

## Phytophthora in Forests and Natural Ecosystems

Report by Bruno Scanu, Meeting Organizer; IUFRO Working Party 7.02.09  
<https://www.iufro.org/science/divisions/division-7/70000/70200/70209/activities/>

The 9th Meeting of the IUFRO Working Party 7.02.09 *Phytophthora diseases on forest trees* was held on 17-25 October 2019 in La Maddalena, Sardinia, Italy and counted 150 participants from 30 countries. For more than 30% of the delegates this was their first Working Party conference, which underlines the high interest in the WP activities. It was hosted by the Dipartimento di Agraria – Università degli Studi di Sassari and the Parco Nazionale dell'Arcipelago di La Maddalena.

Meeting website: <https://www.iufrosardinia2019.org/>

Besides updating the scientific community on recent research developments on *Phytophthora* in forests and natural ecosystems, **the objective of the meeting in Sardinia was to view the impact of *Phytophthora* species in Mediterranean type ecosystems**, with particular regard to the severe outbreak currently affecting oak trees and the maquis vegetation in the National Park of La Maddalena. More than 100 oral presentations were given during the meeting, including 6 keynote lectures and 32 poster presentations.

The conference was focused on forests and natural ecosystems and aimed to advance the discussion of concepts and ideas from pathology and biology to biosecurity. There is new evidence for the introduction of exotic *Phytophthora* species in Mediterranean ecosystems through restoration projects. Metagenomics is a powerful tool for *Phytophthora* detection, however there are some critical points to be considered, including sampling, lab contamination, selection of primers, sequencing technology and reference database. Studies in previously unexplored ecosystems improve our understanding of the biogeography and global diversity of *Phytophthora*. Phosphite represents the most effective treatment for controlling *Phytophthora* infection, however, more studies are needed to understand possible effects on the soil microbiomes as well as development of tolerant isolates through adaptive evolution.

During a **3-day pre-congress** field trip across Sardinia delegates visited the typical Mediterranean holm oak forests, featuring their historical uses and current management systems, including an old growth holm oak forest showing symptoms of chronic decline caused by endemic *Phytophthora* species (Nuoro province). Additionally, the delegation visited one the world's first FSC-certified cork oak forest and products as well as another site with severe dieback and mortality of cork oak trees caused by *Phytophthora cinnamomi*. During the main field trip participants visited Caprera Island to see the impact of *Phytophthora* species on holm oak trees and Mediterranean maquis vegetation.



Delegates in the pre-congress field trip visiting an old growth *Quercus ilex* forest in Sardinia (Photo by Giancarlo Cabrini)  
Severe dieback and mortality of *Quercus suber* trees caused by



*Phytophthora cinnamomi* in Sardinia (Photo by Bruno Scanu)

**Conference Proceedings** will be posted at *Forest Phytophthoras of the World*:  
<http://forestphytophthoras.org/>

The tenth meeting is planned for 2022 in California and Oregon, to view the impact of Sudden Oak Death caused by *P. ramorum* across the two states as well as the severe dieback and mortality of trees and shrubs in restoration sites due to several exotic *Phytophthora* species.

**Read the full report here:**  
<https://www.iufro.org/science/divisions/division-7/70000/70200/70209/activities/>

## Green Economy and Environmental Sustainability of Casuarina Plantations

Report by Abel Nicodemus, Coordinator, IUFRO WP 2.08.02 Improvement and Culture of Nitrogen-fixing Trees  
<https://www.iufro.org/science/divisions/division-2/20000/20800/20802/>

*Casuarinas* are nitrogen-fixing trees of significant importance in many tropical and subtropical countries of the world. International *Casuarina* workshops are organized by IUFRO Working Party 2.08.02 at regular intervals. Five workshops have been conducted so far in Australia (1981), Egypt (1989), Vietnam (1996), China (2010) and India (2014). These workshops have fostered a strong network of researchers from many countries. The **Sixth International Casuarina Workshop** took place on 21-25 October 2019 in Krabi, Thailand with 70 participants from Australia, Bangladesh, China, Fiji, India, Indonesia, Kenya, Thailand, Vietnam and USA. Meeting website: <http://www.casuarina2019.kapi.ku.ac.th/>

In line with the theme of the Workshop, "*Casuarinas for green economy and environmental sustainability*", the discussions during the meeting were focused on **assessing the impact of Casuarina planting in meeting the industrial biomass raw material demand and improving edaphic and climatic conditions**. In particular, the additional benefits derived thanks to the research and development work carried out so far, and increasing the accessibility of such new findings to all those involved in *Casuarina* planting were reviewed.

Regional and international collaborations were proposed to share the expertise and germplasm from countries that have already made substantial genetic and economic gains through long-term research programs with those that are beginning or in the early stages of improving the species. Strategies for conservation of available genetic resources in the natural range as well as broadening of the genetic base and overcoming the biotic and climate change induced threats in the cultivated stands were proposed for long term securing of *Casuarina* utilization.

Participants of the workshop strongly suggested to quantify the overall socio-economic and environmental benefits of *Casuarina* planting to provide the industry leaders and policy makers with the information required for increased prioritization and investments to advance research and development efforts.

The ongoing programmes on genetic improvement, biological nitrogen fixation through *Frankia* symbiosis and evolving appropriate silvicultural techniques especially to



Participants visiting Tsunami rehabilitation plantations of *Casuarina* in Krabi, Thailand. Photo provided by the Secretariat of the Sixth International Casuarina Workshop

the emerging species will be strengthened and extended to new areas of planting.

Issues of decline of *Casuarina* in natural and planted environments will be tackled through an interdisciplinary approach by drawing inputs from genetics, pathology and silviculture. Exploration and trialing of new species, particularly those from the Pacific islands, will be initiated to expand the genetic and utilization base of *Casuarina* cultivation.

Forty-three abstracts were submitted prior to the workshop which were compiled, printed and provided to all participants of the workshop. The full papers of those papers presented in the workshop will be peer-reviewed, edited and published as proceedings of the workshop by September 2020. Meeting participants and members of the Working Party were encouraged to hold regular meetings in their respective countries to further implementation of the workshop recommendations.

Read the full report here: <https://www.iufro.org/science/divisions/division-2/20000/20800/20802/activities/>

## Conservation of Forest Genetic Resources

Report by Konstantin V. Krutovsky, Coordinator of IUFRO RG 2.02.00 - Conifer breeding and genetic resources  
<https://www.iufro.org/science/divisions/division-2/20000/20200/>

The 6th International Conference "*Conservation of Forest Genetic Resources*" took place from 16-20 September 2019 in Shchuchinsk, Kazakhstan and gathered 65 participants. Proceedings of the conference were published in advance and included 104 abstracts in Kazakh, Russian and English representing 38 organizations and scientists from Germany, Latvia, Russian Federation, Republic of Belarus, Republic of Kazakhstan, Ukraine, Uzbekistan, and Serbia.

The conference was hosted and supported by the Kazakh Research Institute of Forestry and Agroforestry, "Zhasyl Zher" LLP, "Green technologies" LLP and "Disinfection" LLP.

Website: <http://kazniilha.kz/content/6-ya-meghdunarodnaya-konferenciya-soveschanie-sohranenie-lesnyh-geneti>



Participants during a session. Photo provided by the Kazakh Research Institute of Forestry and Agroforestry

#### Discussions focused mainly on:

- problems of conservation of forest genetic resources, the important ecological role of forests, and the need to preserve forest biodiversity based on scientific knowledge;
- main achievements in forest conservation, studies of forest genetic resources, forest selection, production of timber varieties, identification of phytopathogens, including the use of the latest genomic and postgenomic technologies;
- implementation of state priorities aimed at conservation of biological diversity of forest ecosystems;
- effective conservation of forest resources, molecular genetic identification of forest tree populations and their pathogens, DNA identification of the timber and seed material origin to increase the efficiency of fighting against illegal logging and to control seed material used for reforestation,
- genetics of important breeding and adaptive traits in forest species, new genetic, breeding, biotechnological and introduction methods in the conservation of biological diversity of forests in different regions.

Participants underlined the importance of remote sensing for studying and monitoring forest resources including geographical cultures and breeding objects. Discussions and presentations also highlighted the importance of molecular genetic markers for identification of forest tree species at the population level and the possibility of assigning trees to their original populations. It was concluded, among other things, that forest exploitation, seed zoning, and reforestation regulations should be based on genetic data and that more studies of population genetic structure are needed for the major forest tree species.

The following measures and methods for the conservation of forest genetic resources in connection with global climate change should be considered priority tasks, among others: conservation of forest ecosystems, endemic, rare, relict plant species, their monitoring using GIS technologies, development of new forest tree varieties using modern methods of biotechnology, genomic selection, and genome editing.

Read the full report here: <https://www.iufro.org/science/divisions/division-2/20000/20200/activities/>

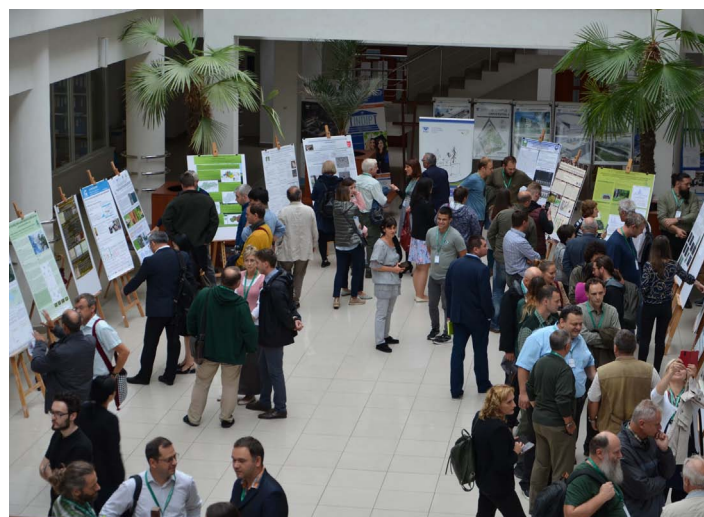
## Recent Changes in Forest Insects and Pathogens Significance

Report by Miloš Knížek, Wojciech Grodzki and Andrej Kunca, Coordinator and Deputy Coordinators of IUFRO WP 7.03.10, Methodology of forest insect and disease survey in Central Europe, <https://www.iufro.org/science/divisions/division-7/70000/70300/70310/>

Forests are continually changing under the influence of a wide range of disturbance factors. Insects and diseases, especially invasive species, are often on top of the list. It is the scientists' goal to understand the biology of these organisms as well as possibly control and develop tools that help make forests healthier.

Against this background, the meeting on "Recent Changes in Forest Insects and Pathogens Significance" with 68 participants from 19 countries was held on 16-20 September 2019, in Suceava, Romania. After 19 years, Romania for the second time had the opportunity to organize this important meeting and the Forestry Faculty of the "Ștefan cel Mare" University of Suceava had the honor to organize it and host it together with the Society for Silviculture and Environment, Suceava.

Meeting website: <http://silvic.usv.ro/iufroromania2019/>



Poster session during the 2019 WP meeting in Suceava, Romania. Photo: Ramona Scriban.

#### Discussions focused on the following main topics:

- Phytosanitary aspects in Suceava County forests (Romania);
- Information platform on pests occurrence in Europe;
- Information platform on diseases occurrence in Europe;
- The pest and disease controls in the certificated forests;
- Non-native organisms - network for sharing information on distribution and spreading;
- Diagnostic tools and evidence systems for forest pests and diseases;
- Risk assessment of actual and introduced pests and diseases;
- Forest pest and diseases: ecology and control.

Book of abstracts: <https://www.iufro.org/publications/proceedings/proceedings-meetings-2019/#c28378>

Read the full report here: <https://www.iufro.org/science/divisions/division-7/70000/70300/70310/activities/>

## 21st International Nondestructive Testing and Evaluation (NDTE) of Wood Symposium 2019

Report by Xiping Wang of USDA Forest Products Laboratory and Franka Brüchert of the Forest Research Institute Baden-Württemberg (FVA), Coordinator/Deputy Coordinator, IUFRO Research Group 5.01.09

<https://www.iufro.org/science/divisions/division-5/50000/50100/50109/>

The 21st International Nondestructive Testing and Evaluation (NDTE) of Wood Symposium was held on September 24–27, 2019, in Freiburg, Germany: <https://ndtesymposium.org/>

The event was hosted by the Forest Research Institute Baden-Württemberg (FVA) and co-sponsored by the USDA Forest Products Laboratory, Forest Products Society, and IUFRO 5.01.09 Nondestructive Evaluation of Wood and Wood-based Materials.

The International NDTE of Wood Symposium is a forum for those involved in nondestructive testing and evaluation of wood, wood-based materials and products. It brings together the international research community, users of various nondestructive testing technologies, equipment development and manufacturing professionals, and other groups to share research findings and new nondestructive testing products and technologies. Networking among participants encouraged international collaborative efforts and fostered the implementation of NDT/NDE technologies around the world.

After opening comments from the international organizing committee, participants were welcomed by the Ministry of Rural Affairs and Consumer Protection Baden-Württemberg, and by the State Forest Service Baden-Württemberg ForstBW, Mr. Bernhard Panknin. A warm welcome to the University was delivered by Prof. Thomas Seifert.

The Symposium's general session included speakers from Italy, Germany, China, and the United States on topics covering the inspection of historic structures, the use of NDE in industrial environments, and the application of NDE around the world.

During the symposium's banquet, special recognition awards were presented to the FVA for its outstanding efforts in hosting the 21st symposium and to Dr. Udo H. Sauter for his leadership as a co-chair in organizing the event. Special recognition awards were also presented to Prof. Raquel Gonçalves for her distinguished service in the symposium series and to Mr. Peter Carter for his outstanding technology transfer efforts in the field of nondestructive evaluation of wood.

Over 140 scientists, technology developers, practitioners, and students from 30 countries attended the event. A total of 137 technical presentations were made in eight technical sessions and one poster session. The technical content of the 21st symposium has been captured in 724 pages of proceedings, which can be accessed from the tree search here:

<https://www.fs.usda.gov/treesearch/pubs/58690>



More than 140 attendees met at the NDTE of Wood symposium in Freiburg (Photo by Thomas Weidner, FVA)

Prior to the Symposium, a technical workshop, "Nondestructive Testing and Evaluation Opportunities in a Historic European City," was held at FVA. It included coursework on the state-of-the-art in NDE as applied to historic structures, and a tour of the historic Freiburg Cathedral. A post-symposium tour of the Black Forest (historical wooden farm houses) and a modern large-span engineered timber roof construction was organized and led by the FVA staff. The 22nd NDTE will be hosted by Laval University in Quebec, Canada in 2021.

**Symposium proceedings are available here:**

<https://www.iufro.org/publications/proceedings/proceedings-meetings-2019/#c28378>

**Read the full report here:** <https://www.iufro.org/science/divisions/division-5/50000/50100/50109/activities/>



Participants of the post-conference tour visiting a modern engineered timber roof construction (Photo by Thomas Weidner, FVA)

## Next Generations' Perspectives on the Future of Forest Work

### Students' views on the future of jobs and education in a changing forest sector: Highlights from the European Forest Week 2019

By Juliet Achieng Owuor, EFI-IFSA-IUFRO Project on Global Student Networking and Green Jobs in the Forest Sector

The 5th edition of the European Forest Week was held from 4-7 November 2019, in Geneva, Switzerland. It was jointly organized by the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Economic Commission for Europe (UNECE). This year's theme was "Forests and the Circular Economy".

Circular economy is a concept that is gaining importance because it promotes resource efficiency which is very essential due to the increasing competition for natural resources and the environment.

The week was celebrated in conjunction with Forêt2019, the Joint Session of the UNECE Committee on Forests and the Forest Industry (COFFI), and the FAO European Forestry Commission (EFC) <http://www.fao.org/about/meetings/european-forest-week/en/>

The European Forestry Institute (EFI), International Forestry Students' Association (IFSA) and the International Union of Forest Research Organizations (IUFRO) Project: <https://ifsa.net/efi-ifsa-iufro-project/>, co-organized a side event together with UNECE/FAO Team of Specialists on Green Jobs in the Forest Sector: <http://www.unece.org/forests/sc/methodsandprocesses/fao/ece/ilo.html> The session was titled "Next Generations' Perspectives on the Future of Forest Work".

Juliet Achieng Owuor, holder of a Joint EFI-IFSA-IUFRO Position and the deputy coordinator of the Joint IUFRO-IFSA Task Force on Forest Education, presented preliminary literature review results and focus group discussions on the future of jobs and education in a changing forest sector: [http://www.unece.org/fileadmin/DAM/timber/meetings/2019/20191104/European\\_Forest\\_Week\\_Side\\_Event\\_GFJ\\_191105.pdf](http://www.unece.org/fileadmin/DAM/timber/meetings/2019/20191104/European_Forest_Week_Side_Event_GFJ_191105.pdf)

The research is part of the project funded by the German Ministry of Food and Agriculture. The aim was to provide insights to professionals, decision makers and institutions from the member states on the future of work in relation to the circular economy. Ms. Owuor acknowledged that many trends could be observed in the forest sector employment including green jobs and that skills and competency requirements are also expected to change as a result of the changes in employment needs.

Other renowned speakers at the event were from International Labour Organization, Universidad Politécnica de Madrid and the Team of Specialists on Green Jobs. The discussions comprised of several other relevant topics such as challenging trends expected to shape the future of employment in the forest sector. These were based on the findings of the Experts Workshop on Green Jobs held in Madrid in June 2019: <http://www.unece.org/index.php?id=51529>



Juliet A. Owuor, one of the speakers at the event;  
©UNECE/FAO

The side event concluded with the message that **Green Forest Jobs lead to Green Forest Careers and they are a key component of the Future Circular Economy.** With such a vital message, the young generation has a key role to play and that is exactly why the project is keen on incorporating students' views on employment and education needs.

## Expert Workshop on Forest Sector Employment, Green Jobs and Forest Education

On 18 and 19 November 2019 the project team hosted an expert workshop at the EFI office in Bonn.

Aims of the workshop were:

- Eliciting overall trends in forest sector employment in different world regions and focus countries
- Identifying main changes in employment
- Gaining insights into forest sector employment, including green jobs and identify employment trends

Find out more: <https://ifsa.net/efi-ifsa-iufro-project/>

Group photo provided by EFI



## Society Will Have Strong Roots, if It Educates Its Youth

**Forest education activities during the XXV IUFRO World Congress involving ca. 150 participants from more than 30 countries**

Report by Khalil Walji and Sandra Rodriguez, Coordinators, and Mika Rekola, Ashley Lehto and Juliet Achieng, Deputy Coordinators of the Joint Task Force on Forest Education <https://www.iufro.org/science/task-forces/forest-education/>

The IUFRO-IFSA (International Forestry Students' Association) Joint Task Force on Forest Education (JTF), which closely collaborates with IFSA's Capacity Development Commission through the Forest Education and Training sub-commission, actively engaged in events at the 25th IUFRO World Congress recently held in Brazil:



Participants of the Pre-congress training day.  
Photo by IFSA.

- Pre-congress training session Building Early Science Skills
- Effective educational strategies for the next generation of forest professionals
- Teaching and training in silviculture, silvics, and silvology in collaboration with Division 1 (Chair: Dr. JP Skovsgaard)
- How to Teach Forest Sciences in the Future - Challenges and Opportunities of Changing Ecological, Socio-Economic, and Technological Circumstances in collaboration with Asia-Pacific Network for Sustainable Forest Management (APFNet)
- Administrative meeting Forest Education
- Forest Education workshop

The training session was organized in three thematic areas representing a broad range of important skills for early career scientists - conventional (Publishing), contemporary (Entrepreneurship), and Social/Soft (Networking) - that would benefit them during and after the Congress.

Trainings were conducted by six experts, two of which were from the Latin American region, one from North America and three from the European region. Thirty-three self-identified young scientists from 21 different countries attended the training, with the majority (55%) coming from Latin American region, 18% from Asia Pacific and the rest evenly split between Europe and Africa. IFSA students comprised 27% of the participants. The training was well received by participants, who expressed satisfaction with the event and acknowledged the relevance to their studies and their careers.

The participants recommended a range of other topics that could be covered in the future, including specific thematic topics such as agroforestry, silviculture, and more general research skills such as coding in R, Python, research and statistical methods. Students' interest in these particular programming skills is consistent with the increasing demand of developing technologies to solve complex problems in relatively less time.

During the technical sessions, challenges and opportunities in teaching in a very dynamic environment were shown in

twenty-two oral presentations. Teaching-learning methods such as field notes, monitoring plots, role play, and MOOC were presented as successful tools to equip students with soft skills and specific competences needed in their working life.

Programs with international collaboration were also presented as important to enhance forestry education in different latitudes. Some of the challenges mentioned were the limited budget, distance (classrooms are far from the forest), and the lack of updated silviculture books. Reviewing the content of forest programs is an urgent task to address skill gaps that help future forest graduates to make a successful transition into the green labor market.

Trainings and participation in conferences will continue to be part of the IFSA engagement at IUFRO and other partner events. The results of the activities by the Joint Task Force on Forest Education show a positive impact for participants and JTF members, the increasing network of researchers and practitioners on forest education is well noticed in early scientists.

**Read the full report at:** <https://www.iufro.org/science/task-forces/forest-education/activities/>

**There is also a special IFSA Newsletter on the IUFRO World Congress:** <https://mailchi.mp/5d7e9ef11c6f/ifsa-newsletter-special-issue-iufro>

### IUFRO World Congress Landing Page

For comprehensive information about the 25th IUFRO World Congress in Curitiba, Brazil, please visit: <https://www.iufro.org/events/congresses/2019/>.

The **acceptance speech by the new IUFRO President John Parrotta** has also been published in *iForest - Biogeosciences and Forestry*, Volume 12: Present challenges to global forests and the role of IUFRO <http://www.sisef.it/forest/archive/?action=issue&n=71>

## Teak Session at the IUFRO World Congress 2019, Curitiba, Brazil

Report from the session "Towards Sustainable Development of the Global Teak Sector in a Changing World"

By PK Thulasidas, Coordinator, and Mario Tomazello Filho and Gilles Chaix, Deputy Coordinators of IUFRO's Teakwood Working Party 5.06.02 Utilization of planted teak <https://www.iufro.org/science/divisions/division-5/50000/50600/50602/>

Teak (*Tectona grandis* L.f.) is one among the major tropical hardwoods in high demand on the international markets due to its multifaceted wood quality traits that last for centuries. The natural teak forests are fast declining in their native range and the long-term market prospects of plantation grown teak appear promising provided that the wood quality can be improved through the use of superior planting material, proper site selection and best management practices. They need to be managed following a well-defined operational regime to achieve the desired production goals.



Participants of the Teak Session during the XXV IUFRO World Congress; Curitiba, Brazil. Photo: PK Thulasidas

Teak plantations, according to various estimates, cover between 4.4 to 6.9 million ha and the global trade of teak roundwood is more than 1 million m<sup>3</sup> on average. In the future, public and private teak producers and processors will increasingly pursue voluntary certification schemes to meet environmental, social and economic standards of responsible forest management and gain better access to high-price in timber markets. High-yielding forest plantations must be integrated into the wider context of forest landscapes and thus contribute to its restoration as well as to the achievement of the global development agenda, particularly SDG 15.

The teak session convened during the IUFRO World Congress in Curitiba deliberated on the current international situation with respect to the supply of quality plantation teakwood from sustainable sources that can be geared up to meet the rising demand of hardwoods.

### Major objectives:

- Strategies for the sustainable management and conservation of teak genetic resources of both natural and planted forests;
- Production and distribution of genetically improved planting stock to smallholders for quality teak timber and livelihood enhancement;
- Develop appropriate processing technologies for quality teak products;
- Expansion of teak trade from legally harvested and sustainably managed sources.

## Economic Drivers of Global Wildland Fire Activity

By Janice Burns, IUFRO Thematic Networking Manager

The newly established IUFRO "Fire\$: Economic Drivers of Global Wildland Fire Activity" Task Force kicked-off collaboration after being formally established at the XXV IUFRO World Congress with participation in the 7th International Wildland Fire Conference (IWFC) hosted October 28 to November 1, 2019, in Campo Grande, Brazil, with a post-Congress tour until November 4.

The IUFRO Teakwood Working Party 5.06.02 in collaboration with the International Teak Information Network (TEAKNET) and FAO Regional Office for Asia and the Pacific, Bangkok, Thailand, successfully organized a partner event on teak during the IUFRO World Congress on 5 October 2019. The theme of the event was "Towards Sustainable Development of the Global Teak Sector in a Changing World."

In his opening remarks, Dr. Michael Kleine, IUFRO Deputy Executive Director touched upon the collaborative teak research support program IUFRO was coordinating with TEAKNET in the sustainable management of teak resources worldwide and the subsequent IUFRO Global Teak Study.

Read the full report here: <https://www.iufro.org/science/divisions/division-5/50000/50600/50602/activities/>

Global Teak Study: <https://www.iufro.org/publications/series/world-series/article/2017/06/21/world-series-vol-36-the-global-teak-study-analysis-evaluation-and-future-potential-of-teak-reso/>

Read the latest issue of the **TeakNet Bulletin** here: <https://www.iufro.org/science/divisions/division-5/50000/50600/50602/publications/>

More about the IUFRO Task Force Fire\$: *Economic Drivers of Global Wildland Fire Activity*: <https://www.iufro.org/science/task-forces/global-wildland-fire-activity/>

The main objective of the IWFC was an exchange of opportunities among professionals of all nationalities related to fire management and forest fire control. The conference was attended by more than a thousand government officials, scientists, practitioners, the private sector and civil society from 37 countries, and by UN agencies and other international and regional organizations. Among the conference's activities were the debate and dissemination of work on the impacts of fire on



Photo by skeeze on Pixabay

## News from IUFRO's Thematic Networking

### Forest Landscape Restoration Implementation: Progress on the Ground

Understanding how forest landscape restoration (FLR) is implemented in different contexts helps to inform future FLR initiatives. This "Scientific Snapshot Analysis Project" of IUFRO-SPDC aims at an independent scientific exploration of efforts contributing to forest landscape restoration (FLR) in selected landscapes in nine Bonn Challenge countries, three each in Africa, Asia and Latin America: Bangladesh, Brazil, Ethiopia, Ghana, Guatemala, India, Madagascar, Mongolia, Peru.

**All countries produced videos, posters and reports** about their FLR experiences: <https://www.iufro.org/fr/science/special/spdc/netw/analysis/>

**A series of snapshot blog posts has just started here:** <http://blog.iufro.org/2019/12/04/restoring-for-water-the-basis-to-address-forest-restoration/>

*An "FLR Implementation Snapshot" publication combining the lessons learnt from the nine countries involved in the project is expected to be published in January 2020!*



mate change, forests and water, forests and food security or forests and biodiversity. Currently, a new assessment on the relationship between forests and poverty is underway:

<https://www.iufro.org/science/gfep/forests-and-poverty-panel/>



From right to left: Heiko Warnken, BMZ, and IUFRO Executive Director Alexander Buck signing the multi-year cooperation agreement. (Photo IUFRO)

communities and ecosystems in various regions of the world. The conference also came up with a statement on "Building Sustainable and Fire-Resilient Societies and Landscapes":

<https://www.iufro.org/fr/science/task-forces/global-wildland-fire-activity/activities/>

Members of the Fire\$ Task Force contributed to the conference by sharing their future plans and presenting the paper "Global Fire Challenges in a Warming World", which stresses the diversity and the complexity of the global fire situation, a situation that is evolving, positively or negatively, in unknown proportions due to global environmental changes.

The Task Force is an international consortium of researchers, managers, and practitioners whose aim is to examine the role of local-to-global temporal, spatial and economic dynamics (including non-monetary values/markets) influencing the occurrence of wildland fires across the planet as it warms. For more information on IUFRO's activities related to fire also visit the webpage of IUFRO's Working Party "Forest Fires": <https://www.iufro.org/science/divisions/division-8/80000/80300/80305/>

## News from the Global Forest Expert Panels Initiative

### New Strategic Partnership between IUFRO and BMZ to Better Link Forest Science with International Development Policies

In November 2019 the German Federal Ministry of Economic Cooperation and Development (BMZ) and the International Union of Forest Research Organizations (IUFRO) entered into a multiyear strategic partnership with the aim to enhance the interaction between the science community and policy makers. The core activity of this new partnership will be carried out in the framework of IUFRO's Science-Policy Programme and its main instrument, the IUFRO-led Global Forest Expert Panels (GFEP) initiative of the Collaborative Partnership on Forests (CPF). Read the related [media information](#).

GFEP produces objective and independent scientific assessments on key issues. Since 2007, GFEP has produced six global assessments on topics such as forests and cli-



## Welcoming New GFEP Team Member: Magdalena Lackner

IUFRO Headquarters is growing! Magdalena Lackner joined the team in Vienna, Austria, beginning of November. As a Project Manager for the Global Forest Expert Panels Programme (GFEP) she will facilitate the work on global assessment reports and related regional activities as well as the communication efforts of GFEP.



Magdalena holds a Master's degree in Forest Sciences from the University of Natural Resources and Life Sciences, BOKU, Vienna. She has been working for the Austrian Research Centre for Forests (BFW) and the Austrian Ministry for Sustainability and Tourism (BMNT). Her long affiliation with the International Forestry Students' Association (IFSA), also in the capacity of Coordinator of the Joint IUFRO-IFSA Task Force on Forest Education, has led her back to IUFRO. When not working and advocating for science and forests globally, she enjoys the tranquility of Austrian mountains and nature.

## Rainforest XPRIZE

### XPRIZE Announces \$10 Million Competition to Preserve Rainforests Across the Globe

The \$10 million Rainforest XPRIZE is a global four-year competition to enhance our understanding of the rainforest ecosystem. The competition challenges teams to develop technologies to rapidly, autonomously, and affordably survey rainforest biodiversity in unprecedented detail and use this data to deliver insights. Teams for this new XPRIZE will be truly interdisciplinary, and participation from any background is encouraged. **Find out more:**

<https://rainforest.xprize.org/prizes/rainforest>



## Publications

### Honours and Awards in IUFRO

"The Scientific Achievements Award of the International Union of Forest Research Organizations: 1971 – 2019" (new), and "Honorary Members of IUFRO: 1953 – 2019" (updated), by Victor Teplyakov

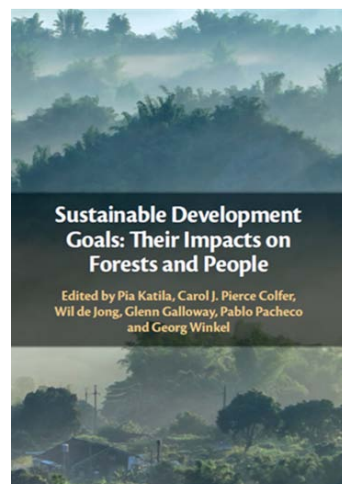
These two books with interesting information about the careers and achievements of IUFRO awardees are now available online: <https://www.iufro.org/publications/general-publications/>

## NEW: Sustainable Development Goals: Their Impacts on Forests and People

*Edited by Pia Katila, Carol J. Pierce Colfer, Wil de Jong, Glenn Galloway, Pablo Pacheco, and Georg Winkel*

**The open access version of the book is now available at Cambridge Core:**

<https://www.cambridge.org/core/books/sustainable-development-goals-their-impacts-on-forests-and-people/5FA75743F80CCE33751BD2095E5754DC>



A new comprehensive assessment of potential and anticipated impacts of efforts towards attaining the different SDGs on forests and forest-related livelihoods and development has just been published. This book discusses the conditions that influence how SDGs are implemented and prioritized, and provides a systematic, multidisciplinary global assessment of interlinkages among the SDGs and their targets, increasing understanding of potential synergies and unavoidable trade-offs between goals from the point of view of forests and people. Ideal for academic researchers, students and decision-makers interested in sustainable development in the context of forests, this book will provide invaluable knowledge for efforts undertaken to reach the SDGs.

The assessment was undertaken by the IUFRO Special Project World Forests, Society and Environment (IUFRO WFSE). It involved 120 scientists and experts from 60 different universities and research and development institutions as well as 38 scientists who acted as peer reviewers of the different SDG chapters. The development and publication of the book and policy brief were made possible thanks to financial contributions from the Ministry for Foreign Affairs of Finland and the Natural Resources Institute Finland.

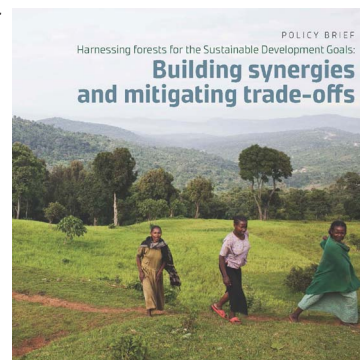
The printed version will be available after 12 December 2019. *Find out more through IUFRO WFSE:*

<https://www.iufro.org/science/special/wfse/>

Contact: Pia Katila, [pia.katila\(at\)luke.fi](mailto:pia.katila(at)luke.fi)

The related *Policy Brief Harnessing Forests for the Sustainable Development Goals: Building Synergies and Mitigating Trade-offs* is available here:

<https://www.iufro.org/fileadmin/material/science/spps/wfse/wfse-pol-brief-building-synergies-mitigating-tradeoffs.pdf>



## International Year of Plant Health 2020 - Protecting plants, protecting life

In December 2018, the United Nations General Assembly declared 2020 as the International Year of Plant Health (IYPH). The year is a once in a lifetime opportunity to raise global awareness on how protecting plant health can help end hunger, reduce poverty, protect the environment, and boost economic development! The official launch of this special activity took place on 2 December in the course of the Climate Summit in Madrid, Spain.



INTERNATIONAL YEAR OF  
**PLANT HEALTH**  
2020

There is an IYPH brochure that shows how FAO and the International Plant Protection Convention (IPPC) are working to protect plant health worldwide:

<http://www.fao.org/documents/card/en/c/ca6992en>

Also available in: Chinese Spanish Arabic French Russian

## On City Trees under Stress and Better Care for Urban Trees

Dr. Somidh Saha of the Karlsruhe Institute of Technology (KIT), Germany, and Deputy Coordinator of IUFRO [Working Party 1.01.06](#) – *Ecology and silviculture of oak* recently had the chance to present current research activities about urban trees and forests to the Helmholtz Society.



Photo by David Mark on Pixabay

In two interviews (available in English and German) he talks about the situation of trees in cities and what is needed to improve it:

- <https://www.eskp.de/en/climate-change/city-trees-under-stress-9351071/>
- <https://www.eskp.de/en/climate-change/better-care-for-urban-trees-9351072/>

## Other Publications, Apps and Media Articles

### Proceedings: 14th International Christmas Tree Research and Extension Conference

Marie-Claude Lavoie and Marylaine de Chantal (eds.)  
26-30 August 2019, Quebec City, Canada, IUFRO 2.02.09  
<https://www.iufro.org/publications/proceedings/proceedings-meetings-2019/#c28377>

### Special Issue on Social Innovation

This Special Issue of Forest Policy and Economics is largely a product of the H2020 SIMRA project and its Thematic

Session organized at the 125th Anniversary IUFRO Congress in 2017: Maria Nijnik, Laura Secco, David Miller, Mariana Melnykovich (eds.) 2019. *Social innovation to increase the well-being of forest-dependent communities and promote sustainability in remote rural areas*; Special Issue of *Forest Policy and Economics*. May 2019.

<https://www.sciencedirect.com/journal/forest-policy-and-economics/special-issue/10H9J184QXV>

### Achieving Sustainable Management of Boreal and Temperate Forests

<https://shop.bdspublishing.com/store/bds/search/workgroups/?pageSize=25>

This collection reviews current research on balancing commercial use with the range of ecosystem services delivered by boreal and temperate forests. Edited by Dr. John Stanturf, Estonian University of Life Sciences, Estonia, former Senior Scientist at the Center for Forest Disturbance Science at the US Forest Service, and Coordinator of IUFRO [Research Group 1.06.00 - Restoration of degraded sites](#).

### The Greening of Saint Lucia: Economic Development and Environmental Change in the Eastern Caribbean

By Bradley B. Walters, Mount Allison University, The University of the West Indies Press, 2019

"The Greening of Saint Lucia" is based on the results of a long-term, field-based research project that began in 2006. It entails the application of a novel research methodology for doing human-environment research (ACE: abductive causal eventism) that the author co-developed with a colleague from Rutgers University. UWI Press website: <https://www.uwipress.com/9789766407056/the-greening-of-saint-lucia/>

### A Planetary Health Perspective on Agroforestry in Sub-Saharan Africa

This study analyzes the pathways through which tree-based farm and landscape change affects food and nutrition security, the spread of infectious disease, the prevalence of non-communicable diseases, and human migration in Sub-Saharan Africa.

Read the article by Rosenstock TS, Dawson IK, Aynekulu E, Chomba S, Degrande A, Fornace K, Jamnadass R, Kimaro A, Kindt R, Lamanna C, Malesu M, Mausch K, McMullin S, Murage P, Namoi N, Njenga M, Nyoka I, Paez Valencia AM, Sola P, Shepherd K, Steward P. 2019.

*A planetary health perspective on agroforestry in Sub-Saharan Africa. One Earth* <https://doi.org/10.1016/j.oneear.2019.10.017>

### Submit Articles for Special Issue on "Management of Family Forests"!

Here is a great opportunity to offer scientific articles for this special issue of the journal "Forests" on research related to family forests. The deadline for manuscript submissions is 30 June 2020.

The special issue editors are Emily Huff (ehuff(at)msu.edu) and Mikko Kurttila (mikko.kurttila(at)luke.fi). If you have further questions, do not hesitate to contact them.

Find out more at: [https://www.mdpi.com/journal/forests/special\\_issues/Family\\_Forests](https://www.mdpi.com/journal/forests/special_issues/Family_Forests)

## Submit Articles for Special Issue "Forest Operations in Environmentally Sensitive Areas"!

Editors Raffaele Cavalli (raffaele.cavalli(at)unipd.it) and Dalia Abbas (daliaabbas(at)yahoo.com)

[https://www.mdpi.com/journal/forests/special\\_issues/Operations\\_Sensitive](https://www.mdpi.com/journal/forests/special_issues/Operations_Sensitive). Deadline: 31 January 2020

## TerrHum - an iOS App for Forest Humus Forms Classification

The app is built on the indications about humus diagnostic horizons, humus forms and humus systems reported and illustrated in 8 articles published in an *Applied Soil Ecology Special Issue* entitled Humusica: <https://www.sciencedirect.com/journal/applied-soil-ecology/vol/122/part/P1> Also visit: IUFRO WP "Humus and soil biodiversity"

## What California Stands To Learn From Indigenous Fire Management Practices

<https://www.forbes.com/sites/priyashukla/2019/10/28/what-california-stands-to-learn-from-indigenous-fire-management-practices/#778c96245869>

This article by Priya Shukla recognizes the California indigenous people, several tribes, and the importance of their wildland fire work.

## Forests, Mining and Indigenous Peoples in India

Kabza, a documentary by Purabi Bose, Deputy Coordinator of [IUFRO RG 6.08.00 – Gender and forestry](#) and keynote speaker at the 25th IUFRO World Congress, depicts how forest land diversion for mining has impacted indigenous tribes. Read a newspaper review by the journalist Suryasarathi Bhattacharya of FIRSTPOST: <https://www.firstpost.com/living/kabza-purabi-bose-documentary-depicts-how-forest-land-diversion-for-mining-has-impacted-indigenous-tribes-7555721.html>

## Positions

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

### Assistant Professor of Forest Resource Economics

Department of Forestry at Michigan State University, East Lansing, USA. Review of applications begins on 15 January 2020.

Details: <https://careers.msu.edu/en-us/job/502870/assistant-professortenure-system>

### Assistant or Associate Professor of Remote Sensing and Geospatial Analysis.

School of Forest Resources and Environmental Science, Michigan Technological University, Houghton, Michigan, USA. Review of applications begins 16 Dec 2019. Details: <http://www.jobs.mtu.edu/postings/8679>

### Senior Lecturer / Lecturer in Dpt. of Forest and Wood Science.

Department of Forest and Wood Science, Faculty of AgriSciences, Stellenbosch University, South Africa  
Apply by 17 December 2019; <https://www.iufro.org/fileadmin/material/discover/nb-stellenbosch-senior-lecturer-forest-and-wood-138303-AW03.pdf>

### Senior Lecturer in Forest Policy

Faculty of Forest Sciences, Southern Swedish Forest Research Centre, Alnarp, Sweden. Apply by 27 December 2019. <https://www.slu.se/en/about-slu/jobs-vacancies/?rmpage=job&rmjob=2855&rmlang=UK>

### Scientist, Forest Entomology

Research Group *Swiss Forest Protection*, Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Birmensdorf, Switzerland. Closing date: open until filled  
<https://www.iufro.org/fileadmin/material/discover/nb-wsl-entomologist-Advert-Nov2019.pdf>

## IUFRO Meetings

Search our online calendar for a full list of meetings:

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

Find non-IUFRO meetings on the IUFRO Noticeboard:

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

Also search for forest-related events in GFIS at:

<https://www.gfis.net>

9-13 Mar 2020

### International IUFRO Symposium on Pine Wilt Disease

Orléans, France

IUFRO [7.02.10](#)

Contact: Christelle Robinet, christelle.robinet(at)inra.fr

<https://symposium.inra.fr/pwd2020/>

25-27 May 2020

### Forests in Women's Hands

Traunkirchen, Austria

IUFRO Task Force [Gender Equality in Forestry](#)

Contact: Barbara Oellerer, barbara.oellerer(at)bfw.gv.at

Janice Burns, burns(at)iufro.org. Registration opens on 12 Dec:

<https://www.forstfrauen.at/en/conference-2020>

13-19 Jun 2020

### 5th Int'l Conference on Soil, Bio- and Eco-Engineering

Zollikofen, Switzerland

IUFRO [8.03.00](#), [8.03.01](#)

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

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

17-19 Jun 2020

### Managing for Resilient Forests in Variable Future Climate

Stellenbosch, South Africa

IUFRO [1.02.01](#), [1.09.00](#), [5.01.04](#)

Contact: Deon Malherbe, gfmalherbe(at)sun.ac.za

<https://conferences.sun.ac.za/index.php/forests/1>

22-24 Jun 2020

### IUFRO Small-Scale Forestry Conference

Kilkenny, Ireland

IUFRO [3.08.00](#)

Contact: Christoph Hartebrodt,

Christoph.Hartebrodt(at)forst.bwl.de; <https://iufrossf.ucd.ie/>

6-9 May 2020

### Forestry: Bridge to the Future

Sofia, Bulgaria

IUFRO [3.00.00](#), [9.04.04](#), [1.01.11](#), [1.03.01](#)

Contact: Marius Dimitrov, mariusdimitrov(at)ltu.bg

Yaoqi Zhang, zhangy3(at)auburn.edu

<https://conf2020.forestry-ideas.info>

14-18 Sep 2020

### ForestSAT2020 - Last Call for Forests!

Krakow, Poland

IUFRO [4.02.05](#)

Contact: Piotr Wężyk, p.wezyk(at)ur.krakow.pl, forestsat2020(at)gmail.com; <http://forestsat2020.forestsat.com/>

14-17 Sep 2020

### Second International AFORPOLIS Conference

Accra, Ghana

IUFRO [9.05.09](#)

Contact: Symphorien Ongolo, contact(at)aforpolis.org

<https://aforpolis.org/international-aforpolis-conference-2020/>

6-9 Oct 2020

### Socio-economic and socio-ecological value added of non-wood forest products, forestry and the timber processing industry, Bolzano, Italy

IUFRO [4.05.00](#), [4.05.04](#)

Contact: Christian Hoffmann, Christian.Hoffmann(at)eurac.edu

<https://www.iufro.org/science/divisions/division-4/40000/40500/activities/>