.iufro.org/events/iufro-world-day/expression-of-interest/>

Contact: Carola Egger, egger@iufro.org

<https://www.iufro.org/events/iufro-world-day/>



28-29 Sep 2021

**Forest Ecosystems in the Conditions of Climate Change:
Biological Productivity and Remote Sensing**

Online / IUFRO [4.02.05](#)

Contact: Eldar Kurbanov, kurbanovea@volgatech.net

<https://feucc.volgatech.net/>

26-28 Oct 2021

**NEW DATE! 3rd IUFRO Acacia Conference 2021:
Embracing Transformation for Sustainable Management
of Industrial Forest Plantations**

Online / IUFRO [2.08.07](#)

Contact: Wickneswari Ratnam, wicki@ukm.edu.my

<https://iufroacacia2020.com/>

6-9 Sep 2022

All-Division 7 Conference

Lisbon, Portugal

IUFRO [7.00.00](#)

Contact: Manuela Branco, mrbranco@isa.ulisboa.pt

Eckehard Brockerhoff, eckehard.brockerhoff@wsl.ch

<https://www.iufro.org/science/divisions/division-7/70000/activities/>

12-16 Sep 2022

ForestSAT2020 - Last Call for Forests!

Krakow, Poland

IUFRO [4.02.05](#)

Contact: Piotr Weżyk, p.wezyk@jur.krakow.pl, forest-sat2020@gmail.com

<http://forestsat2020.forestsat.com/>

23-25 Sep 2022

IUFRO Regional Conference

Sustaining the Forests of Russia and Eurasia: Management, Innovation, Conservation and Restoration

Moscow, Russian Federation

<https://www.iufro.org/events/congresses-regional/>

http://mf.bmstu.ru/iufro-conf_2022

**STOCKHOLM 2024
IUFRO
WORLD CONGRESS XXVI**

23-29 Jun 2024

XXVI IUFRO World Congress 2024

Stockholm, Sweden

Congress website: <https://www.iufro2024.com/>

Other Meetings

1 Jul 2021

Austrian World Summit: Healthy Planet – Healthy People

Spanish Riding School Vienna, Austria

No tickets available this year, please join live & for free on:

<https://www.austrianworldsummit.com/summit/program>

4-5 Aug 2021

Environmental Change and the Forest Fires

virtual and on site at Istanbul Regional Directorate of Forestry Campus, Istanbul, Turkey

Organizers: General Directorate of Forestry with the support of Istanbul Universitesi-Cerrahpaşa

<https://www.iufro.org/fileadmin/material/discover/nb-Wildfire21conference.pdf>

23-27 Aug 2021

World Water Week

Virtual

Launch of “A guide to forest–water management” on Wednesday, 25 Aug, 18.00 CET in a joint FAO-IUFRO-USFS session:

“Healthy forests, resilient societies:

Managing the forest-water nexus”

<https://www.worldwaterweek.org/>

14-17 Sep 2021

First EVOLTREE Conference 2021: Genomics and Adaptation in Forest Ecosystems

Birmensdorf, Switzerland

<http://www.evoltree.eu/index.php/10-news/news-middle/180-evoltree-conference>

2–6 May 2022

XV World Forestry Congress

Call for Abstracts open until 30 June 2021!

Coex Convention Center, Seoul, Korea

<https://www.wfc2021korea.org/index.html>

[Read about a WFC side event at UNFF16!](#)

