

Interconnecting Forests, Science and People 125th Anniversary Congress 2017



MAIN PROGRAM

Freiburg 18 – 22 September 2017





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WELCOME MESSAGES



Michael Wingfield

Dear friends and colleagues

It gives me great pleasure to welcome you to IUFRO's 125th Anniversary Congress in the beautiful city of Freiburg. In attending this meeting, you are participating in one of the largest gatherings of the forest science and associated community to be held in recent years. But you also join us in celebrating a major milestone in the history of forest research: the 125 year-long contribution that IUFRO has made to promoting international cooperation in research embracing the full range of topics related to forests and trees.

As you may know, IUFRO was established on 17 August 1892 in the small town of Eberswalde near Berlin, Germany, by only three organizations that became the founding members: the Association of German Forest Experiment Stations and the experiment stations of Austria and Switzerland. From that time onwards, IUFRO has grown to become a worldwide organization and now represents more than 15,000 forest scientists in over 600 Member Organizations and in 126 different countries.

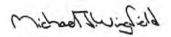
IUFRO originally emerged from the recognition that research was important to the future of forests and people. This remains as true today as it was 125 years ago! We live in a complex and

rapidly changing world; one where natural resources including forests are under severe pressure. This has impacts on virtually every element of our lives; the security of water resources, the air we breathe, food security, and general human well-being. It is my sincere hope that by marking the 125th aniversary of IUFRO, we will all be inspired to take steps towards more closely interconnecting forests, science and people. This will allow us to jointly pursue our ultimate goal to find pathways towards more sustainable global development. The future of our forests will depend deeply on research to provide solutions to the many challenges that face them. IUFRO will surely play an increasingly important role in achieving this objective.

Together with our local hosts and regional partners, we have anticipated our 125 Anniversary Congress for a long time. It provides a unique opportunity to gain new knowledge from outstanding research. Importantly, it also offers a platform to engage not only with many of the world's leading forest scientists and research managers but also with global leaders in industry, government and civil society.

Arranging a Congress of this magnitude requires a huge effort on the part of many people. I take this opportunity to thank the NFZ. forestnet as our local hosts, the members of the Congress Organizing Committee, the Congress Scientific Committee, the IUFRO Headquarters team in Vienna and the many other people that have worked tirelessly to prepare a globally relevant, scientifically challenging and socially enjoyable event for us.

It is a particular privilege for me to serve IUFRO as its President during our 125th Anniversary year. Thank you for attending this meeting and for sharing your knowledge and experience. In doing so, you are contributing to the future, not only of IUFRO but to the long term well-being of humankind. I wish you a week full of inspiring scientific presentations, important stakeholder discussions, amazing anniversary celebrations, and wonderful networking opportunities!



Michael J. Wingfield
Ph.D., D.Sc. h.c (UBC, NCSU), FRSSA, ASSAF
President: International Union of Forestry Research Organisations
(IUFRO)
Mondi Professor of Forest Pathology
Director: FABI, the Tree Protection Co-operative Programme (RSA)

& DST/NRF Centre of Excellence in Tree Health Biotechnology



Christian Schmidt

Dear Reader

I extend my sincere congratulations on the 125th anniversary of the International Union of Forestry Research Organizations (IUFRO). IUFRO has long been established as the international organization that advances scientific investigation into current forestry issues and encourages discussion on these issues at the global level. On behalf of the host country, I am delighted to welcome you to the Anniversary Congress in Freiburg. You could not have chosen a better location.

Germany is a land of forests. Forests play a key role in German literature, art, architecture and other arts. The term "sustainability" was first coined 300 years ago in German forest management. Forests have also always been a subject of scientific interest in research. The city of Freiburg boasts the Albert Ludwig University and the renowned Forest Experimental and Research Institute (FVA), making it one of the main centres of German forestry research. Surrounded by the scenery of the Black Forest, the setting for many German tales and legends, the Anniversary Congress in Freiburg will doubtless be an unforgettable experience for all delegates.

But there is another reason why Freiburg is such an outstanding congress location: its close proximity to many European partner countries. I am therefore delighted that this IUFRO Congress also underlines the long-standing and excellent cooperation in international forestry research. Research partners from Switzerland, Austria and the French region of Lorraine, along with other parts of Germany such as Bavaria, have worked together with the Forest Experimental and Research Institute in Freiburg to organise this important event and the many excursions and activities taking place before the congress.

In Germany, we live and work with forests. Our forests are consequently recreational areas and place of economic activity as well as natural habitats. Our forest policy picks up on the multi-functional nature of our forests and the different goals that are pursued, analyses potential conflicts of interests and supports the development of possible solutions. In light of this, the research community is an extremely important partner for our forest policy. My ministry therefore supports forest-related research projects at both domestic and European level, as there is a great need for research in many areas, given the multitude of pressing global and local concerns relating to forests. The IUFRO congress will unquestionably play a role in finding answers to these urgent questions, from adapting forests to climate change and identifying the interrelations and effects of sustainable forest management and nature conservation to promoting the efficient use of resources. I look forward to the results of the Anniversary Congress!

Best wishes.

Christian Schmidt Member of the German Bundestag Federal Minister of Food and Agriculture

WELCOME MESSAGES



Peter Hauk

Dear Guests,

I am pleased that you will come from all over the world to attend the congress celebrating the 125th Anniversary of the International Union of Forest Research Organizations (IUFRO) in Freiburg — at the foot of the Black Forest.

The Black Forest is better known than any other forest in Germany. Regional products like the Black Forest cake, Black Forest Kirschwasser and cuckoo clocks are famous and popular around the world. The Black Forest offers myths and modernity, nature and culture, and recreation and enjoyment alike. The people who live here have formed the Black Forest and, in turn, the Black Forest with its many isolated valleys has formed the people. Even today the Black Forest provides many jobs in forestry and tourism. Simultaneously, the Black Forest affords an important natural habitat for rare plant and animal species through two large conservation areas; the Black Forest National Park and the Black Forest Biosphere Reserve.

With the Faculty of Environment and Natural Resources at the University of Freiburg and the Forest Research Institute Baden-Württemberg — a founding member of IUFRO — the region represents an important center of forest research with an influence extending well beyond the Black Forest. The uniqueness of the center lies in the close link between scientific research and the practical application of the results. Current research focuses on climate change, sustainability and species protection as well as the interconnection between forestry, tourism and society. In the Tri-Nation Region of Germany, France and Switzerland, the forest research institutes in Freiburg, Nancy and Zurich form a Central European network of forest research — these proven partners are also organizing the IUFRO Congress in close cooperation.

I wish you a successful scientific congress in Freiburg and memorable discoveries the Black Forest.

Peter Hauk

Minister for Rural Affairs and Consumer Protection Baden-Württemberg, Stuttgart (Germany)

mus faith



Max Reger

Dear Reader,

As head of the public forestry administration of Baden-Württemberg ForstBW, I am very happy to welcome you in Freiburg for the IUFRO 125th Anniversary Congress 2017!

Forests and forestry are of major importance for Baden-Württemberg in economic, social and ecological dimensions. Almost 40 percent of this federal state is covered by forests, with the Black Forest being one of the world-wide best known landmarks of Germany.

ForstBW is committed to a multifunctional and sustainable management of the public forests. The demands of the society are the keystone of our work: public forests provide timber, serve as habitat for game as well as rare animal and plant species, invite for human recreation and are necessary for clean air, a well-balanced climate and fresh water. In order to treat all forest functions coequal, we are obliged to connect between forest owners, society and politics and develop appropriate solutions. Our guiding principle is to preserve the forest functions for current and future generations.

To sustain these core competences, ForstBW relies on continuous professional development and substantiated scientific insights and feedback.

The Forest Research Institute of Baden-Württemberg (FVA) is a fundamental consultant for us as well as for many private forest owners in Baden-Württemberg and far beyond. The original forest research institutes of Baden and Württemberg were founded during the 1870's and thus we can draw back on the knowledge of many generations of forest scientists. Through this mixture of long-term knowledge and the ongoing dedicated work of its researchers today the FVA is one essential pillar of our decision making.

However, in our highly globalized world, local and global actions and conditions are mired more closely than ever before. The uncertainties arising from global change pose new challenges to a sustainable forest management on the spot. Thus, we also highly value the productive national and international cooperation with other research organizations in Germany, the NFZ partners in the tri-nation region and of course the IUFRO network.

During this 125th Anniversary Congress many pressing topics for forests and forest management will be addressed. We are looking forward to gain new insights from an international perspective and take these impulses as a basis for our local actions. Therefore, ForstBW is proud to be a key partner for the organization of this congress!

I wish you all a pleasant and inspiring time during the congress and warmly invite you to enjoy Freiburg and the Black Forest!

Mus Reger

Max Reger
State Forest President and
Managing Director of ForstBW

WELCOME MESSAGES



Left to right: Konstantin von Teuffel, Andreas Rigling, Erwin Dreyer

Welcome to the IUFRO 125th Anniversary Congress 2017 in Freiburg, Germany Interconnecting Forests, Science and People!

The resonance within the scientific community has been overwhelming. We are delighted to welcome about 2.100 participants from all over the world here in Freiburg. Your presence and your contributions will make this event an excellent platform to establish and strengthen international ties, to exchange the latest insights and achievements in forest science, as well as to communicate the relevance and timeliness of our joint research out to politics, stakeholders and the public.

As representatives of the NFZ.forestnet, the local host consortium of the congress, we proudly introduce our tri-national forest science network. It comprises seven forest related research institutions in Nancy/France (INRA, AgroParistech, Univ. Lorraine), Freiburg/Germany (FVA, Univ. of Freiburg) and Zurich/Switzerland (WSL, ETH). You are invited to read more about the network and its members on the following pages.

The challenges to organize such an international event are manifold but also inspiring and a valuable investment. We are grateful to our Key Partners for their financial and organizational support. We would like to thank all our Sponsors and Donors and every individual involved in the organization for their indispensable, much appreciated contributions and for your individual commitment to make this congress happen.

Nowadays, providing and conveying scientific evidence is more important than ever to responsibly shape our forests and our future. Exactly on this behalf, the international and vibrant network of the International Union of Forest Research Organizations can unfold and display its strength — and truly be the means for Interconnecting Forests, Science and People.

In the upcoming five days, you are part of a diverse scientific program with a broad range of research fields. Please enjoy the varied choice of seminars, an artful forest history exhibition, scientific and cultural excursions near and around Freiburg, as well as back to back workshops and summer schools offered by our institutional partners in Germany, France, and Switzerland.

Last not least you are happily invited to celebrate 125th Anniversary of scientific networking in the IUFRO with us in various festive moments and during our special Anniversary Gala Evening!

In the name of the NFZ.forestnet, sincerely yours

Prof. Konstantin von Teuffel Director of FVA Freiburg, Germany

Prof. Dr. Andreas Rigling Board of Directors of WSL Birmensdorf, Switzerland

Dr. Erwin Dreyer President of INRA GrandEst-Nancy Centre Nancy, France



Dieter Salomon

Welcome from the Lord Mayor of Freiburg

to the Anniversary Congress of the International Union of Forest Research Organizations with the motto Interconnecting Forests, Science and People.

On behalf of the City of Freiburg and its citizens, I extend a very warm welcome to all visiting Freiburg to attend this International Union of Forest Research Organizations (IUFRO) Anniversary Congress at which the most important forest research network in the world celebrates 125 years since its foundation. On this special occasion we, in Freiburg, are delighted to host this prestigious meeting of more than 2 000 scientists from around the world.

You are visiting a city which is strongly characterized by the forests surrounding it. With its forested foothills, the Black Forest reaches virtually into the center of the city. Consequently, it influences the outlook on life of people living in Freiburg: indeed, one cannot imagine life in the city without the forests.

Today, the City of Freiburg owns more than 5000 ha of forest, making it one of the largest forest owners in Germany. A large proportion of these forests has been under its ownership since the foundation of Freiburg in the high middle ages.

This year, the city's Forest Department will turn 180 years old. For the municipality, the income from the forest has not been the focus of forest management. Rather management in keeping with the natural forest environment predominates, in which the economic, social and ecological factors are taken into account. This is because the forests, with their near-natural ecosystems and their importance in the face of climate change, play a major role in the sustainable city development we strive for.

The Congress is sure to address exactly the critical questions of our time, which we associate with the concept of sustainability — a concept originating from the forest sciences. In this respect, responsible policies on environment and climate change are simultaneously policies based on the principles of sustainability, whether they apply to the treatment of natural resources, the use of regenerative, and hence sustainable energy sources, or to social welfare policies.

In this respect, Freiburg offers much innovation. Here, the Faculty of Environment and Natural Resources at the University and the Forest Research Institute Baden-Württemberg (FVA) provide important impulses. They have also contributed much to Freiburg's profile as a sustainable city. I thank them together with the Nancy-Freiburg-Zurich Forest Research Network, NFZ.forestnet, for organizing this IUFRO 125th Anniversary Congress. I wish all participants a rewarding congress with inspiring discussions and constructive outcomes, and, finally, an enjoyable stay in the city and the surrounding forests.

Dr. Dieter Salomon Lord Mayor

Dr. Dieter Salomon Lord Mayor Freiburg im Breisgau



International Union of Forest Research Organizations www.iufro.org

VISION

The leading global network for forest-related research that serves the needs of all forest scientists, research organizations and decision makers.

MISSION

IUFRO advances research excellence and knowledge sharing, and fosters development of science-based solutions to forest-related challenges for the benefit of forests and people worldwide.

CORE VALUES

The following core values and associated behaviors will guide the work of IUFRO's Officeholders:
Service — Independence — Integrity — Networking — Excellence

Forests and trees play a vital role in sustaining life on earth.

Their conservation and sustainable management are closely linked with global challenges such as climate change, food security and environmental protection. Quality research on forests and forest products delivers the scientific knowledge that is needed to address these and other challenges and provide a sound basis for political decisions that concern forests and trees.

IUFRO is the world's network of forest science.

Since its establishment in 1892, IUFRO has been committed to ensuring quality research through global cooperation and to disseminating scientific knowledge to stakeholders and decision makers. Currently, IUFRO unites over 15,000 scientists in more than 120 countries who are working together assiduously towards solving forest-related problems at all levels from local to global. Research centers, universities, NGOs, and decision making authorities are counted among IUFRO's roughly 650 member organizations.

The IUFRO network offers many entry points.

As a scientist, you can join any of the 9 scientific Divisions, over 50 Research Groups, more than 180 Working Parties, and 10 interdisciplinary Task Forces. Around 700 voluntary officeholders currently coordinate these units. Furthermore, IUFRO offers Special Programmes, Projects and IUFRO-led Initiatives to support more informed decision-making and foster research capacity. 70 meetings are held on average every year and IUFRO World Congresses take place every 5 years.

Interconnecting Forests, Science and People

With the Strategy 2015-2019, IUFRO addresses five research themes that aim to guide the science collaboration within IUFRO's global network. These themes are:

- Forests for People
- Forests and Climate Change
- Forests and Forest-based Products for a Greener Future
- Biodiversity, Ecosystem Services and Biological Invasions
- Forest, Soil and Water Interactions

In addition, IUFRO's institutional goals reflect the organization's commitment to research excellence and interdisciplinary cooperation, to better visibility of IUFRO's knowledge products and network cooperation, and to science-based solutions and options for impact on policy processes.



CONGRESS AIM



IUFRO 125th Anniversary Congress – Interconnecting Forests, Science and People

Forests and trees play a vital role in sustaining life on earth. For 125 years the International Union of Forest Research Organizations (IUFRO) has been committed to promoting international cooperation in research embracing the full range of topics related to forests and trees

In this remarkable time span, IUFRO has grown into a network with much potential to make a significant contribution towards attaining the social, economic and environmental goals outlined in the 2030 United Nations Agenda for Sustainable Development as well as other international agreements. The current IUFRO Strategy addresses issues such as food, drinking water, affordable energy, but also incomes and jobs, and provides pathways towards achieving sustainable growth and greater resilience to climate change and natural hazards.

This essential capacity makes IUFRO member institutions and individual researchers proud to be part of an organisation which develops and shares the knowledge needed to provide science-based solutions to current and future global challenges for the benefit of forests and people.

Consequently, the 125th Anniversary Congress is a unique opportunity to **CELEBRATE** past achievements, **HIGHLIGHT** IUFRO's vital role in providing a sound basis for political decisions at all levels, **STRENGTHEN** collaboration with our stakeholders. and **BUILD BRIDGE**S to other sectors such as water, agriculture and energy.

This Congress aims to provide a platform for the exchange of scientific knowledge across the full range of forest and forest-related topics and scientific disciplines. A wide selection of scientific **sessions** will highlight innovative research and interdisciplinary research approaches of relevance to forests, and focus on the transfer of scientific knowledge on critical global forest-related challenges to national and international political agendas.

In addition, a series of **Science in Dialogue sessions** is planned for this Congress with the aim of bringing scientists from forest-related and other relevant disciplines from all parts of the world together with national and international policy and decision makers and important stakeholders.

International Union of Forest Research Organizations XXV WORLD | SEP 29 - OCT 5 CONGRESS | 2019 Curitiba, PR



Plan ahead 29 September to 5 October 2019

We look forward to welcoming you in Curitiba

iufro2019 Curitiba · Brazil

Contact: info@iufro2019.com www.iufro2019.com

International Host:

















Brazillian Hosts:













NFZ.forestnet welcomes you at the IUFRO 125th Anniversary Congress

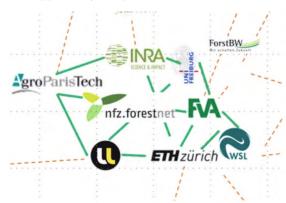


We, the local hosts of the congress, welcome you to the Tri-Nation Region - a hot spot for forest science and research in Europe and the World. We hope to enchant you with our regional high diversity of forest types and forest stands - from flood plains to mountains and Mediterranean to Scandinavian climate zones - as well as with the cultural diversity of three Nations right in the heart of Europe. The high density of forest scientists and academic practitioners in the region provides a broad spectrum of expertise and hopefully inspires new forms of co-operation.

Our forest science network was founded in the Tri-Nation Region in 2006. It comprises seven forest related research institutions in Nancy (France), Freiburg (Germany) and Zurich (Switzerland). Since then, more than 700 scientists have been collaborating within and beyond NFZ.forestnet in international forest, forest ecosystem and forest-related products research projects as well as various summer schools and educational exchanges.

The main aim of the NFZ.forestnet is to strengthen and broaden on-going cooperation and intercultural exchanges of IUFRO Members – especially but not only in the Tri-Nation Region - for mutual benefit. We strive to actively spark and enhance multi- and interdisciplinary research within forestry research and with neighboring disciplines and sectors. Hosting the IUFRO 125 Anniversary Congress in 2017 is the ultimate challenge as much as pleasure to this ambition.

We are looking forward to hosting you in Freiburg and the Tri-nation region. We hope you will enjoy the charming lifestyle and hospitality of our host city Freiburg, the capital of the world famous Black Forest as well as experience the regional diversity through our colorful array of excursions. Let's use this opportunity to expand our network!



Forest Research Institute Baden-Württemberg (FVA), Freiburg, Germany

Faculty of Environment and Natural Resources, University of Freiburg, Freiburg, Germany

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际 Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Zurich, Switzerland

 $\begin{tabular}{ll} \textbf{ETH} & \textbf{Swiss Federal Institute of Technology (ETH), Zurich, Switzerland} \\ \end{tabular}$

Institut national de la recherche agronomique (Inra), France

Paris Institute of Technology for Life, Food and Environmental Sciences

Université de Lorraine, France



Your local host at the congress is the NFZ.forestnet, a forest science network founded in this region — the Tri-Nation Region — in 2006. Seven research institutions below in Nancy (France), Freiburg (Germany) and Zurich (Switzerland). Since then about 700 scientists have been collaborating in NFZ.forestnet in forest, forest ecosystem, and forest-related products research, and in education projects.



Forest Research Institute Baden-Württemberg (FVA), Freiburg, Germany



Faculty of Environment and Natural Resources, University of Freiburg, Freiburg, Germany



Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Zurich, Switzerland



Eidgenössische Technische Hochschule Zürich Swiss Federal Institute of Technology Zurich Swiss Federal Institute of Technology (ETH), Zurich, Switzerland



Institut national de la recherche agronomique (Inra), France



Paris Institute of Technology for Life, Food and Environmental Sciences (AgroParisTech), France



Université de Lorraine, France





As an institution for applied forest research, the Forest Research Institute of the German State of Baden-Württemberg (FVA) has the goal to investigate the relationships between the forest and the environment in order to develop efficient and rational ways for the forestry and timber industry to protect the commercial as well as the ecological and recreational functions of the forest. In addition to their main work on research projects and environmental monitoring, FVA employees are actively involved in political consulting, policy advising, and transferring knowledge. Moreover, the FVA continuously adds new research topics to its research program.

The FVA comprises eight departments, namely: Forest Growth, Forest Nature Conservation, Soil and Environment, Forest Health, Forest and Society, Forest Utilisation, Forest Economics, and Biometry and Computer Science. In addition, an Advisory Board guides the FVA regarding substantive and strategic issues. Actual research priorities of the Forest Research Institute are the climate change research, the forest nature conservation and the measurement and evaluation of sustainability.



Forest Research Insitute Baden-Württemberg

FVA is one of the founding members of IUFRO in 1892 and partner within the NFZ.forestnet. It is engaged in international research projects as well as educational programs and strives to extend its international partnerships.

Currently around 270 persons are employed by the FVA. Furthermore, the FVA is a family–friendly institution with its own childcare centre, and a member of the national network "Erfolgsfaktor Familie" ("Success factor family").





Albert-Ludwigs-Universität Freiburg (ALU)

With more than 25,000 students matriculated in 196 study programs at 11 faculties, the Albert-Ludwigs-University of Freiburg (ALU) is a full University that covers the whole range of scientific fields from the humanities, natural and engineering to social sciences.



The University of Freiburg possesses a comprehensive network of partnerships at the local, regional, and international level. Within the context of three international networks, the university and its faculties maintain partnerships with universities in over 30 countries — from Trinidad and Tobago to the USA. Thanks to the European Union's Erasmus Programme, the University of Freiburg also enjoys close relations with all European countries. Almost twenty percent of the students in Freiburg hail from abroad.

The Faculty of Environment and Natural Resources includes more than 30 chairs reaching from forestry over hydrology, geography and geology to meteorology. It is engaged in teaching and research in both, natural and social sciences.

The Faculty focuses on the interactions between environment and society, in particular under the aspect of Global Change. Interdisciplinary approaches including natural, social and technical sciences are employed to research and teach the sustainable use and conservation of natural resources. Particular emphasis is placed on the transfer of research results into the different areas of society.

Central research fields covered by the Faculty are sustainable use of natural resources, protection of livelihoods (water, soil, air, biodiversity), adaptation to Global Change and natural hazards and risks.













WSL: Research for People and the **Environment**

The Swiss Federal Institute for Forest, Snow and Landscape Research WSL is concerned with the use, development and protection of natural and urban spaces.

Our research focuses on solving problems to do with the responsible use of landscapes and forests and a prudent approach to natural hazards. WSL is an active player in these areas, with a strong research-extension interface and the aim to provide groundwork for sustainable environmental policies in Switzerland.

WSL maintains more than 6000 experimental and research plots, including large experimental platforms and monitoring networks for studying the impact of environmental changes on forests, landscape, biodiversity, natural hazards, snow and ice.

Altogether 700 staff members and supervised students work at WSL headquarters in Birmensdorf, near Zurich, as well as in Davos, Cadenazzo, Lausanne and Sion.

www.wsl.ch







TH zürich

ETH Zurich was founded in 1855 to generate the knowledge needed to develop the national technical infrastructure in the era of industrialization. The four founding departments were architecture, civil engineering, mechanical engineering, and forest engineering.

To this day, ETH is the only federally operated university in Switzerland besides its sister Ecole Polytechnique Fédérale in Lausanne, and the only university in the country that offers a university-level degree in Forest and Landscape Science.

With the implementation of the BSc/MSc system in 2005, the curriculum in Forest Engineering was merged with the curriculum in Environmental Sciences. Since then, students can choose a specialization on "Forests and Landscapes" in the BSc, and a Major "Forest and Landscape Management" in the MSc program. Both programs deal with processes from the cell to the landscape, convey a profound scientific basis and the skills that are required for both a scientific and a practical career.

Forest-related professorships and research groups at ETH



www.ecology.ethz.ch



Forest Engineering

ww.lue.ethz.ch



Sylviculture and Forest Management

www.wm.ethz.ch



Forest Management and Development



Landscape Ecology

Forest Ecosystems

Forest Ecology

www.fe.ethz.ch

Ecology and Evolution in

www.forestpathology.ethz.ch



www.narp.ethz.ch



Wood Material Science

www.ifb.ethz.ch



L'Institut National de la RECHERCHE AGRONOMIQUE

INRA is one of the largest agricultural research organisations in the world. It is active in a wide variety of fields to address issues related to nutrition, agriculture and the environment, which are now framed in the wider context of the bioeconomy and food systems.

INRA GRAND EST - NANCY

brings together excellence-driven teams focused on forest and woods sciences and on agricultural issues. Our mains topics in forest and wood sciences include the dynamics of forest management, the assessment of available resources and services provided by forest ecosystems and the valorisation of wood as a biological material of prime importance. Inra cooperate stightly with Université de Lorraine and AgroParisTech.

Icos-RI

Focus —

ANAEE ARBRE

tem in the context of AnaEE-S). global change.

is a laboratory of excel- is an Environmental is a pan-European nisms behind the evo- ted ensemble of expe- get and perturbations. lution of forest ecosys- rimental fora (ExpeER,

lence awarded support research infrastructure research infrastructure (2012-2019) French that aims to overcome which provides harinitiative « invest- the current fragmen- monized and high prements for the future ». tation of ecosystem cision scientific data It aims to explore and research in Europe by on carbon cycle and analyse the mecha- setting up a coordina- greenhouse gas bud-



https://www.facebook.com/Inra.Nancy/

https://twitter.com/inra nancv

http://mycor.nancy.inra.fr/ARBRE/





Paris Institute of technology for life, food and environmental sciences

AgroParisTech is the European Technology University which trains engineers and managers in the field of life, food and environmental sciences

AgroParisTech is present on 8 campuses in France and has:

- 5 research and teaching departments,
- 24 mixed research units.
- 1 experimental farm,
- 2000 students, including 200 PhDss.
- 230 professors-researchers, 450 affiliated researchers,

AgroParisTech is a founding members of the Université Paris-Saclay and member of Agreenium.

AgroParisTech campus at Nancy: Degrees:

Being the heir of «Ecole Forestière» (1825) and «Diplôme d'ingénieur» AgroParisTech : 2 years ter and PhD levels in forest management, forest for exchange of students. ecology, economics and global adaptation, Master FAGE (Forest Agronomy and Ecosystem Some degrees are co- awarded with Université and their Environment» de Lorraine.

ENGREF, AgroParisTech in its Nancy downtown training in forestry, national highly selective campus develops forest research activities with recruitment, apprenticeship training is possible, Inra, and offers comprehensive training at Mas-several Erasmus and international agreements

forest resources and forest-wood chain, nature Management, together with Université de Lormanagement, urban forestry, tree biology. raine) with one major taught in English «Forests

> Doctorate AgroParisTech in LABEX ARBRE labs Mastère spécialisé ® Forêt Nature Société (dual skills in forest and environmental policies and economics).

The livinglab «Forêt campus» bases on the wide network of our Alumni and our student taskforce. It aims at developing innovation processes from research co-created with end users (forest managers, local community projects, consultancy firms). «Forêt campus» organizes project teams of teachers, researchers, professionnals, stake holders, and students and support learning by doing and initiative of students

SILVAE is a web portal which gives access to French geographic data about forest vegetation and trees, and environmental factors that explain their ecology.

http://silvae.agroparistech.fr/home/

http://www.agroparistech.fr/Presentation-of-AgroParisTech.html



FOREST AND WOOD SCIENCES AT UNIVERSITÉ DE LORRAINE

Université de Lorraine (Nancy, Metz, and different cities in Lorraine), a large University devoted to global engineering:

- 60 000 students
- 43 training and learning components in 11 cities of Lorraine.
- 1 790 PhD students
- 8 doctoral schools

Université de Lorraine provides training in Wood Science and Technology (ENSTIB, Epinal), in Agronomy and Food Sciences (ENSAIA, Nancy), in Forest and Ecosystem Sciences (Master FAGE) and in Forest and Wood Sciences at the Doctoral Schools (SIReNa, SJPEG).

Université de Lorraine develops strong research groups in Forest and Wood Sciences, mainly on cooperation with Inra, in its Department for Agronomy, Agrofood and Forests like the mixed research groups DynAMIC, EEF, IAM, LERMaB... devoted to Biology, Ecology and Material sciences for forest ecosystems and wood material.

Université de Lorraine is an important player in the field of forest and wood sciences in France.

Université de Lorraine, Inra, AgroParisTech and other partners were awarded the I-SITE "Lorraine Université d'Excellence" during 2016. LUE is among others devoted to contribute to the sustainable management of natural resources including forests and agricultural systems. They run together the Laboratoire d'Excellence "ARBRE" (Advanced Research in Tree Biology and Forest Ecosystems) since 2012.



ARBRE: mycor.nancy.inra.fr/ARBRE/

LUE: lue.univ-lorraine.fr

ENSTIB: www.enstib.univ-lorraine.fr

WWW.UNIV-LORRAINE.FR

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University Malaysia Sarawak, Malaysia

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University of Ljubljana, Slovenia

WELCOME MESSAGE



Andrew Liebhold

Dear Participants,

As Chair of the Congress Scientific Committee, I would like to express my gratitude for your participation in this 125th Anniversary Congress. This will be a unique event and I am excited and honored to be part of it. How fitting to mark this historical anniversary by bringing together a scientific program that focuses on an array of fascinating scientific problems facing forest researchers around the world.

I am particularly grateful for the organizers of the scientific sessions. These volunteers did excellent work in focusing the subject matter of the Congress and this resulted in over 95% of presentations being part of 160 organized scientific sessions that address a wide variety of topics, representing the far reaches of the IUFRO subject matter. These subjects include not only traditional topics related to classic forest research, but also cutting edge topics addressing the applications of new technologies, biodiversity management challenges, climate change mitigation, bioeconomy, invasive species and tropical ecology. The program is particularly rich in areas that focus on social aspects of forests, clearly reflecting the growing importance of humans in the consideration of forests and their management.

Finally, I would like to thank the members of the Congress Scientific Committee, my colleagues at the Forest Research Institute Baden-Württemberg (FVA) and the workers at Intercongress Freiburg for their exceptional work in pulling together what I think is an amazing Congress program.

Sincerely,

Dr. Andrew M. Liebhold
Chair, Congress Scientific Committee
US Forest Service Northern Research Station. USA

and W. lists

Categories and Topics

- Theme 1: Forests for People
- Theme 2: Forests and Climate Change
- Theme 3: Forests and Forest-Based Products for a Greener Future
- Theme 4: Biodiversity, Ecosystem Services and Biological Invasions
- Theme 5: Forests, Soil and Water Interactions
- Keynote Plenary Sessions
- Science in Dialogue Sessions
- Sub-plenary Sessions

LIVE STREAM (further information on page 268)

- All Division 3 (Forest Operations Engineering and Management)
- All Division 4 (Forest Assessment, Modelling and Management)
- All Division 6 (Social Aspects of Forests and Forestry)
- All Division 7 (Forest Health) Meeting
- All Division 9 (Forest Policy and Economics)
- Poster Exhibtion
- Side Events
- Special Sessions

Science in Dialogue Sessions

"Challenges of sustainable development: implications for forests and forest science"

Forests are critical for achieving the universal Sustainable Development Goals (SDGs) adopted by the United Nations (UN) in 2015. Efforts to attain the 17 SDGs can lead to synergies among the goals, but can also lead to trade-offs between them. By connecting thousands of scientists in 126 countries, IUFRO aims to provide the scientific basis required for effectively harnessing the potential of forests to contribute to the SDGs.

In a series of "Science in Dialogue" sessions, Congress participants will have the opportunity to discuss with leading representatives from all different groups of society the following quiding questions:

- What are the biggest concerns and most pressing challenges related to the SDGs and forests?
- Are there synergies and trade-offs in implementing the SDGs from a forestry perspective?
- What are the most important knowledge gaps and information requirements by policy makers, business and industry, and civil society groups?
- Is there a mismatch between the knowledge delivered by education and the expertise and skills needed?
- How can IUFRO support policy makers, business and industry, and civil society groups more effectively in addressing the forest-related SDGs? And which forms of collaborative action could be taken?

The Dialogue will consist of the following sessions:

Science Meets Policy, Tuesday, 19 September Science Meets Business, Tuesday, 19 September Science Meets Stakeholders, Tuesday, 19 September Science Meets Science, Wednesday, 20 September

Please find details in the daily highlight overview.

| | KONZERTHAUS | | | | | |
|-------|--|--|---|--|--|--|
| | Rolf Böhme Saal | К1 | K2-4 | K5-7 | | |
| 8:00 | OS D7 - Opening Session | 16a T4 – Joint management of | 61a D4 - Decision Support | 130 D4 - Contributions of Forest | | |
| 8:30 | | large herbivores and forests for resilient ecosystems | Approaches in Adaptive Forest Management | Mensuration and Modeling over 125 years | | |
| 9:00 | | | | | | |
| 9:30 | | | | | | |
| 10:00 | | Coffee Break (Konzert | haus & University KG I) | | | |
| 10:30 | 179 D9 - Forest policy and | 16b T4 - Joint management of | 61b D4 - Decision Support | 102 T1 – Bringing carbon to | | |
| 11:00 | governance: research at multiple scales | large herbivores and forests for resilient ecosystems | Approaches in Adaptive Forest Management | small-scale forest owners - role of buy-in mechanisms for | | |
| 11:30 | | | | bridging scales and facilitating access to carbon markets | | |
| 12:00 | Lun | ch break (Mensa) and visit of the Po | ster Exhibition (University, KG II, HS2 | 121) | | |
| 13:30 | 198 D7 - Forest biodiversity and | 119 D4 - Quantifying distur- | 56 D7 - Modern approaches | 79 D4 - Decision support | | |
| 14:00 | resistance to natural disturbances | bance effects and post-distur- bance dynamics with repeatedly | in evaluating ozone impacts on forests | models (DSM) for optimal forest management (FM) with | | |
| 14:30 | | measured plots | | a glance to the past and a view to the future | | |
| 15:00 | | | | | | |
| 15:30 | | | | | | |
| 16:00 | | Coffee Break (Konzert | haus & University KG I) | | | |
| 16:30 | 59 D7 - Responses to the | 67 D4 - Managerial Economics | 169 D3 - New comminution | 46 D4 – European Climate Smart | | |
| 17:00 | increasing threat of insect pests to sustainable plantation forestry | ry Been & Where We Can Go improve the quality | | Forestry | | |
| 17:30 | | | energy feedstock | | | |
| 18:00 | | | | | | |
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| 21:00 | | | | | | |
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| KONZE | RTHAUS | | NOVOTEL | |
|---|---|---|---|---------------|
| К8 | К9 | Room "Basel + Mühlhausen" | Room "Baden-Baden" | Room "Colmar" |
| 14 D4 – Strategies and challenges for risk resilient forest management | 112a D4 - Climate change adaptation in forest management: from applied science to implementation | 18a T5 – Forest floor matters – The pivotal role of a forest compartment in danger of extinction | 11a T4 - Progress in tropical forest management: Assuring sustainability, avoiding degradation and assisting restoration | |
| | Coffee | Break (Konzerthaus & University | KG I) | |
| 21T2 – Dendrochemistry – a tool to asses changes in ecosystem nutrition and forest growth. | 112b D4 – Climate change adaptation in forest management: from applied science to implementation | 18bT5 – Forest floor matters – The pivotal role of a forest compartment in danger of extinction | 11b T4 – Progress in tropical forest management: Assuring sustainability, avoiding degradation and assisting restoration | |
| | Lunch break (Mensa) an | d visit of the Poster Exhibition (Ur | niversity, KG II, HS2121) | |
| 129 D4 - Advances in multi-scale monitoring of forest biodiversity | 65 D9 - Multifunctional tropical forest landscapes: finding solutions in science and practice | 176T1 – Agroforestry – the future of land use management? | 101 D4 – 125 Years of Forest Inventories – Past, Present and Future | |
| | Coffee | Break (Konzerthaus & University | KG I) | |
| 1 D4 - Advances in the use of lidar data for forest carbon accounting | 154 D3 - Sustainable and Constructive Strategy of Ergonomic Research in Forestry | 42T3 - Open Session | 109 T4 – Promoting forest biodiversity through structural complexity? New advances in the assessment and restoration of habitat structures in forests | |
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Theme 5: Forests, Soil and Water Interactions

| | | | UNIVERSITY | | |
|-------|--|--|---|--|--|
| | KG I - 1009 | KG I - 1010 | KG I - 1015 | KG I - 1098 | KG I - Aula |
| 8:00 | 43a D9 - In the woods | 145a D9 – The Role of Forest History Cultural | 39a D6 - Beyond Carbon: | | 171 D4 - Managing Risk |
| 8:30 | of transdisciplinarity: Forest science between | Heritage in Re-con- structing Nature - a | REDD + implementation in the local level | | in the Face of Uncertain Change |
| 9:00 | research for the sector and a new wave of transdisciplitnarity | land-scape-level explo- ration of the need for, of approaches to, and case | | | |
| 9:30 | напзинстрппанту | studies of, the recovery, remediation and | | | |
| 10:00 | | Coffee I | Break (Konzerthaus & Univers | sity KG I) | |
| 10:30 | 43b D9 - In the woods | 145b D9 - The Role of | 39b D6 - Beyond Carbon: | | 17 D9 - IIntegrating |
| 11:00 | of transdisciplinarity: Forest science between 'research for the sector' | Forest History & Cultural Heritage in Re-con- structing Nature - a land- | REDD+ implementation in the local level | | grassroots participation, crowd mobilization and |
| 11:30 | and a new wave of 'transdisciplitnarity' | scape-level exploration of the need for, of | | | big data analysis in forestestoration policy |
| 12:00 | | Lunch break (Mensa) and | visit of the Poster Exhibition | (University, KG II, HS2121) | |
| 13:30 | 178 D9 – Forest policies in | 128a D4 - Building | 118 D6 - Nature-based | 31 D3 - Quality Assess- | 48 T5 - Ecohydrolo- |
| 14:00 | the Baltic and Central and Eastern European (CEE) | relevant, harmonised, comprehensive, reliable | tourism and recreation's role in sustaining forests | ments along the wood supply chain for optimal | gy-based forest manage ment for water provision |
| 14:30 | regions | and up-to-date forest information for bioecono- my outlooks at European | and improving people's quality of life | use of the forest resource | carbon sequestration and enhanced climate resilience |
| 15:00 | | level – a joint ENFIN-DIA– BOLO session | | | lesilicite |
| 15:30 | | 5020 30331011 | | | |
| 16:00 | | Coffee I | Break (Konzerthaus & Univers | sity KG I) | |
| 16:30 | 116 D9 – Forest and | 128b D4 - Building | 8 D6 - The Role of Social | 91 D9 - Interdisciplinary | 88 T5 - Natural hazards |
| 17:00 | Natural Resources Policy and Governance | relevant, harmonised, comprehensive, reliable | Fostering a Culture of o- Disciplinary Inclusion | Perspectives on Illegal and Informal Logging and Related Trade: Drivers, Impacts, and Governance Options | and disturbance interac- tions in mountain forests |
| 17:30 | in Latin America and the Caribbean | and up-to-date forest information for bioecono- my outlooks at European | | | |
| 18:00 | | level – a joint ENFIN-DIA– BOLO session | | οριιστισ | |
| 18:30 | | | | | |
| 19:00 | | | | | |
| 19:30 | | | | | |
| 20:00 | | | BM 9 Tropical Forest | | |
| 20:30 | | | Datasets Networking Meeting | | |
| 21:00 | | | | | |
| 21:30 | | | | | |

| | | UNIVE | RSITY | | |
|--|--|---|---|--|---|
| KG I - 1139 | KG I - 1199 | KG I - 1224 | KG I - 1228 | KG II - Auditorium Maximum | KG II - 2121 |
| | 34 D9 - Institutional drivers and barriers for the management of climate related hazards | 6 D6 - Open Session | 107 D3 - Collaborative logistics and planning in the forest sector | 153aT2 - Genetics and Genomics for Conservation, Climate Adaptation and Sustainable Manage- ment of Forests | Poster Exhibition for more Details see page 188 |
| | Coffee B | reak (Konzerthaus & Unive | rsity KG I) | | |
| | | 95T3 - Forestry classic ' for the future | 78 D3 - Forest Operation and Ergonomics: Challenge and Solutions | 153bT2 - Genetics and Genomics for Conservation, Climate Adaptation and Sustainable Manage- ment of Forests | |
| 2:45 – 13:45 | Lunch break (| Mensa) and visit of the Po | ster Exhibition (University, | KG II, HS2121) | |
| M 8 International ociety of Tropical presters Business leeting | 113 T2 - What is the potential for CO2 mitigation of forest soils? | 149 T1 – Synergies and Conflicts in the Provision of Ecosystem Services by Small- scale Forest Owners | 300 D7 - Pine pitch canker - strategies for management of Gibberella circinata in greenhouses and forests (Pinestrength) | 153cT2 - Genetics and Genomics for Conservation, Climate Adaptation and Sus- tainable Management of Forests | |
| | Coffee B | reak (Konzerthaus & Unive | rsity KG I) | | |
| 2 D6 - Monitoring f society-forest elationship: from tate of the art to uture directions | 124 D9 – Forests and water Payments for Ecosystem Services | | 80T1 - Changing Forest Ownership: significance of trends and implications for management and policy | 71 D7 – Early detection and monitoring of invasive forest pests and pathogens with citizen science | |
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| | | BM 19 IUFRO UNIT 4.05.00 Business Meeting | | | |
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Theme 5: Forests, Soil and Water Interactions Theme 4: Biodiversity, Ecosystem Services and Biological Invasions Side Events (Business Meetings & Book Launches)

| 08:00 – 10:00 | Rolf Böhme Saal (Konzerthaus) All Division 7 (Forest Health) Meeting |
|---------------|---|
| 05 | D7 - Opening Session Predicting forest insect response to changing climate: Complexities and considerations |
| Organizer | Brockerhoff E. (New Zealand) |
| 4200 | Opening Remarks Brockerhoff E. (New Zealand) |
| 4201 | Predicting forest insect response to changing climate: Complexities and considerations Bentz B. (United States of America) |
| 4202 | Pathogens on the move: a 100-year global experiment with planted eucalypts Burgess T. (Australia) |
| 4203 | Closing Remarks Brockerhoff E. (New Zealand) |
| | Market of A |

| 08:00 – 10:00 | K 1 (Konzerthaus) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|--|---|
| 16a T4 - Joint management of large herbivores and forests for resilient ecosystems | |
| Organizer | Endress B. (United States of America) |
| Chairs | Akashi N. (Japan) |
| 1534 | Interactions between ungulate herbivores and forest management and the search for resilient forests in western North America Endress B. (United States of America) |
| 1891 | Reindeer hinder restoration benefits in boreal forests Tarvainen O. (Finland) |
| 564 | Impact of ungulates on regeneration in Switzerland depends on forest type Kupferschmid A. (Switzerland) |
| 2220 | Interactions between ungulates, forests and supplementary feeding: does one bite of beet result in one bite less in the forest? Felton A. (Sweden) |
| 358 | Evaluation of the impact of sika deer on natural forests using a simple check list Akashi N. (Japan) |

| 08:00 – 10:00 K 2-4 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting | | K 2-4 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---|-----------|---|
| | 61a | D4 - Decision Support Approaches in Adaptive Forest Management |
| | Organizer | Kašpar J. (Czech Republic) |
| | Chairs | Vacik H. (Austria), Marusak R. (Czech Republic) |
| | 1018 | Cluster creating for harvest scheduling ARM for small-scale spatial limited forest management <i>Kašpar J. (Czech Republic)</i> |
| | 2863 | Creating dynamic treatment units by spatial optimization Öhman K. (Sweden) |

| | Mäkinen A. (Finland) |
|------|---|
| 2376 | Decision on rotation period of Norway spruce in the context of climate change adaptation: Implications for Management planning in the Czech Republic <i>Marusak R. (Czech Republic)</i> |
| 3803 | Decision support and knowledge transfer for improved understanding about management of protected areas across borders in Europe <i>Vacik H. (Austria)</i> |
| 2165 | Decision support in conflicting forest utilization: Market impact analysis of forest management and wood supply scenarios on forest product markets Schier F. (Germany) |

Dynamic forest planning model for private forest owners using publicly available data sources in Finland

| 08:00 – 10:00 | K 5-7 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---------------|---|
| 130 | D4 - Contributions of Forest Mensuration and Modeling over 125 years |
| Organizer | Hailemariam T. (United States of America) |
| 2292 | Reflections on the contributions of Bertil Matern Gregoire T. (United States of America) |
| 1461 | Long-term expansion in the growing stock of the French forests : analysis and modelling Denardou-Tisserand A. (France) |
| 637 | Forest sampling viewed in the context of stereology and Monte Carlo integration Lynch T. (United States of America) |
| 2928 | Models and their role in assessing the carbon dynamics of forests Hasenauer H. (Austria) |
| 3491 | Implementing different thinning types and intensities in individual tree models Tomé M. (Portugal) |
| 2401 | Keep it simple: – the history of stereological measurements in forest inventory Ståhl G. (Sweden) |
| 3270 | The changing scope of national forest inventories – challenges for research and education <i>Kleinn C. (Germany)</i> |

|)8:00 — 10:00 | K9 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---------------|---|
| 112a | D4 - Climate change adaptation in forest management: from applied science to implementation |
| Organizer | Brang P. (Switzerland) |
| Chairs | Lexer M. (Austria), Peyron J. (France) |
| 1095 | Integration of climate and ecological modeling tools for adaptive management in Asia-Pacific forests Wang G. (Canada) |
| 3988 | Climate change, adaptation and management of risks to boreal forests Peltola H. (Finland) |
| 4149 | Economic adaptation of silviculture and forests to climate Peyron J. (France) |

| 1963 | Knowledge transfer in applied climate change adaptation research: lessons learned from regional case studies across Europe | 1659 | Phosphorus mineralization in forest floors differing in litter composition Talkner U. (Germany) |
|---------------|--|---------------|--|
| 3527 | Lexer M. (Austria) Mind the gap: How to bridge between scientific possibility and practical necessity in adaptive mountain forest | 2525 | Leaf litter decomposition in translocation experiments across altitudinal gradients in Costa Rica and longitudinal gradients in South Korea Park B. (South Korea (ROK)) |
| | management Bugmann H. (Switzerland) | 1359 | Interaction between forest floor and mineral soil: an approach to quantify bioturbation under different tree |
| 1928 | Utilizing forest tree genetic diversity for adapting forest to climate change: a transnational approach Schüler S. (Austria) | 1329 | species Kayser G. (Germany) |
| 1748 | Can the Norway spruce timber supply be reduced by silvicultural treatments? Podrázský V. (Czech Republic) | 4025 | Impact of Sessile Oak and Scots Pine on forest floor ecology of acid sandy soils in northern Saxony, Germany <i>Tischer A. (Germany)</i> |
| 08:00 – 10:00 | Room "Baden-Baden" (Novotel Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions | 08:00 – 10:00 | KG I - 1009 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
| 11a | T4 - Progress in tropical forest management: Assuring sustainability, avoiding degradation and assisting restoration | 43a | D9 - In the woods of transdisciplinarity: Forest science between 'research for the sector' and a new wave of 'transdisciplinarity' |
| Organizer | Pietsch S. (Austria) | Organizer | Rhodius R. (Germany) |
| Chairs | Sist P. (France), Nasi R. (Indonesia) | Chairs | Pregernig M. (Germany), Böcher M. (Germany), Winkel G. (Germany) |
| 2829 | Timber production, logging residues, and forest recovery of Brazilian Amazon rainforest: nine case studies of different managed forests. Numazawa C. (Brazil) | 1149 | Where are the Missing Co-Authors: Principles and Practices of Co-authorship in Participatory Transdisciplinary Research Journal Articles Fortmann L. (United States of America) |
| 1187 | Methodological approaches and preliminary results of forest biomass measurements for the implementation of the REDD+ mechanisms in the COMIFAC area Medjibe V. (Cameroon) | 1263 | Different ways of being transdisciplinary: forest research in the real-world laboratory "Knowledge Dialogue Northern Black Forest", Germany <i>Pregernig M. (Germany)</i> |
| 3310 | Simulation of tropical forest management in a spatially explicit global forest model <i>Gusti M. (Austria)</i> | 2282 | Transdisciplinarity in International Forestry Research: An Assessment of Four CIFOR Projects Belcher B. (Indonesia) |
| 3790 | Implications of changes in tropical shifting cultivation intensification on future GHG emissions in the Congo Basin | 3856 | Solving problems in forest landscapes as social–ecological systems: barriers of transdisciplinary research Elbakidze M. (Sweden) |
| 2333 | Mosnier A. (Austria) Sustainable woodland management and livelihood options in a charcoal producing region: an agent-based modelling approach | 4029 | Generating better knowledge through cooperation with policy actors? Reflecting on experiences made in a "transdisciplinary" policy implementation research project Maier C. (Germany) |
| 3905 | Kiruki H. (Netherlands) The Tropical managed Forests Observatory: a research network addressing the resilience of tropical logged forests Sist P. (France) | 3800 | Advanced approaches for a better understanding of scientific knowledge transfer for interconnecting forest-related policies, science and people - an introduction <i>Böcher M. (Germany)</i> |
| | | 08:00 - 10:00 | KG I - 1010 (University Freiburg) |
| 08:00 – 10:00 | Room "Basel + Mühlhausen" (Novotel Freiburg) Theme 5: Forests, Soil and Water Interactions | | All Division 9 (Forest Policy and Economics) Meeting |
| 18a | T5 - Forest floor matters - The pivotal role of a forest compartment in danger of extinction | 145a | D9 - The Role of Forest History & Cultural Heritage in Re-constructing Nature - a landscape-level exploration of the need for, of approaches to, and case studies of, |
| Organizer | Lang F. (Germany) | | the recovery, remediation and re-c |
| Chairs | Krüger J. (Germany) | Organizer | Rotherham I. (United Kingdom) |
| 2978 | Forest floor dynamics in the light of the new German humus-form classification Schack-Kirchner H. (Germany) | 878 | An Overview of the Role of Forest History & Cultural Heritage in Re-constructing Nature at a Landscape Level Rotherham I. (United Kingdom) |

| 381 | Concepts of Landscape Restoration in the History of the Alpine Region of Austria Johann E. (Austria) | 08:00 – 10:00 | KG I - Aula (University Freiburg) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|-------------|---|--|--|
| 2293 | Historical tree species composition and forest habitat continuity are important determinants for carbon stock in topsoils and subsoils in a large forest patch of north-eastern Germany Wulf M. (Germany) | 171 Organizer | D4 - Managing Risk in the Face of Uncertain Change Yousefpour R. (Germany) |
| 1493 | Cultural and scientific heritage of forest history and its recent and future significance – interconnecting forest history, science and people Ludemann T. (Germany) | 3201 | Optimal sequence of forest rotations under a declining discount rate: including thinning in a cross-europea comparison Price C. (United Kingdom) |
| 1593 | Using historic maps and citizen science to investigate the survival of old survey 'blaze' trees Spooner P. (Australia) | 975 | The self-insurance clauses puzzle, risk vs. ambiguity: an application to forest adaptation to climate change Brunette M. (France) |
| 2738 | Survival of the fittest: Differentiation in livelihood resilience - Bolivian indigenous forest communities in the wake of an extreme weather event | 1292 | Interactive effects of climate warming and invasive pests on European forest carbon storage <i>Dullinger S. (Austria)</i> |
| 1521 | Bauer T. (Netherlands) Landscape history, values of nature and their importance for forest conservation and management in the | 1934 | Robust detection of novel invasive forest pests: New approaches to deal with uncertainty and tight budge Yemshanov D. (Canada) |
| 1321 | context of a discussion about The Bialowieza Forest, Poland Bozetka B. (Poland) | 982 | An animated introduction to tail hunting and robust decision making <i>Keller K. (United States of America)</i> |
| 0 10.00 | | 1142 | Making robust thinning decisions under deeply uncertain climate change: Applying the MORDM approach Radke N. (Germany) |
| 0 – 10:00 | KG I - 1015 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting | 3888 | Assessment of the robustness and uncertainty of climate projections applied for impact analysis and adaption support in forestry |
| 39a | D6 - Beyond Carbon: REDD+ implementation in the local level | | Gálos B. (Hungary) |
| Organizer | Damayanti E. K. (Indonesia) | | |
| Chairs | Mahmud A. (Indonesia), Berry N. (United Kingdom), Aritonang S. A. (Indonesia) | 08:00 - 10:00 | KG I - 1199 (University Freiburg) |
| 2101 | REDD + activities at the local level - Lessons from community managed forests in the Heart of Borneo | | All Division 9 (Forest Policy and Economics) Meeting |
| 1352 | Damayanti E. (Indonesia) Beyond carbon: a look on community-based forest conservation approach at a sub-national REDD+ demon- | 34 | D9 - Institutional drivers and barriers for the management of climate related hazards the forest |
| | stration site in the Philippines Veridiano R. (Germany) | Organizer | Kruse S. (Germany) |
| 2048 | • | and the second s | |
| | Evnectation and Disappointment: the social life of evnectations in REDID— pilot projects in Japaania | Chairs | von Detten R. (Germany) |
| 1067 | Expectation and Disappointment: the social life of expectations in REDD+ pilot projects in Tanzania Massarella K. (United Kingdom) Tailormade solutions for topure security in PEDD 1, and community concernation projects. | Chairs 1502 | von Detten R. (Germany) After the epidemic: Analyzing the policy and governance non-response to landscape-level mountain pine beetle outbreaks in the U.S. West |
| 1962 | Massarella K. (United Kingdom) Tailormade solutions for tenure security in REDD+ and community conservation projects | | After the epidemic: Analyzing the policy and governance non-response to landscape-level mountain pine beetle outbreaks in the U.S. West Abrams J. (United States of America) |
| 1962 873 | Massarella K. (United Kingdom) Tailormade solutions for tenure security in REDD+ and community conservation projects van der Zon M. (Netherlands) How to achieve effective participation of communities in the monitoring of REDD+ projects in the Democratic | | After the epidemic: Analyzing the policy and governance non-response to landscape-level mountain pine beetle outbreaks in the U.S. West |
| 873 | Massarella K. (United Kingdom) Tailormade solutions for tenure security in REDD+ and community conservation projects van der Zon M. (Netherlands) How to achieve effective participation of communities in the monitoring of REDD+ projects in the Democratic Republic of Congo (DRC) Schmitt C. (Germany) | 1502 | After the epidemic: Analyzing the policy and governance non-response to landscape-level mountain pine beetle outbreaks in the U.S. West Abrams J. (United States of America) Framings of drought risks and policy options in the forest sector: a case study from Southern Germany. |
| | Massarella K. (United Kingdom) Tailormade solutions for tenure security in REDD+ and community conservation projects van der Zon M. (Netherlands) How to achieve effective participation of communities in the monitoring of REDD+ projects in the Democratic Republic of Congo (DRC) Schmitt C. (Germany) Assessing community capacity for MRV activities at pilot project level: comparison analysis from case study of Rwanda, Cameroon and DRC. | 1502 3671 | After the epidemic: Analyzing the policy and governance non-response to landscape-level mountain pine beetle outbreaks in the U.S. West Abrams J. (United States of America) Framings of drought risks and policy options in the forest sector: a case study from Southern Germany. Müller W. (Germany) Bridging Gaps in Fire Management and Dry Forest Restoration |
| 873 | Massarella K. (United Kingdom) Tailormade solutions for tenure security in REDD+ and community conservation projects van der Zon M. (Netherlands) How to achieve effective participation of communities in the monitoring of REDD+ projects in the Democratic Republic of Congo (DRC) Schmitt C. (Germany) Assessing community capacity for MRV activities at pilot project level: comparison analysis from case study of | 1502 3671 1991 | After the epidemic: Analyzing the policy and governance non-response to landscape-level mountain pine beetle outbreaks in the U.S. West Abrams J. (United States of America) Framings of drought risks and policy options in the forest sector: a case study from Southern Germany. Müller W. (Germany) Bridging Gaps in Fire Management and Dry Forest Restoration Thompson M. (United States of America) The end of happy days: how Irish forest stakeholders are moving from risk denial to climatic adaptive strat |

| 8:00 – 10:00 | KG I - 1224 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
|--------------|---|
| 6 | D6 - Open Session |
| Organizer | Sievänen T. (Finland) |
| Chairs | Stein T. (United States of America), Sievänen T. (Finland) |
| 1568 | Spatio-temporal analysis of accessibility of urban forest: An analysis on Tohoku region, Japan <i>Uchiyama Y. (Japan)</i> |
| 745 | Managing ecosystem commons – Attitude toward environmental consideration among Swedish forest owners based on a forest owner typology. Widmark C. (Sweden) |
| 2920 | The influence of agricultural concessions on local community life in peat land areas in Riau, Indonesia <i>Mori M. (Japan)</i> |
| 522 | Vulnerability of rural communities to climate change in the Gambia: influence of methodological approaches on assessment outcomes Fandohan A. (Benin) |
| 302 | Landscape Image Sketching Technique for Forest studies <i>Ueda H. (Japan)</i> |
| 1848 | The socioeconomic impacts of large-scale tree plantations on local communities. Examining the empirical evidence. Malkamäki A. (Finland) |

| 08:00 – 10:00 | KG I - 1228 (University Freiburg) All Division 3 (Forest Operations Engineering and Management) Meeting |
|---------------|---|
| 107 | D3 - Collaborative logistics and planning in the forest sector |
| Organizer | Rönnqvist M. (Canada) |
| 4001 | Routing of logging trucks in Norway <i>Rönnqvist M. (Canada)</i> |
| 512 | Balance Technical Efficiency and Harvesting Volume/Area at the Regional Forestry Timber Production <i>Nitami T. (Japan)</i> |
| 4166 | Potentials for developing geographical barter in Norwegian wood supply <i>Fjeld D. (Norway)</i> |
| 1009 | Collaboration through standardization Rönnqvist M. (Canada) |

|)8:00 — 10:00 | KG II - Auditorium Maximum (University Freiburg) Theme 2: Forests and Climate Change |
|---------------|--|
| 153a | T2 - Genetics and Genomics for Conservation, Climate Adaptation and Sustainable Management of Forests |
| Organizer | Rajora O. (Canada) |
| Chairs | Rajora O. (Canada) |
| 4219 | Introduction and overview <i>Rajora O. (Canada)</i> |
| 1158 | Dynamics of epigenetic and genetic variation within and between populations and generations in two conifers and two angiosperms *Aravanopoulos F. (Greece)* |
| 569 | Morphometric and molecular variability among Julans regia populations Geburek T. (Austria) |
| 3119 | Morpho-genetic differentiation of close timber Guibourtia species newly listed on Appendix II of CITES <i>Tosso F. (Belgium)</i> |
| 2833 | Toward gene conservation triage: A United States national prioritization of tree species threatened by climate change Potter K. (United States of America) |
| 2389 | Gene conservation of Sorbus torminalis L.: deep insights into genetic patterns of a rare tree species in Southern Germany Fussi B. (Germany) |
| 1137 | Scots pine seed tree regeneration method may lead to formation of clusters of relatives Kavaliauskas D. (Germany) |
| 2148 | The reactions of Scots pine trees from different genetic groups comprising the population to the effect of meteorology and air pollutants at different stages of their development <i>Augustaitis A. (Lithuania)</i> |

| Rolf Böhme Saal (Konzerthaus) All Division 9 (Forest Policy and Economics) Meeting |
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| D9 - Forest policy and governance: research at multiple scales |
| Giessen L. (Germany) |
| Overall assessment of FLEGT and EUTR state of the art from the stakeholders' perspective Masiero M. (Italy) |
| Money for Signatures or Signatures for Money? Using Public Choice to Study Forest Policy Zhang D. (United States of America) |
| Adaptive governance, weaving Maori aspirations and livelihoods into policy and implementation, a systems approach to forest-based regeneration. Barnard T. (New Zealand) |
| Transformational change through REDD readiness in Nepal: realities amidst expectations Bhandari N. (Nepal) |
| Governance capacity of public actors in forestry: An analytical framework for facilitating social innovation Rogelja T. (Italy) |
| C A A A A B C |

| 10:30 – 12:00 | K 1 (Konzerthaus) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|---------------|--|
| 16b | T4 - Joint management of large herbivores and forests for resilient ecosystems |
| Organizer | Endress B. (United States of America) |
| Chairs | Akashi N. (Japan) |
| 776 | Reconciling forest production and hunting in adaptive management - French case studies <i>Marell A. (France)</i> |
| 1248 | Gap creation in post-coppice woodlands may increase both resilience and resistance of plant species against ungulate herbivory: an analysis based on life-history strategy theories Suzuki M. (Japan) |
| 234 | Wild ungulate management for natural regeneration in Los Alcornocales Natural Park Rodriguez Benavente J. (Spain) |
| 133 | Native ungulates and ecosystem functioning: an integrated approach Baltzinger C. (France) |
| 2065 | From deer versus forests to deer and forests: an adaptive management case study from the U.S.A. <i>Rooney T. (United States of America)</i> |
| 10:30 – 12:00 | K 2-4 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
| 61b | D4 - Decision Support Approaches in Adaptive Forest Management |
| Organizer | Kašpar J. (Czech Republic) |
| Chairs | Vacik H. (Austria). Marusak R. (Czech Renublic) |

| | All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|-----------|--|
| 61b | D4 - Decision Support Approaches in Adaptive Forest Management |
| Organizer | Kašpar J. (Czech Republic) |
| Chairs | Vacik H. (Austria), Marusak R. (Czech Republic) |
| 3948 | Simulating silvicultural alternatives with a web based forest model: SIMANFOR <i>Bravo F. (Spain)</i> |
| 3594 | Evaluating different strategies for lodgepole pine in Sweden – economy, distribution and potential spread Lundström J. (Sweden) |
| 311 | Deadwood management with robust optimisation Härtl F. (Germany) |
| 2468 | Forest restoration with a native species Paricá in Amazon: a generalizable model to support forest management Nobre S. (Spain) |
| 33 | Current Thought on the Use of Heuristics for Adaptive Forest Management Planning Bettinger P. (United States of America) |

| 0:30 – 12:00 | K 5-7 (Konzerthaus) Theme 1: Forests for People |
|--------------|---|
| 102 | T1 - Bringing carbon to small-scale forest owners - role of buy-in mechanisms for bridging scales and facilitating access to carbon markets |
| Organizer | Bowditch E. (United Kingdom) |
| 2611 | Carbonscapes – The effect of carbon sequestration driven woodland creation on management culture in Scotland Bowditch E. (United Kingdom) |
| 3548 | Investment in forest carbon offset: the perspective of private forest landowners in Korea Seung-Uk S. (South Korea (ROK)) |
| 741 | REDD+ finance perspective as solution to community forestry in Congo Basin Sufo Kankeu R. (Cameroon) |
| 578 | Measuring non-carbon benefits of bio-carbon projects and their delivery in existing projects in Southern Africa Chirwa P. (South Africa) |
| | Panel Discussion |
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| 10:30 – 12:00 | K 8 (Konzerthaus) Theme 2: Forests and Climate Change |
|---------------|--|
| 21 | T2 - Dendrochemistry - a tool to asses changes in ecosystem nutrition and forest growth. |
| Organizer | Niederberger J. (Germany) |
| 1074 | Analysis of oak tree rings using LA-ICP MS to record urban pollution from different sources in Terni (Central Italy) <i>Cocozza C. (Italy)</i> |
| 3620 | Do tree rings record changes in soil fertility? Results from a Quercus petraea fertilization trial. <i>Ponton S. (France)</i> |
| 1735 | Can the interannual variation of phosphorus (P) in tree rings be used as an indicator of P nutrition or P availability? Niederberger J. (Germany) |

| 10:30 – 12:00 | K9 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---------------|---|
| 112b | D4 - Climate change adaptation in forest management: from applied science to implementation |
| Organizer | Brang P. (Switzerland) |
| Chairs | Peyron J. (France), Lexer M. (Austria) |
| 1448 | Regionalization of climate change adaptation – dynamic tree species selection in the German federal state of Brandenburg Spathelf P. (Germany) |
| 3395 | Developing site-specific species recommendations in Switzerland: A pragmatic ecogram-based approach Brang P. (Switzerland) |
| 2363 | Climate change adaption in the Bavarian State Forest Enterprise: Transferring scientific knowledge into management practice Rothe A. (Germany) |
| | Panel Discussion |

| 10:30 – 12:00 | Room "Baden-Baden" (Novotel Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions | 2252 | How do we conduct forest-related research in ways that enhance its impact on policy and practice? Edwards D. (United Kingdom) |
|---------------------|---|---------------|--|
| 11b | T4 - Progress in tropical forest management: Assuring sustainability, avoiding degradation and assisting restoration | 2678 | An Empirical Evaluation of Knowledge Translation in Policy-Relevant Forestry Research <i>Davies B. (Indonesia)</i> |
| Organizer | Pietsch S. (Austria) | | Panel Discussion |
| Chairs | Sist P. (France), Nasi R. (Indonesia) | | |
| 1228 | Forest resilience to silvicultural interventions in a tropical rain forest of the Brazilian Amazon de Avila A. (Germany) | 10:30 – 12:00 | KG I - 1010 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
| 4145 | Evaluating Agro-successional reforestation as a strategy to improve soil fertility in Panama's cattle dominated Azuero peninsula Bertsch A. (United States of America) | 145b | D9 - The Role of Forest History & Cultural Heritage in Re-constructing Nature - a landscape-level exploration of the need for, of approaches to, and case studies of, the recovery, remediation and re-c |
| 3341 | Changes in rainforest dynamics under different management regimes | Organizer | Rotherham I. (United Kingdom) |
| 2316 | Pietsch S. (Austria) Diameter-Limit-Tables as a basic silvicultural tool for the sustainable management of Fijian rain forests Mussong M. (Germany) | 589 | Economic valuation of the forest of life and death by direct and indirect beneficiaries for the recovery of the biocultural landscape Camacho Mojica H. (Bolivia) |
| 10:30 – 12:00 | Room "Basel + Mühlhausen" (Novotel Freiburg) Theme 5: Forests, Soil and Water Interactions | 714 | Transforming nomadic traditions to biodiversity-friendly livelihoods from the perspective of traditional forest-related knowledge: the successful story of H Village of Yunnan Province in China <i>Liu J. (China)</i> |
| 18b | T5 - Forest floor matters - The pivotal role of a forest compartment in danger of extinction | 4116 | Reconstruction of forest fire scenarios in the inner regions of the Iberian Peninsula through the geo-historical |
| Organizer Chairs | Lang F. (Germany) Krüger J. (Germany) | 4110 | sources, 18th-20th centuries Montiel Molina C. (Spain) |
| 3505 | Increase of C/N-Ratios in Forest Soils in Germany: Analysis and discussion of possible explanations Fleck S. (Germany) | 403 | A Study on the Retention of Forest-related Traditional Knowledge - A Case of Dengcen village in Guizhou Province, Southwest China |
| 973 | More than we ever thought – distribution and function of lithic histosols in the Calcareous Alps Olleck M. (Germany) | 2194 | Huang Y. (South Korea (ROK)) Selective and cumulative rewilding |
| 448 | Forest floor in Southwest Germany – properties and changes within the last decades Hartmann P. (Germany) | 2171 | Krcmárová J. (Czech Republic) |
| 4132 | Has long-term elevated N-deposition changed organic layer accumulation, microbial community, reactivity and temperature sensitivity? Gundersen P. (Denmark) | 10:30 – 12:00 | KG I - 1015 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
| 740 | Forest management can counteract recent forest floor degradation induced by climate warming in mountain | 39b | D6 - Beyond Carbon: REDD+ implementation in the local level |
| 710 | forests of the German Alps | Organizer | Plugge D. (Germany) |
| | Prietzel J. (Germany) | Chairs | Berry N. (United Kingdom), Damayanti, E.K. (Indonesia) |
| | | 4152 | Village Forest Management Agreements (VilFoMA) as a performance-based payment scheme under REDD+ in |
| 10:30 – 12:00 | KG I - 1009 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting | | Lao PDR Koch S. (Lao People's Democratic Republic) |
| 43b | D9 - In the woods of transdisciplinarity: Forest science between 'research for the sector' and a new wave of 'transdisciplinarity' | 2534 | Spatial analysis of forest environmental tax as a scheme of Payment for Ecosystem Service: Suggestions to the REDD+ Kohsaka R. (Japan) |
| Organizer | Rhodius R. (Germany) | 2535 | Schemes of Benefit Sharing in alternative livelihood strategies: potential of Geographical Indications of Non |
| Chairs | Pregernig M. (Germany), Böcher M. (Germany), Winkel G. (Germany) | 2555 | Timber Forest Products |
| 160 | Applying the RIU-model of knowledge transfer in practice: Experiences from the EU-project ALTERFOR Jürges N. (Germany) | | Kohsaka R. (Japan) |

| 915 | Shifting Cultivation and REDD+ in Laos: Can the Village Development Grants deliver on stabilisation of shifting cultivation and CO2 emission reductions? | 10:30 – 12:00 | KG I - 1228 (University Freiburg) All Division 3 (Forest Operations Engineering and Management) Meeting |
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| | Ramcilovic-Suominen S. (Finland) | 78 | D3 - Forest Operation and Ergonomics: Challenge and Solutions. |
| 3678 | Are there differences between men and women's preferences for benefit sharing arrangements in REDD+ schemes? | Organizer | Gandaseca S. (Malaysia) |
| | Mwangi E. (Kenya) | Chairs | Lewark S. (Germany) |
| | | 811 | Hand Planter Ergonomics: Characterizing Physically Demanding Work in the Southeastern United States Smidt M. (United States of America) |
| 10:30 – 12:00 | KG I - Aula (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting | 3446 | Studying work in tropical forests: the need for integrative research approaches Lewark S. (Germany) |
| 17 | D9 - Integrating grassroots participation, crowd mobilization and big data analysis in forest restoration policy assessment in the tropics | 3114 | The Effect of Slash Reinforcement of Strip Roads on Rutting, Forwarder's Fuel Consumption, Driving Speed and Whole Body Vibrations |
| Organizer | Kraxner F. (Austria) | | Mohtashami S. (Sweden) |
| Chairs 3755 | Soterroni A. (Austria) Towards an integrated assessment for landscape approach: combining remote sensing, crowdsourcing big data | 909 | A Biomechanical Analysis of Tropical Matang Mangrove Forest Operation Workers in Perak, Malaysia Gandaseca S. (Malaysia) |
| | and multi-objective modelling Yowargana P. (Austria) | 1235 | Assessment of heavy metal contamination in sediment along Sungai Sepetang, Perak Gandaseca S. (Malaysia) |
| 2008 | $Harnessing \ the \ power \ of \ volunteers \ to \ collect \ and \ validate \ spatial \ information \ using \ Geo-Wiki: \ Relevance \ to \ and \ validate \ spatial \ information \ using \ Geo-Wiki: \ Relevance \ to \ and \ validate \ spatial \ information \ using \ Geo-Wiki: \ Relevance \ to \ and \ validate \ spatial \ information \ using \ Geo-Wiki: \ Relevance \ to \ and \ validate \ spatial \ information \ using \ Geo-Wiki: \ Relevance \ to \ and \ validate \ spatial \ information \ using \ Geo-Wiki: \ Relevance \ to \ and \ validate \ spatial \ information \ using \ Geo-Wiki: \ Relevance \ to \ and \ validate \ spatial \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ to \ and \ using \ Geo-Wiki: \ Relevance \ to \ and \ using \ to \ and \ union \ union \ union \ union \ union $ | | |
| | forestry Schepaschenko D. (Austria) | 10:30 – 12:00 | KG II - Auditorium Maximum (University Freiburg) Theme 2: Forests and Climate Change |
| 2252 | Toward a successful forest and landscape restoration in Sumatra, Indonesia: the application of Restoration | | 3. |
| 3352 | Opportunities Assessment Methodology | 153b | T2 - Genetics and Genomics for Conservation, Climate Adaptation and Sustainable Management of Forests |
| 3332 1511 | Opportunities Assessment Methodology Wicaksono S. (Indonesia) | 153b Organizer | · |
| | Opportunities Assessment Methodology | | Management of Forests |
| | Opportunities Assessment Methodology Wicaksono S. (Indonesia) Effect of Harvesting Practice on Forest Stand Condition: A case from Terai Community Forest of Nepal | Organizer | Management of Forests Rajora O. (Canada) |
| 1511 | Opportunities Assessment Methodology Wicaksono S. (Indonesia) Effect of Harvesting Practice on Forest Stand Condition: A case from Terai Community Forest of Nepal Baral S. (Austria) Forest Restoration Strategies in Brazil within the Scope of the New Forest Code | Organizer Chairs | Management of Forests Rajora O. (Canada) Aravanopoulos F. (Greece) Understanding the Genetic Basis of Local Adaptation to Climate and Genetic Responses to Climate Change in Northern Forest Trees |
| 1511 3645 | Opportunities Assessment Methodology Wicaksono S. (Indonesia) Effect of Harvesting Practice on Forest Stand Condition: A case from Terai Community Forest of Nepal Baral S. (Austria) Forest Restoration Strategies in Brazil within the Scope of the New Forest Code Soterroni A. (Austria) KGI - 1224 (University Freiburg) | Organizer Chairs 710 | Management of Forests Rajora O. (Canada) Aravanopoulos F. (Greece) Understanding the Genetic Basis of Local Adaptation to Climate and Genetic Responses to Climate Change in Northern Forest Trees Rajora O. (Canada) Local adaptation of Swiss stone pine (Pinus cembra) to the changing climate at the timberline Rellstab C. (Switzerland) Detecting adaptive traits in natural alpine populations of Norway spruce (Picea abies [L.] Karst) along |
| 1511 3645 10:30 – 12:00 | Opportunities Assessment Methodology Wicaksono S. (Indonesia) Effect of Harvesting Practice on Forest Stand Condition: A case from Terai Community Forest of Nepal Baral S. (Austria) Forest Restoration Strategies in Brazil within the Scope of the New Forest Code Soterroni A. (Austria) KG I - 1224 (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future T3 - Forestry classic' for the future Skovsgaard J. (Sweden) | Organizer Chairs 710 | Rajora O. (Canada) Aravanopoulos F. (Greece) Understanding the Genetic Basis of Local Adaptation to Climate and Genetic Responses to Climate Change in Northern Forest Trees Rajora O. (Canada) Local adaptation of Swiss stone pine (Pinus cembra) to the changing climate at the timberline Rellstab C. (Switzerland) |
| 1511 3645 10:30 – 12:00 | Opportunities Assessment Methodology Wicaksono S. (Indonesia) Effect of Harvesting Practice on Forest Stand Condition: A case from Terai Community Forest of Nepal Baral S. (Austria) Forest Restoration Strategies in Brazil within the Scope of the New Forest Code Soterroni A. (Austria) KG I - 1224 (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future T3 - Forestry classic' for the future Skovsgaard J. (Sweden) Chung W. (United States of America), Saranpää P. (Finland), Barbour J. (United States of America) | Organizer Chairs 710 | Rajora O. (Canada) Aravanopoulos F. (Greece) Understanding the Genetic Basis of Local Adaptation to Climate and Genetic Responses to Climate Change in Northern Forest Trees Rajora O. (Canada) Local adaptation of Swiss stone pine (Pinus cembra) to the changing climate at the timberline Rellstab C. (Switzerland) Detecting adaptive traits in natural alpine populations of Norway spruce (Picea abies [L.] Karst) along altitudinal gradient at regional scale |
| 1511 3645 10:30 – 12:00 95 Organizer | Opportunities Assessment Methodology Wicaksono S. (Indonesia) Effect of Harvesting Practice on Forest Stand Condition: A case from Terai Community Forest of Nepal Baral S. (Austria) Forest Restoration Strategies in Brazil within the Scope of the New Forest Code Soterroni A. (Austria) KG I - 1224 (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future T3 - Forestry classic' for the future Skovsgaard J. (Sweden) Chung W. (United States of America), Saranpää P. (Finland), Barbour J. (United States of America) Resource efficient and cascade use of wood - a challenge for raw material research | Organizer Chairs 710 2276 4012 | Rajora O. (Canada) Aravanopoulos F. (Greece) Understanding the Genetic Basis of Local Adaptation to Climate and Genetic Responses to Climate Change in Northern Forest Trees Rajora O. (Canada) Local adaptation of Swiss stone pine (Pinus cembra) to the changing climate at the timberline Rellstab C. (Switzerland) Detecting adaptive traits in natural alpine populations of Norway spruce (Picea abies [L.] Karst) along altitudinal gradient at regional scale La Porta N. (Italy) Exome-wide population genetic variation underlying the climate adaption of loblolly pine, Pinus taeda L. Krutovsky K. (Germany) |
| 1511 3645 10:30 – 12:00 95 Organizer Chairs 2300 | Opportunities Assessment Methodology Wicaksono S. (Indonesia) Effect of Harvesting Practice on Forest Stand Condition: A case from Terai Community Forest of Nepal Baral S. (Austria) Forest Restoration Strategies in Brazil within the Scope of the New Forest Code Soterroni A. (Austria) KG I - 1224 (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future T3 - Forestry classic' for the future Skovsgaard J. (Sweden) Chung W. (United States of America), Saranpää P. (Finland), Barbour J. (United States of America) Resource efficient and cascade use of wood - a challenge for raw material research Saranpää P. (Finland) | Organizer Chairs 710 2276 4012 | Rajora O. (Canada) Aravanopoulos F. (Greece) Understanding the Genetic Basis of Local Adaptation to Climate and Genetic Responses to Climate Change in Northern Forest Trees Rajora O. (Canada) Local adaptation of Swiss stone pine (Pinus cembra) to the changing climate at the timberline Rellstab C. (Switzerland) Detecting adaptive traits in natural alpine populations of Norway spruce (Picea abies [L.] Karst) along altitudinal gradient at regional scale La Porta N. (Italy) Exome-wide population genetic variation underlying the climate adaption of loblolly pine, Pinus taeda L. Krutovsky K. (Germany) Genetic diversity at putatively neutral and adaptive loci in populations of silver fir from marginal and core areas |
| 1511 3645 10:30 – 12:00 95 Organizer Chairs | Opportunities Assessment Methodology Wicaksono S. (Indonesia) Effect of Harvesting Practice on Forest Stand Condition: A case from Terai Community Forest of Nepal Baral S. (Austria) Forest Restoration Strategies in Brazil within the Scope of the New Forest Code Soterroni A. (Austria) KG I - 1224 (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future T3 - Forestry classic' for the future Skovsgaard J. (Sweden) Chung W. (United States of America), Saranpää P. (Finland), Barbour J. (United States of America) Resource efficient and cascade use of wood - a challenge for raw material research | Organizer Chairs 710 2276 4012 | Rajora O. (Canada) Aravanopoulos F. (Greece) Understanding the Genetic Basis of Local Adaptation to Climate and Genetic Responses to Climate Change in Northern Forest Trees Rajora O. (Canada) Local adaptation of Swiss stone pine (Pinus cembra) to the changing climate at the timberline Rellstab C. (Switzerland) Detecting adaptive traits in natural alpine populations of Norway spruce (Picea abies [L.] Karst) along altitudinal gradient at regional scale La Porta N. (Italy) Exome-wide population genetic variation underlying the climate adaption of loblolly pine, Pinus taeda L. Krutovsky K. (Germany) |

| 42.45.42.45 | NCL 4420 (II.) |
|---------------|--|
| 12:45 – 13:45 | KG I - 1139 (University Freiburg) Side Events |
| BM 8 | International Society of Tropical Foresters Business Meeting |
| Organizer | Ward S. (Puerto Rico) |
| 13:30 – 16:00 | K 8 (Konzerthaus) |
| | All Division 4 (Forest Assessment, Modelling and Management) Meeting |
| 129 | D4 - Advances in multi-scale monitoring of forest biodiversity |
| Organizer | Chirici G. (Italy) |
| Chairs | McRoberts R. (United States of America) |
| 629 | Assessing leaf-on and leaf-off airborne laser scanning data to derive information surrounding structural diversity in UK forests Davison S. (United States of America) |
| 647 | Design-based kriging maps of forest tree species and size diversity Corona P. (Italy) |
| 1808 | Lorenz curves of Tree Size and Growth Inequality: Tree Competitive Dominance and Forest Structure assessed through LiDAR and Spectral Dominance <i>Valbuena R. (Finland)</i> |
| 1088 | European Mixed forests in Europe: towards an estimation Barbati A. (Italy) |
| 2983 | Pan-European forest biodiversity monitoring through the ICP-level I network. First results from the BIOSOIL-BIODIVERSITY project Chirici G. (Italy) |
| 1084 | Using the k-Nearest Neighbors technique for multivariate forest structural diversity estimation McRoberts R. (United States of America) |
| 998 | Logical consistency and accuracy using single-step versus multi-step processes to monitor forest biodiversity LeMay V. (Canada) |
| 962 | Estimation of stand biomass and other structural variables with LiDAR and error assessment at different sample sizes. Valbuena R. (Finland) |
| 13:30 – 16:00 | Rolf Böhme Saal (Konzerthaus) All Division 7 (Forest Health) Meeting |
| 198 | D7 - Forest biodiversity and resistance to natural disturbances |
| Organizer | Jactel H. (France) |
| 1798 | Experimental effects of forest diversity on bird insectivory at the global scale Castagneyrol B. (France) |
| 442 | Using seedlings with select traits to lower risk of herbivore browsing Griess V. (Canada) |

| 3013 | Tree diversity: Indirect effects on insect performance Bellone D. (Sweden) |
|------|--|
| 4015 | Role of multiple stressors on crown dieback & growth sensitivity of European beech (Fagus sylvatica L trees under recurrent droughts Chakraborty T. (Germany) |
| 3368 | Does biodiversity confer resistance to biological invasions? Jactel H. (France) |
| 486 | Does forest diversity reduce wind damage risk? Gardiner B. (France) |
| 371 | Bottom-up and top-down effects of tree diversity on insect herbivory on pedunculate oak Castagneyrol B. (France) |
| 456 | Contrasting vulnerability and resilience to drought-induced defoliation in mixed versus pure stands. Sousa-Silva R. (Belgium) |

| 3:30 – 16:00 | K 1 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|--------------|--|
| 119 | D4 - Quantifying disturbance effects and post-disturbance dynamics with repeatedly measured plots |
| Organizer | Eskelson B. (Canada) |
| Chairs | Fonseca T. (Portugal) |
| 319 | The National Forest Monitoring and Assessments (NAFORMA) process in Tanzania <i>Malimbvwi R. (Tanzania)</i> |
| 822 | Forest Monitoring and Human Impact Assessment on Forest Resources in Democratic Republic of East Timor Fonseca T. (Portugal) |
| 2061 | How do long-term increases in background mortality rates and disturbance each affect forest biomass? Vanderwel M. (Canada) |
| 2062 | Structure and dynamics of woody debris as indicators of forest disturbance Merganicová K. (Slovakia) |
| 1063 | Evaluation of carbon loss derived from wind disturbance in planted forests in Japan using repeated measurement data of permanent plots Mitsuda Y. (Japan) |
| 4170 | Vegetation Pattern 8 Years After the Eruption of Chaiten Volcano, Chile Promis A. (Chile) |
| 657 | Post-disturbance regeneration dynamics in the mountain spruce forests in Central Europe - lessons from 20 years of natural development Svoboda M. (Czech Republic) |
| 1526 | Post-fire fine fuel dynamics in California's forests Eskelson B. (Canada) |

| 13:30 – 16:00 | K 2-4 (Konzerthaus) All Division 7 (Forest Health) Meeting |
|---------------|--|
| 56 | D7 - Modern approaches in evaluating ozone impacts on forests |
| Organizer | Hoshika Y. (Italy) |
| 615 | Metabolomics and transcriptomics elucidate the mechanisms behind the detoxification and defence processes against ozone stress – insights from the birch and aspen studies Oksanen E. (Finland) |
| 1686 | The new generation Free Air Controlled Exposure (FACE) system for exposing communities of deciduous tree species to 03 in Japan Agathokleous E. (Japan) |
| 1237 | Ontogenetic changes in grazing characteristics of leaf beetles on canopy of seedlings and young trees of Japanese white birch grown in free-air ozone enrichment systems. Koike T. (Japan) |
| 587 | A mechanistic modelling approach to link ozone susceptibility to constitutive and induced defenses Grote R. (Germany) |
| 1927 | Epidemiological analysis: a new approach for forest protection against ozone Sicard P. (France) |
| 3511 | Assessing the potential impact of ozone on native vegetation: findings from the long-term pan-European monitoring program of ICP Forests Gottardini E. (Italy) |
| 3928 | Environmental predictors of the effects of ozone concentration and stomatal ozone flux on net ecosystem production of Norway spruce: A case study from Czech Republic Cudlin P. (Czech Republic) |

| 13:30 – 16:00 | K 5-7 (Konzerthaus) |
|---------------|--|
| | All Division 4 (Forest Assessment, Modelling and Management) Meeting |

| 79 | D4 - Decision support models (DSM) for optimal forest management (FM) with a glance to the past and a view to the future |
|-----------|--|
| Organizer | Zadnik-Stirn L. (Slovenia) |
| Chairs | Hodges D. (United States of America) |
| 31 | Measuring and ranking FM scenarios using particular multivariate and multi-criteria methods Hodges D. (United States of America) |
| 1514 | Decision support model for sustainable and multifunctional forest management (FM) based on fuzzy and adaptive dynamic programming Zadnik-Stirn L. (Slovenia) |
| 1728 | Modeling optimal forest management and associated risks Krasovskii A. (Austria) |
| 310 | Application of group analytic hierarchy process in strategic forest management <i>Groselj P. (Slovenia)</i> |
| 777 | Integration of strategic and tactical levels in the management of industrial forest plantations using multi-criteria optimization models Belavenutti P. (Germany) |

| 944 | Understanding the past, anticipating the future: assessment of recent changes in Slovenian forestry sector using qualitative methods Leban V. (Slovenia) |
|------|---|
| 1765 | Optimisation of decision making in forest management planning of Central European pre-mature forest stands Výbostok J. (Slovakia) |
| 3815 | A decision support system for climate change adaptation at the xeric forest limit <i>Bidló A. (Hungary)</i> |
| 3469 | Analysis of timber harvesting behavior in forests in the northeastern United States Kovach K. (Germany) |

| 13:30 – 16:00 | K9 (Konzerthaus) All Division 9 (Forest Policy and Economics) Meeting |
|---------------|--|
| 65 | D9 - Multifunctional tropical forest landscapes: finding solutions in science and practice |
| Organizer | Günter S. (Germany) |
| Chairs | Sunderland T. (Indonesia) |
| 895 | Landscape Forestry in the Tropics Guenter S. (Germany) |
| 4062 | How opportunity costs are linked to deforestation patterns in tropical Ecuadorian landscapes Ojeda Luna T. (Germany) |
| 4072 | How different forest uses influences on ecosystems services on the tropical wet forest Eguiguren Velepucha P. (Germany) |
| 3344 | Livelihood strategies among migrant settlers and indigenous population in the Ecuadorian Amazon: an element to landscape approach Torres B. (Ecuador) |
| 3375 | Carbon Storage of Various Land Uses in Eastern Visayas, Philippines Sales-Come R. (Philippines) |
| 4110 | Integrated Natural Resources and Environment Management: Synthesis of State of Knowledge and Practice from the Philippines Pulhin J. (Philippines) |
| 4039 | Revisiting change in the miombo: uses and problems Gumbo D. (Zambia) |
| 2601 | Applying ecosystem service approach in navigating forest contributions to rural livelihoods Ahammad R. (Australia) |
| 3248 | Forests, food and nutrition: A policy perspective Sunderland T. (Indonesia) |

| 13:30 – 16:00 | Room "Basel + Mühlhausen" (Novotel Freiburg) Theme 1: Forests for People | 1052 | Automatic mapping of forest stands based on three-dimensional point clouds derived from terrestrial laser-scanning |
|---------------|--|----------------|--|
| 176 | T1 - Agroforestry - the future of land use management? | | Schwarz M. (Austria) |
| Organizer | Morhart C. (Germany) | 1386 | A workflow for remote sensing assisted forest planning in south-west Germany |
| Chairs | Spiecker H. (Germany), Dupraz C. (France) | 1422 | Schumacher J. (Germany) |
| 1383 | Truffle cultivation as an alternative for agroforestry in Poland Rosa-Gruszecka A. (Poland) | 1422 | Remote sensing based timber volume modelling on plot level: influence of ground sampling methods Kirchhöfer M. (Germany) |
| 1474 | Nutrient response and nutrient retention efficiency in temperate agroforestry systems Göbel L. (Germany) | 13:30 – 16:00 | KG I - 1228 (Uni Freiburg) All Division 7 (Forest Health) Meeting |
| 4125 | Agroforestry a tool to mitigate climate change Mosquera Losada M. (Spain) | 300 | D7 - Pine pitch canker - strategies for management of Gibberella circinata in greenhouses |
| 808 | Bundles of ecosystem services provided by agroforestry in European landscapes | Organizar | and forests (Pinestrength) |
| | Kay S. (Switzerland) | Organizer | Diez Casero J. (Spain) Woodward S. (United Kingdom) |
| 2808 | Conservation benefits of tropical multifunctional land-use in and around a forest protected area of Bangladesh | Chairs 3035 | COST Action FP1406: Pine pitch canker – strategies for management of Gibberella circinata in greenhouses and |
| 704 | Mukul S. (Bangladesh) Homestead agroforestry for forest conservation and ecosystem services - A case in the deforested area of Bangladesh | 3033 | forests (PINESTRENGTH) Diez Casero J. (Spain) |
| | Rahman A. (Bangladesh) | 2503 | Evaluation of soil and alternative hosts as potential inoculum sources of Fusarium circinatum in plantations of |
| 1443 | On-farm tree products: How reliant are smallholder farmers on this resource for subsistence needs? Lamond G. (United Kingdom) | | Pinus radiata Hernández Escribano L. (Spain) |
| 2706 | Assessing the adaptation to climate change of agroforestry systems by field experiments and numerical simulations. | 2494 | Impact of climatic factors in the establishment of pine pitch canker in new disease scenarios <i>Elvira-Recuenco M. (Spain)</i> |
| | Dupraz C. (France) | 2329 | Effect on in planta virulence and extracellular lignocellulolytic enzyme production of Fusarium circinatum isolates infected by FcMV1 and FcMV2-2. Diez Casero J. (Spain) |
| 13:30 – 16:00 | Room "Baden-Baden" (Novotel Freiburg) All Division 4 (Forest Assessment, Modelling and Management) Meeting | 1900 | Susceptibility of Scottish Scots pine to the Pine Pitch Canker Pathogen, Fusarium circinatum Woodward S. (United Kingdom) |
| 101 | D4 - 125 Years of Forest Inventories - Past, Present and Future | 2575 | Susceptibility of Turkish Conifer Species to Fusarium circinatum |
| Organizer | Mussong M. (Germany) | | Dogmus- Lehtijärvi H. (Turkey) |
| Chairs | Marchetti M. (Italy) | 3367 | Management of Fusarium circinatum in Pinus radiata plant production at the Arauco nurseries in Chile |
| 361 | Forest data acquisition in Nordic countries – roadmap for the future Kangas A. (Finland) | | Ahumada R. (Chile) |
| 4162 | Current Forest Inventory Initiatives to Promote Sustainable Forest Management in Brazil Veloso de Freitas J. (Brazil) | 13:30 – 16:00 | KG I - 1009 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
| 1887 | New improvements in the French national forest inventory: towards the integration of forest resources | 178 | D9 - Forest policies in the Baltic and Central and Eastern European (CEE) regions |
| | assessment and ecosystem monitoring Morneau F. (France) | Organizer | Brukas V. (Sweden) |
| 454 | Friend or Foe? Assessing the diversity-productivity relationship using forest inventory data. | _ | Salka J. (Slovakia) |
| 15 1 | Sousa-Silva R. (Belgium) | 1268 | Formation and Political Power of Forest Owners Associations in the Czech Republic and Slovakia |
| 635 | Trees recognition based on branch extraction from UAV images | | Sálka J. (Slovakia) |
| | Pereira J. (Germany) | 1289 | Actors and effects of their power on forest management in Slovakia Smrecek R. (Slovakia) |
| | | | |

| 3946 | Implementation of forest-related policies by state forest institutions from former Yugoslavian countries: state of the art and future perspectives Stevanov M. (Slovakia) |
|------|--|
| 2617 | Strategic options for state forest institutions in Poland. Evaluation by the 3L Model and ways ahead <i>Chudy R. (Norway)</i> |
| 1171 | The restitution process in the Czech Republic and Slovakia. Directed the same beginning to the same results? Jarsky V. (Czech Republic) |
| 1103 | The state and focus of forest ownership and policy research in Estonia Põllumäe P. (Estonia) |
| 3298 | Forestry in transition: A review of forest policy research in the post-socialist realm Nazare A. (Sweden) |
| 2027 | Reimagining forest policy, institutions and instruments according to societal expectations the focus on Ukraine and beyond Soloviy I. (Ukraine) |
| 1705 | The command-and-control model of forest governance in Lithuania and Slovakia: past, present and possible future. Makrickiene E. (Lithuania) |

| 13:30 – 16:00 | KG I - 1010 (University Freiburg) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---------------|---|
| 128a | D4 - Building relevant, harmonised, comprehensive, reliable and up-to-date forest information for bioeconomy outlooks at European level - a joint ENFIN-DIABOLO session |
| Organizer | Packalen T. (Finland) |
| Chairs | Lier M. (Finland), Schadauer K. (Austria) |
| 1061 | Potential of remote sensing based forest attribute modelling for harmonising NFIs across Europe Kirchhöfer M. (Germany) |
| 3090 | Matching plot-level tree maps with 3D remote sensing data towards the development of small area estimations Fadili M. (France) |
| 2474 | A sensitivity analysis of forest tree mock-up reconstruction methods from phase-shift based tLiDAR data Casella E. (United Kingdom) |
| 2776 | Improved ways for assessing and monitoring the connectivity of forest habitats: how much we gain from high-resolution spatial data? Mateo-Sánchez M. (Spain) |
| 4063 | Future 3D remote sensing data support for National Forest Inventories Nilsson M. (Sweden) |
| 3321 | Harmonisation of Stem Volume Estimates in Europe Gschwantner T. (Austria) |
| 3182 | Pan-European harmonised biomass models for the most frequent forest species |

Bouriaud O. (Romania)

| 1955 | Harmonising, improving and using social and recreational data in National Forest Inventories across Europe Edwards D. (United Kingdom) |
|------|---|
| 3412 | How can NFIs meet the growing demand for forest information at European scale? - Lessons learned from the last decade Schadauer K. (Austria) |

| l3:30 – 16:00 | KG I - 1015 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
|---------------|--|
| 118 | D6 - Nature-based tourism and recreation's role in sustaining forests and improving people's quality of life |
| Organizer | Stein T. (United States of America) |
| Chairs | Fredman P. (Norway) |
| 3818 | Exploring small cities' influence on nature-based tourism and community development Rodriguez S. (Mexico |
| 2092 | Giving locals a say in promoting tourism by enhancing recreation in the wildland urban interface in Florida, USA Stein T. (United States of America) |
| 941 | Recreational hunting – a source of income for forest owners and a contested pastime: A survey of attitudes of the general public in Denmark Jensen F. (Denmark) |
| 1861 | From place-based natural resources to value-added experiences: Future nature-based tourism in the bio-economy Fredman P. (Norway) |
| 3009 | Touristic and recreational uses of forests in peri-urban areas: a case study in Veneto (Northern Italy) Secco L. (Italy)) |
| 2627 | Rural tourism: Its feasibilty frontier as seen from empirical evidence Paredes M. (Mexico) |
| 2677 | Low density nature based tourism, a study case from Mexico Paredes M. (Mexico) |
| 1653 | A Survey on Awareness and Demand of Urbanites about Introduction of Mountain Eco-tourism Kim J. (South Korea (ROK)) |
| 1098 | Changes in the livelihoods of people in protected areas in China Wang W. (Canada) |

KG I - 1098 (University Freiburg) 13:30 - 16:00 All Division 3 (Forest Operations Engineering and Management) Meeting D3 - Quality Assessments along the wood supply chain for optimal use of the forest

resource

Organizer Brüchert F. (Germany) Chairs Achim A. (Canada) Challenges in addressing merchantability of forest stands throughout the supply chain in the US Pacific Northwest Washington C. (United States of America)

| 1625 | New methods to estimate, analyze and map forest characteristics, wood quality and resources over large landscapes at high resolution Anderson N. (United States of America) |
|------|--|
| 1390 | Defining the value of the stand using integrated LiDAR and multisource GIS data. Sanz Pareja B. (Finland) |
| 728 | Estimating external quality of stems for pre-harvest assessment of timber assortments Malinen J. (Finland) |
| 428 | Using acoustic tools to select for improved mechanical properties in a tree breeding programme for Sitka spruce (Picea sitchensis) Macdonald E. (United Kingdom) |
| 4003 | Modelling wood quality of Douglas fir in France Longuetaud F. (France) |
| 1994 | Accuracy of knot end point detection in CT images of Douglas-fir logs <i>Longo B. (Germany)</i> |
| 4017 | Impact of partial cutting on sawmill profitability in the eastern boreal forest of Canada <i>Achim A. (Canada)</i> |

| 13:30 – 16:00 | KG I - Aula (University Freiburg) Theme 5: Forests, Soil and Water Interactions |
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| 40 | Tr Fashinduslami has addangat managamant fan instanciación, sanhan sannastratio |

| 48 | T5 - Ecohydrology-based forest management for water provision, carbon sequestration and enhanced climate resilience |
|-----------|--|
| Organizer | del Campo A. (Spain) |
| Chairs | Liu S. (China) |
| 2572 | Forestry and water budget in Germany – consequences for choice of tree species and for forest management Müller J. (Germany) |
| 2630 | Impacts of Wildland Fires on Streamflow in the United States: Empirical Evidence and Modeling Results Sun G. (China) |
| 3372 | Potential biomass-water synergies in dryland farming systems Sochacki S. (Australia) |
| 1304 | Eco-hydrological effects of forest management of Aleppo pine post-fire regeneration forest at catchment scale <i>González-Sanchis M. (Spain)</i> |
| 2116 | Assessment of the water retention potential of forest soil for clean water supply <i>Choi H. (South Korea (ROK))</i> |
| 3122 | Forest soil water budgets under a changing climate – modelling framework and example application to the |

forests of Baden-Württemberg, Germany Puhlmann H. (Germany) Thinning management increases tree growth by delaying the drought onset in a Mediterranean evergreen oak Limousin J. (France)

Water status and water use of temperate European forest tree species during naturally occurring drought Dietrich L. (Switzerland)

| | KG I - 1199 (University Freiburg) Theme 2: Forests and Climate Change |
|-----------|--|
| 113 | T2 - What is the potential for CO2 mitigation of forest soils? |
| Organizer | Saint-Andre L. (France) |
| Chairs | Derrien D. (France) |
| 3425 | Impact of forest management on organic carbon storage in soils Augusto L. (France) |
| 4178 | Impact of afforstations on soil organic carbon stocks – what do we really know? Don A. (Germany) |
| 2053 | Changes in soil carbon stocks and turnover rates after land-use conversions in Thailand's tropical forest ecosystems Sakai M. (Japan) |
| 1850 | Land use, land cover changes and their effects on soil organic carbon stocks in a semi arid forest in Zimbabwe <i>Mujuru L. (Zimbabwe)</i> |
| 2851 | Microbial decomposers and their role in forest C-sequestration Keiblinger K. (Austria) |
| 3265 | Impact of tree species on soil organic carbon Boca A. (United States of America) |
| 408 | Effects of tree species change on forest soil carbon in Western Norway (BalanC) – preliminary results. Kjønaas O. (Norway) |
| 3222 | Contribution of deep soil organic matter to forest-atmosphere carbon exchanges: a worldwide isotopic approach Balesdent J. (France) |
| 3618 | What is the capacity and potential for carbon sequestration in forest soils in the UK? Vanguelova E. (United Kingdom) |
| | |

13:30 – 16:00 KG I - 1224 (University Freiburg) Theme 1: Forests for People

149 T1 - Synergies and Conflicts in the Provision of Ecosystem Services by Small-scale Forest

| | Owners |
|-----------|---|
| Organizer | Hartebrodt C. (Germany) |
| 781 | Forest ecosystem services in Germany: how to benefit the private forest owners? Dieter M. (Germany) |
| 1617 | Awakening of the ecosystem service values of the forest in Japan and Taiwan Ota I. (Japan) |
| 3502 | A novel approach to forest owner typologies – discourses and power Tikkanen J. (Finland) |
| 414 | Nature protection payments for forest owners – problem and solution approach from the perspective of the Agency Theory Franz K. (Germany) |

| Economic Opportunities for Forest Landowners (US) for Ecosystem Services Provided on Privately-owned Lands and Waters Jones D. (United States of America) |
|---|
| Estimating the Supply of Ecosystem Services from Small-Scale Forests: Challenges and Opportunities Japelj A. (Slovenia) |
| Paraguay's Atlantic Forest Cover Dynamics and Ecosystem Services Perception; a household survey case study Da Ponte E. (Germany) |
| What Accounting System and Accountancy Network Can Tell Us about Financial Consequences of the Provision of Ecosystem Services **Hartebrodt C. (Germany)** |
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| HARTEDIOAT C. (Germany) |
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| KG II - Auditorium Maximum (University Freiburg) Theme 2: Forests and Climate Change |
| T2 - Genetics and Genomics for Conservation, Climate Adaptation and Sustainable Management of Forests |
| Rajora O. (Canada) |
| Rajora O. (Canada) |
| Genomics and Forest Quantitative Genetics <i>El-Kassaby Y. (Canada)</i> |
| First analysis of QTL mapping in Cupressus sempervirens for traits of adaptive significance Avramidou E. (Greece) |
| Enhanced classification of forest tree seedlots with SNPs vs. microsatellites Heinze B. (Austria) |
| Transposon activation tagging in trees for gene function discovery Fladung M. (Germany) |
| Stress related overview of two poplar homologues of GRAS/SCL TF: from characterization, cloning to differential expression <i>Galovic V. (Serbia)</i> |
| Identification and characterization of DNA methyltransferases and DNA demethylases in Salix purpurea, a model plant for bioenergy and phytopharmaceutical products Gomes C. (Poland) |
| Sustaining Pinus strobiformis into the Future: Reciprocal Transplant Gardens and Disease Resistance Trials Waring K. (United States of America) |
| Triploid Aspen in the US: Occurrence and Implications Mock K. (United States of America) |
| |

Panel Discussion

| 5:30 – 19:00 | K 1 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|--------------|--|
| 67 | D4 - Managerial Economics and Accounting: Where We have Been & Where We Can Go |
| Organizer | Hodges D. (United States of America) |
| Chairs | Zadnik-Stirn L. (Slovenia) |
| 1220 | What a Long Strange Trip It's Been: A Look Back at 125 Years of Managerial Economics and Accounting Hodges D. (United States of America) |
| 1736 | Forest Management and Public policy in Fast Growing Plantations: Past, Present and Future Morales Olmos V. (Uruguay) |
| 2774 | Economics of wood-based bioenergy: review of the past and an exploration of future research directions and policy deliberations Grebner D. (United States of America) |
| 2201 | Advancing the Valuation and Measurement of Forest Ecosystem Services: Future Research/Management Directions Japelj A. (Slovenia) |
| 1597 | Rules of thumb for invasive species rapid response based on bioeconomic rates of return Sims C. (United States of America) |
| 1288 | The Future of Forest Management: Developing a Theory of Planning <i>Kovac M. (Slovenia)</i> |
| 1462 | Experimental Analysis of the Climate Change Impact on Forest Economics in a Selected Territory of the Czech Republic Sisak L. (Czech Republic) |
| 1284 | Return on wood production by tree species Leppänen J. (Finland) |

| 6:30 – 19:00 | K 2-4 (Konzerthaus) All Division 3 (Forest Operations Engineering and Management) Meeting |
|--------------|--|
| 169 | D3 - New comminution technologies and logistics to improve the quality of forest energy feedstock |
| Organizer | Han H. (United States of America) |
| Chairs | Spinelli R. (Italy), Eliasson L. (Sweden) |
| 426 | ISO standards for solid biofuels and their application in practise <i>Kofman P. (Ireland)</i> |
| 92 | Managing knife wear and chipper settings to increase productivity, fuel efficiency and product quality Spinelli R. (Italy) |
| 756 | Finite element analysis to predict in-forest stored harvest residue moisture content Belart F. (United States of America) |
| 1817 | Chipping productivity, cost and product quality of logging residue by extraction methods <i>Oh J. (South Korea (ROK))</i> |
| 1025 | Evaluating the performance of star and deck screen machines separating biomass feedstocks <i>Han H. (United States of America)</i> |
| | |

| 655 | The effect of screening and drying of forest residue chips on fuel quality and combustion behavior in small boilers (< 50 kW) Kuptz D. (Germany) |
|------|---|
| 1022 | Windrowing and fuel chip quality of some residual forest biomasses in North Sweden Fernandez Lacruz R. (Sweden) |
| 711 | Forest biomass harvesting productivity and cost analysis in Australia Reza Ghaffariyan M. (Australia) |
| 2864 | Improvements of the chip supply system to reduce supply costs Eliasson L. (Sweden) |

| 16:30 – 19:00 | K 5-7 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---------------|---|
| 46 | D4 - European Climate Smart Forestry |
| Organizer | Nabuurs G. (Netherlands) |
| 4105 | Alternative climate change mitigation strategies and their relevance in European climate smart forestry Lindner M. (Germany) |
| 3925 | Active forest management and its role for climate change mitigation Lundmark T. (Sweden) |
| 2672 | How much wood can we expect from European forests? Schelhaas M. (Netherlands) |
| 4151 | Toward projections of an overall and comprehensive carbon balance of the forest sector Peyron J. (France) |
| 3707 | Impact of governance instruments on wood supply in a climate change environment <i>Barreiro S. (Portugal)</i> |
| 1551 | European climate smart forestry Nabuurs G. (Netherlands) |
| 1914 | Regional forest productivity and economy designate European Climate Smart Forestry Yousefpour R. (Germany) |
| 964 | Inclusion of aerosols is essential for analysing the climate impacts of boreal forest use <i>Vanhatalo A. (Finland)</i> |

| 16:30 – 19:00 | K 8 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---------------|--|
| 1 | D4 - Advances in the use of lidar data for forest carbon accounting |
| Organizer | McRoberts R. (United States of America) |
| Chairs | Naesset E. (Norway) |
| 010 | Comparison of different tupes of auxiliary remote concing data to improve estimates of hismass in dry Africa |

Chirici G. (Italy)

| Chairs | Naesset E. (Norway) |
|--------|---|
| 810 | Comparison of different types of auxiliary remote sensing data to improve estimates of biomass in dry African |
| | woodlands |
| | Naesset E. (Norway) |
| 2999 | Integrating airborne and terrestrial laser scanning in designing new approaches to forest inventory sampling |

| 2397 | Lidar-assisted national forest inventories: - for which variables and domains does it work well? <i>Ståhl G. (Sweden)</i> |
|------|--|
| 1877 | Statistical issues with modeling individual tree above ground biomass Gregoire T. (United States of America) |
| 2794 | A multi temporal ALS assessment to monitor the growth of above ground forest carbon in restored corridors connecting natural reserves in Brazil <i>Rodriguez L. (Brazil)</i> |
| 4127 | Estimation of Trees Outside Forest Using LiDAR Zara P. (Philippines) |
| 1614 | Using advanced airborne remote sensing as a sampling tool to support the forest inventory of interior Alaska Andersen H. (United States of America) |
| 1104 | Hierarchical model-based inference with GLMM for forest inventories Saarela S. (Sweden) |
| 1082 | Sequential adaptive sampling for remote regions McRoberts R. (United States of America) |

| 5:30 – 19:00 | Rolf Böhme Saal (Konzerthaus) All Division 7 (Forest Health) Meeting |
|--------------|---|
| 59 | D7 - Responses to the increasing threat of insect pests to sustainable plantation forestry |
| Organizer | Hurley B. (South Africa) |
| Chairs | Branco M. (Portugal), Slippers B. (South Africa) |
| 1572 | Pathways approaches inform early-detection strategies to slow pests invasion to planted forests Bulman L. (New Zealand) |
| 1290 | Early detection of alien wood-boring beetles in southern Europe: from the arrival to the forests Faccoli M. (Italy) |
| 128 | The Use of Semiochemicals for Monitoring and Management Allison J. (Canada) |
| 1453 | Biological control of insect pests in non-native forest plantations: opportunities and constrains Branco M. (Portugal) |
| 1028 | Eucalyptus insect pests and their management in China Wu Y. (China) |
| 3076 | A multi-omics approach to understand molecular mechanisms of host resistance in Eucalyptus grandis against the gall wasp, Leptocybe invasa Naidoo S. (South Africa) |
| 961 | BiCEP: Building collaboration to advance biological control Lawson S. (Australia) |
| 3320 | Predicting the impact of processionary moth defoliation on pine plantation production over a full timber rotation Jactel H. (France) |
| 2069 | Gall-forming wasps threaten non-native plantation-grown Eucalyptus Dittrich-Schröder G. (South Africa) |

| | Room "Basel + Mühlhausen" (Novotel Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
|-----------|---|
| 42 | T3 - Open Session |
| Organizer | Wong A. (Malaysia) |
| 2942 | Effects of tree diversity on productivity and stability in Short Rotation Coppice (ECOLINK-Salix) Arranz C. (Germany) |
| 3567 | Future foresight for the forest sector Vanclay J. (Australia) |
| 2973 | Life-cycle Assessment of Wood Products from Natural Tropical Forests in Costa Rica Alice F. (Costa Rica) |
| 2277 | Reproductive phenology of pure and mixed Nothofagus forests of southern Patagonia <i>Toro Manriquez M. (Argentina)</i> |
| 932 | Continuous cover forestry as a cost-efficient tool to increase multifunctionality of boreal production forests Peura M. (Finland) |
| 2093 | Silvicultural management options in Alaska forests to increase forest biodiversity and enhance ecosystem services Deal R. (United States of America) |
| 3863 | Studies on the durability of several tropical wood species Dumarçay S. (France) |
| 1006 | Presence of anti-fungal sapwood and heartwood extractives of selected decay resistant and decay susceptible Malaysian hardwoods and Scots pine (Pinus sylvestris) Wong A. (Malaysia) |
| 703 | Fungal glutathione transferases and wood extractives Gelhaye E. (France) |
| | |

| – 19:00 | Room "Baden-Baden" (Novotel Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|----------------|---|
| 109 | T4 - Promoting forest biodiversity through structural complexity? New advances in the assessment and restoration of habitat structures in forests |
| Organizer | Braunisch V. (Germany) |
| Chairs | Bollmann K. (Switzerland), Müller J. (Germany) |
| 3674 | Assessing the relative importance of vegetation structure for forest biodiversity: new insights from LiDAR remote sensing for conservation Bollmann K. (Switzerland) |
| 1455 | Faunistic Indicators for structural diversity in temperate forests: a systematic niche-based approach Magg N. (Germany) |
| 2434 | Does managing for habitat conservation enhance biodiversity and ecosystem services in Apennine beech forests? Barbati A. (Italy) |
| 3264 | The conservation of forest structural complexity through retention forestry: a bird's perspective. Basile M. (Germany) |
| | |

| 3776 | Deadwood accumulation in beech forest triggers community homogenization in formerly different management intensities Müller J. (Germany) |
|------|---|
| 3703 | Forest management cessation and biodiversity: a synthesis of a nationwide French project Gosselin F. (France) |
| 3227 | Please do not disturb - A chance is needed in the way forests are treated after natural disturbances <i>Thorn S. (Germany)</i> |
| 1775 | Forest biodiversity in numbers – The German National Forest Inventory as a basis for forest biodiversity monitoring Winter S. (Germany) |
| 3994 | Multi-scale biodiversity monitoring in the Black Forest National Park Gärtner S. (Germany) |

| :30 – 19:00 | K9 (Konzerthaus) All Division 3 (Forest Operations Engineering and Management) Meeting |
|-------------|--|
| 154 | D3 - Sustainable and Constructive Strategy of Ergonomic Research in Forestry |
| Organizer | Yamada Y. (Japan) |
| Chairs | Grzywinski W. (Poland), Yovi E. (Indonesia) |
| 1681 | Study courses on forest ergonomics aiming at basic competences – examples from the University of Freiburg Lewark S. (Germany) |
| 4167 | Perspectives on forest ergonomics Heinimann H. (Singapore) |
| 421 | Analyzing OSH Problems in Indonesian Forest Operation: A STAMP-System Dynamics Approach Yovi E. (Indonesia) |
| 1690 | Development of ergonomics in Polish forestry Sowa J. (Poland) |
| 2136 | Mechanization in forestry and benefits at the local level. Polish study Nowacka W. (Poland) |
| 2326 | Sustainable and Constructive Strategy of Ergonomic Research in Forestry Yamada Y. (Japan) |
| 2798 | Physiological workload at forester and deputy forester workstations in Poland Grzywinski W. (Poland) |
| 1400 | The course of physiological functions in connection with listening to selected sounds Filo P. (Czech Republic) |
| 2028 | Eye-tracking studies – new opportunities in analyzing work processes in forestry Szewczyk G. (Poland) |

| 16:30 – 19:00 | KG I - 1009 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting | 2332 | Current advances on mapping burned areas in Mediterranean with Sentinel-2 and Sentinel-1 data <i>Koutsias N. (Switzerland)</i> |
|------------------|---|----------------|---|
| 116 | D9 - Forest and Natural Resources Policy and Governance in Latin America and the Caribbean | 2799 | The use of National Forest Inventory data for the conservation status assessment of Natura 2000 forest habita in Europe Alberdi I. (Spain) |
| Organizer 676 | Burns S. (Germany) Sustainable Forest Management translations in a global-local nexus: an institutional analysis in Caatinga biome, Brazil. | 2265 1847 | Fire probability estimated by National Forest Inventories in Iberian Peninsula Castro Rego F. (Portugal) Development of national LULUCF GHG projection system: the implications for forest and land use policy in |
| 1988 | Mattei Faggin J. (Netherlands) Renewable energies policy in Uruguay: the case of the Northeast region Stuhldreher A. (Uruguay) | 104/ | Development of national Ecocor and projection system, the implications for lorest and land use policy in Lithuania Kulbokas G. (Lithuania) |
| 272 | Past, present and future of forest policy in Chile Grosse H. (Chile) | 2215 | Timber production outlook: European Forestry Dynamics Model vs. German WEHAM <i>Klatt S. (Germany)</i> |
| 3150 | Critical analysis of the forest policy development in Argentine and some incidences on the Delta del Paraná transformations Fernandez E. (Argentina) | 3843 | A review of methodologies for analysing long-term sustainable biomass supply Packalen T. (Finland) |
| 2755 | Actors' perception on future wood production in a cross-border amazonian region: challenges for a sustainable production | 16:30 – 19:00 | KG I - 1015 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
| 1151 | Castro Euler A. (Brazil) The role of International and Transnational organizations in Latin American forest policy. The case of Argentina | 8 | D6 - The Role of Social Science in Forestry and Forest Management: Fostering a Culture of Disciplinary Inclusion |
| 2410 | Burns S. (Germany) Twenty five years of forest policy and governance in Costa Rica, tradeoff between discourse of conservation | Organizer | Fish T. (United States of America) |
| 2410 | and sustainable forest management M. Aymerich J. (Costa Rica) | Chairs 2691 | Stein T. (United States of America) Visitor Preferences for South Korea's National Park Management Alternatives: A Case Study on Seoraksan National Park |
| 1481 | Major bottlenecks in the regulation of the Environmental Reserve Quotas in Brazil Saretta C. (Brazil) | | Youn Y. (South Korea (ROK)) |
| 2391 | Argentina forest law 10 years later: has it really made it better for forests? Flores M. (Argentina) | 4144 | Brazil Park and Protected Area Management: Tapajós National Forest Case Study Burns R. (United States of America) |
| | | 3887 | Developing Nature-Based Tourism in Finland - Implications to Research <i>Tyrväinen L. (Finland)</i> |
| 16:30 – 19:00 | KG I - 1010 (University Freiburg) All Division 4 (Forest Assessment, Modelling and Management) Meeting | 4172 | Spatial analysis linking recreation supply and demand data with health and environmental justice in Alabama Morse W. (United States of America) |
| 128b | D4 - Building relevant, harmonised, comprehensive, reliable and up-to-date forest information for bioeconomy outlooks at European level - a joint ENFIN-DIABOLO session | 3419 | Local ecological knowledge (LEK) of forest practitioners and its relevance for biodiversity conservation – a literature review |
| Organizer | Packalen T. (Finland) | | Joa B. (Germany) |
| Chairs | Lier M. (Finland), Schadauer K. (Austria) | 649 | Influences of Culture on Management of Forests in Africa <i>Gaveta E. (Malawi)</i> |
| 3879 | The politics of forest information in EU: mapping use, provision, gaps and challenges related to forest information exchange Baycheva-Merger T. (Germany) | 1647 | Ensuring an integrated approach to the design of new eradication technologies – linking technical, social and cultural perspectives |
| 3782 | Monitoring forest disturbances based on NFI field inventory and Sentinel2 time series imagery | | Allen W. (New Zealand) |
| | Gallaun H. (Austria) | 3977 | Integrating forest conservation management practices with recreationists' perception of quality Stein T. (United States of America) |

| 16:30 – 19:00 | KG I - 1098 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting | 1108 | Tradeoffs between efficiency of the protection against rockfalls and vulnerability to fires in the French Alpine forests |
|---------------------|--|---------------|--|
| 91 | D9 - Interdisciplinary Perspectives on Illegal and Informal Logging and Related Trade: | | Dupire S. (France) |
| | Drivers, Impacts, and Governance Options | 2301 | How far can one throw a rock through a forest until it hits a tree? - A Boolean model approach Breschan J. (Switzerland) |
| Organizer Chairs | Leipold S. (Germany) Kleinschmit D. (Germany) | 2383 | Bark beetle disturbance alter forests' protective effects against snow avalanches |
| 2106 | Defining illegal forest activities and illegal logging | | Teich M. (United States of America) |
| 2100 | Tacconi L. (Australia) | 3080 | Estimation of Debris Flow Impact force from the flume experiments Eu S. (South Korea (ROK)) |
| 960 | Timber, numbers and definitions: a proposal for a novel quantification and qualification of illegal logging Omar Cerutti P. (Kenya) | 233 | Plant-Best: a novel plant selection tool for slope protection Gonzalez Ollauri A. (United Kingdom) |
| 718 | Multiple and Intertwined Impacts of Illegal Forest Activities Pacheco P. (Indonesia) | 2385 | Managing Forest Disturbance in a Changing Global Ecosphere: metaphysical, socio-political and ecological opportunities and constraints |
| 472 | Drivers of Illegal and Destructive Forest Use Pokorny B. (Germany) | | Jenkins M. (United States of America) |
| 2448 | Actors and Hidden Incentives in Nepal's Community Forest Timber Value Chain Basnyat B. (Nepal) | 16:30 – 19:00 | KG I - 1139 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
| 3699 | Global governance approaches to addressing illegal logging: uptake and lessons learned <i>Cashore B. (United States of America)</i> | 22 | D6 - Monitoring of society-forest relationship: from state of the art to future directions |
| 2393 | The Impacts of the EU Timber Regulation: Market Diversion and Product Substitution | Organizer | Hunziker M. (Switzerland) |
| | Zhang D. (United States of America) | Chairs | Bethmann S. (Germany) |
| 1917 | The Importance of Strengthening Governance for FLEGT and REDD+ Implementation: Why illegal logging remains a central challenge | 1059 | Recreational Indicators in the Danish National Forest Inventory – 10 Years of Experiences and Results Jensen F. (Denmark) |
| 1128 | Barber C. (United States of America) Spatial and temporal trends of forest cover as a response of policy interventions in the district Chitral, Pakistan; | 1856 | On-site data vs. population data vs. panel data - How to best monitor the society-forest relationship? Fredman P. (Norway) |
| | Zeb A. (Canada) | 1536 | Forest in Switzerland from the point of view of the Swiss public: Results of a nationwide monitoring survey Hunziker M. (Switzerland) |
| 16:30 – 19:00 | KG I - Aula (University Freiburg) Theme 5: Forests, Soil and Water Interactions | 549 | Integrating social and physical aspects of forest recreation – a new approach to a comprehensive monitoring Hegetschweiler T. (Switzerland) |
| 88 | T5 - Natural hazards and disturbance interactions in mountain forests | 1701 | An analysis of communicative interaction as a tool to understand the dynamics of society-forest relationship in |
| Organizer | Bebi P. (Switzerland) | | Baden-Württemberg Simminger E. (Germany) |
| Chairs | Stokes A. (France) | 3413 | Timber or Non-Timber Forest Products: How do stakeholders perceive the ecosystem services provided by |
| 2178 | Post-fire regeneration monitoring: integrating field-based and remote sensing at different spatial scales Morresi D. (Italy) | | tropical forests in Central Africa? Lhoest S. (Belgium) |
| 3673 | 30 years of research and transfer on protection forest against rockfall risks in France and Europe <i>Berger F. (France)</i> | 2313 | Quantification and regionalization of economic values of forest ecosystem services in Germany (ReWaLe) Elsasser P. (Germany) |
| 501 | Post-fire trends in the protective capacity against rockfall of European beech forests (Fagus sylvatica L.) in the southwestern Alps | 1020 | Knowing past and learning for future: assessing processes of monitoring nature-based recreation and tourism Sievänen T. (Finland) |
| | Maringer J. (Switzerland) | 1637 | The Swiss landscape monitoring program – bridging the gap between bio-physical space and perceived place <i>Kienast F. (Switzerland)</i> |

| 16:30 – 19:00 | KG I - 1199 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting | 3192 | Combining data on ownership characterist improved understanding of small-scale for |
|---------------|--|---------------|--|
| 124 | D9 - Forests and water Payments for Ecosystem Services | | Wilhelmsson E. (Sweden) |
| Organizer | Valatin G. (United Kingdom) | 1655 | Living and working at several places: the "nev Lidestav G. (Sweden) |
| Chairs | Schueler G. (Germany) | 1667 | Spider web of ownership relations in the Czec |
| 2891 | Incentives for woodland creation to improve water quality: an overview of the initial findings, activities and | 1007 | Jarsky V. (Czech Republic) |
| | ambitions of the PESFOR-W COST Action Valatin G. (United Kingdom) | 3126 | Status and challenges of small-scale private for |
| 4019 | Engaging Utilities Companies in Water PES: first evidences from European case-studies | | – Croatia case study Zunic M. (Croatia) |
| | Gatto P. (Italy) | | , , |
| 3204 | Quantifying the effectiveness of woodland creation measures for reducing agricultural diffuse pollution Nisbet T. (United Kingdom) | 16:30 – 19:00 | KG II - Auditorium Maximum (University |
| 3524 | Forest services to preserve drinking water: guidelines and partnerships | | All Division 7 (Forest Health) Meeting |
| | Fiquepron J. (France) | 71 | D7 - Early detection and monitoring of science |
| 367 | A quantitative analysis of factors affecting the implementation of water-related PES schemes Bösch M. (Germany) | Organizer | Hulbert J. (South Africa) |
| 865 | Comparing institutional characteristics of PES schemes for forests and watersheds: selected cases in Ecuador | Chairs | Garbelotto M. (United States of America), Coppo |
| 003 | Gordillo F. (Germany) | 3406 | Citizen science initiatives: opportunities to mana |
| 2563 | Classifying Forest Peatlands and Holistic Evaluation of Ecosystem Services | 507 | Hulbert J. (South Africa) |
| 1510 | Schueler G. (Germany) Forest management decisions when timber, carbon sequestration and water yields have an economic value. | 597 | Oregon Forest Pest Detectors: Oregon's first defe Saffell B. (United States of America) |
| 1310 | An application to Alpine forest | 620 | When policy meets science and public engagem |
| | Ovando P. (Switzerland) | | in the UK |
| 44.00 40.00 | | 3250 | Geoghegan H. (United Kingdom) Citizen science helps predict spread of emerging |
| 16:30 – 19:00 | KG I - 1228 (University Freiburg) Theme 1: Forests for People | 3230 | Garbelotto M. (United States of America) |
| 80 | T1 - Changing Forest Ownership: significance of trends and implications for management | 1519 | Co-development of a cross-sector nationwide pa |
| | and policy | | public of New Zealand Pawson S. (New Zealand) |
| Organizer | Lidestav G. (Sweden) | 2374 | Empowering volunteers in early detection and m |
| 3715 | Forest ownership in the ECE region: What do we know? Results from the Joint COST Action FACESMAP/UNECE/ FAO Enquiry on Forest Ownership in the ECE Region | | online tracking systems and UAVs |
| | Weiss G. (Austria) | 1424 | Gupta A. (United States of America) |
| 2554 | State Forest Management Organizations in Europe: performance, potential and challenges | 1434 | Observatree: A pioneering and award winning Tr with plant health professionals |
| 2072 | Liubachyna A. (Italy) | | Pérez-Sierra A. (United Kingdom) |
| 2272 | Forest advisory systems for changing forest owners in Europe Lawrence A. (United Kingdom) | 2402 | Stream monitoring for Phytophthora in Washing Elliott M. (United States of America) |
| 3312 | Towards impact and inclusiveness with forest owner related policies | | LIIIOTT WI. (UTITLEU STATES UT ATTIETICA) |
| | Hujala T. (Finland) | | |

| 20:00 – 21:30 | KG I - 1015 (University Freiburg) Side Events |
|---------------|--|
| BM 9 | Tropical Forest Datasets Networking Meeting |
| Organizer | Ward S. (Puerto Rico) |
| 20:00 – 21:30 | KG I - 1224 (Uni Freiburg) Side Events |
| BM 19 | IUFRO UNIT 4.05.00 Business Meeting |
| Organizer | Zadnik-Stirn L. (Slovenia) |





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| | | KONZERTH | IAUS | | | | |
|-------|--|------------------------|--|-------|--|--|--|
| | Rolf Böhme Saal | K1 | K2-4 | K5-7 | | | |
| 8:00 | | | | | | | |
| 8:30 | | | | | | | |
| 9:00 | | | | | | | |
| 9:30 | LIVE STREAM | | | | | | |
| 10:00 | OC Opening Ceremony More details on page 74 | | | | | | |
| 10:30 | LIVE STREAM | | | | | | |
| 11:00 | SID1 Statements by Federal Ministers. More details on page 74 | | | | | | |
| 11:30 | LIVE STREAM | | | | | | |
| 12:00 | SID2 Science meets Policy Panel Discussion. More details on page 75 | | | | | | |
| 13:30 | | | | | | | |
| 14:00 | Lunch break (Mensa) and visit of the Poster Exhibition (University, KG II, HS2121) | | | | | | |
| 14:30 | | | | | | | |
| 15:00 | LIVE STREAM | | 15a D4 - Impacts of environ- | | | | |
| 15:30 | SID3 Science meets Business Panel Discussion. | | mental changes on growth and productivity of managed and | | | | |
| 16:00 | More details on page 75 | | unmanaged forests | | | | |
| 16:30 | Coffee Break (Konzerth | aus & University KG I) | | | | | |
| 17:00 | LIVE STREAM | Cof | fee Break (Konzerthaus & University l | (G I) | | | |
| 17:30 | SID4 Science meets Stakeholders Panel Discussion More details on page 76 | | 15b D4 - Impacts of environ- | | | | |
| 18:00 | - More details on page 76 | | mental changes on growth and productivity of managed and | | | | |
| 18:30 | | | unmanaged forests | | | | |
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| KONZERTHAUS | | NOVOTEL | | |
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| К8 | К9 | Room "Basel + Mühlhausen" | Room "Baden-Baden" | Room "Colmar" |
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| | 305a D7 – Pine wilt disease: | | | |
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| 12:00 | | | | | | |
| 13:30 | | | | | 13:30 – 14:15 LIVE STREAM | |
| 14:00 | Lunch break (M | ensa) and visit of the Po | ster Exhibition (Universit | y, KG II, HS2121) | PC Press Conference | |
| 14:30 | | | | | More details on page 77 | |
| 15:00 | 7 D9 - Europe Inside | 186a T2 – Changing | 45a T4 – Forest | 140a D6 - Forest | | |
| 15:30 | / Outside - The export of European | forest disturbance regimes: Patterns, | policy and biodiversity strategy: | education - the consequences of | | |
| 16:00 | forest policies, objectives and | consequences, and responses | The relevance of forest genetic | interaction: innovation and | | |
| 16:30 | architecture through public and private | | resources | curricula | | |
| 17:00 | | | Coffee Break (Konzert | haus & University KG I) | | |
| 17:30 | 138 D9 - The po- | 186b T2 – Changing | 45b T4 - Forest | 140b D6 - Forest | | |
| 18:00 | tential contribution of forest related | forest disturbance regimes: Patterns, | policy and biodiversity strategy: | education - the consequences of | | |
| 18:30 | indicators to global issues | consequences, and responses | The relevance of forest genetic | interaction: innovation and | | |
| 19:00 | | | resources | curricula | | |
| 19:30 | | | | | | |
| 20:00 | | | 20:00 – 21:45 | 20:00 – 21:45 | | BM 6 Meliaceae |
| 20:30 | | | BM 5 Division 9 Business Meeting | BM 1 Division 3 Business Meeting | | Working Party (IUFRO Working |
| 21:00 | | | | | | |
| 21:30 | | | | | | |

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| KG I - 1199 | KG I - 1224 | KG I - 1228 | KG I - 1243 | KG II - Auditorium Maximum | KG II - 2121 |
| | | | | | Poster Exhibition |
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| L | unch break (Mensa) and v | visit of the Poster Exhibitio | n (University, KG II, HS212 | 1) | |
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| Da T5 – Soil Processes nd Sustainable Forest | | | | 82a T3 - Traditional | |
| | | | | coppice: ecology, | |
| | | | | coppice: ecology, silviculture and socio-economic | |
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| 09:30 – 10:45 | Rolf Böhme Saal (Konzerthaus Freiburg) | LIVE STREAM | Opening Ceremony |
|---------------|---|----------------------------------|---------------------------|
| | Welcome messages from representatives of h and stakeholders. | nost organizations, | |
| Moderator | Konstantin von Teuffel, Director of Forest Research Instit | tute Baden-Württember | g, Freiburg (Germany) |
| 1. | Michael Wingfield, President of IUFRO, Pretoria (South A | Africa) | |
| 2. | Peter Hauk, Minister for Rural Affairs and Consumer Prot | ection Baden-Württemb | oerg, Stuttgart (Germany) |
| 3. | 3. Philippe Richert, President of Grand Est Region, Strasbourg (France) t.b.c | | |
| 4. | Georg Schirmbeck, President of the German Forestry Co | uncil, Berlin (Germany) | |
| 5. | Marc Palahi, Director of European Forest Institute, Joens | uu (Finland) | |
| | Launch of the new IUFRO slogan Alexander Buck, IUFRO Executive Director, Vienna (Austr | ria) | |

| 10:45 - 11:30 | Rolf Böhme Saal (Konzerthaus Freiburg) | LIVE STREAM | Science in Dialogue Sessions | | | |
|---------------|---|----------------------|------------------------------|--|--|--|
| SID1 | Statements by Federal Ministers | | | | | |
| | Hermann Onko Aeikens, State Secretary, Federal Ministry of Food and Agriculture, Berlin (Germany) | | | | | |
| | Marc Chardonnens, Director, Federal Office of the Environment, Bern (Switzerland) | | | | | |
| | Gerhard Mannsberger, Head, Forestry Department, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Vienna (Austria) | | | | | |
| | Arnaud Brizay, Attaché for Agriculture, French Emba | ssy, Berlin (France/ | Germany) | | | |

In the series of Science in Dialogue Sessions, high-level speakers from various sectors will join a panel to discuss the overarching theme Challenges of sustainable development: implications for forests and forest science from their perspectives. Introductory statements will be followed by a moderated discussion with panelists, and an open discussion with the audience. The sessions will be streamed live.

These Sessions will deliver input for the IUFRO Strategy 2019 – 2024.

| 11:45 – 13:30 | Rolf Böhme Saal (Konzerthaus Freiburg) LIVE STREAM Science in Dialogue Sessions | | | | | |
|--|--|--|--|--|--|--|
| SID2 | Science Meets Policy | | | | | |
| Moderator | Alexander Buck, IUFRO Executive Director, Vienna (Austria) | | | | | |
| Keynote presentations | Göran Persson, Senior Advisor, Sveaskog and former Prime Minster of Sweden, Stockholm (Sweden) José Sarney Filho, Minister of Environment, Brasilia (Brazil) t.b.c. | | | | | |
| Panel | Hiroto Mitsugi, Assistant Director-General Forestry, Food and Agriculture Organization of the United Nations, Rome (Italy) | | | | | |
| | Manoel Sobral Filho, Director, UN Forum on Forests, Secretariat (USA) | | | | | |
| Gustavo A.B. da Fonseca, Director of Programs, Global Environment Facility, New York (USA) | | | | | | |
| | Tim Christophersen, Chief of Terrestrial Ecosystems Unit, UN Environment, Nairobi (Kenya) | | | | | |
| | Benoit Blarel, Practice Manager, Global Platforms, Environment & Natural Resources, The World Bank, Washington (USA) | | | | | |
| | Daniela Kleinschmit, Chair of Forest and Environmental Policy, University of Freiburg; IUFRO Coordinator of Division 9 Forest Policy and Economics, Freiburg (Germany) | | | | | |

| 15:00 – 16:30 | Rolf Böhme Saal (Konzerthaus Freiburg) | LIVE STREAM | Science in Dialogue Sessions | | | |
|----------------------|---|-----------------|------------------------------|--|--|--|
| SID3 | Science Meets Business Jointly co-hosted with Mondi AG | | | | | |
| Moderator | Gerald Steindlegger, ISS-Integrated Sustainability Solutions, Oberneukirchen (Austria) | | | | | |
| Introductory Keynote | Bhaskar Vira, Director, University of Cambridge Conservation Research Institute, Cambridge (United Kingdom) | | | | | |
| Panel | Christian Skilich (Operations and Technical Director, Mondi AG) | | | | | |
| | Ivo Mulder (Finance and Private Sector Coordinator, I | JN Environment) | | | | |
| | Mike Wingfield (IUFRO President) | | | | | |

| 17:00 – 18:30 | Rolf Böhme Saal (Konzerthaus Freiburg) | LIVE STREAM | Science in Dialogue Sessions | | | |
|---------------|---|--|--------------------------------|--|--|--|
| SID4 | Science meets Stakeholders Panel Discussion | | | | | |
| Moderator | Evy von Pfeil, Deutsche Gesellschaft für International | Zusammenarbeit (| (GIZ) GmbH, Eschborn (Germany) | | | |
| Introduction | Mike Wingfield, IUFRO President, Pretoria (South Africa) | | | | | |
| Panel | Paul Chatterton, Leader of Landscape Finance Lab, WWF International, Vienna (Austria) | | | | | |
| | Victoria Tauli-Corpuz, UN Special Rapporteur on the r | toria Tauli-Corpuz, UN Special Rapporteur on the rights of indigenous peoples, Baguio City (Philippines) | | | | |
| | Carsten Wilke, President of German Forest Society, Göttingen (Germany) | | | | | |
| | Salina Abraham, President of International Forestry S | tudents' Associatio | on, Utrecht (Netherlands) | | | |
| | Lisa Sennerby-Forsse, President of the Royal Swedish Stockholm (Sweden) | Academy of Agric | ulture and Forestry, | | | |

Press conference

LIVE STREAM

Presentation

Ulrike Hinrichs, Die Kuppel

The panel

Peter Hauk MdL, Minister for Rural Areas, Consumer Protection and Agriculture in Baden-Württemberg

Dr. Hermann Onko Aeikens, Secretary of State in the Federal Ministry for Food and Agriculture

Alexander Buck, Executive Director of IUFRO

Prof. Konstantin von Teuffel, Director of the Forest Research Institute of Baden-Württemberg (FVA)

Presentation: Ulrike Hinrichs, Die Kuppel

Refreshments will be served after the press conference.

More Information regarding the press programme at www.iufro2017.com/press.

Live-Stream: www.live.iufro2017.com

| , | , 19 September 2017 | Location | K I Aula (University Freiburg) |
|----------------|---------------------|--------------|-----------------------------------|
| Time 13:30 – 1 | 14:15 | Registration | necessary at presse@die-kuppel.de |

| – 10:45 | Rolf Böhme Saal (Konzerthaus) Science in Dialogue Sessions | 15:00 – 17:00 | K9 (Konzerthaus) All Division 7 (Forest Health) Meeting |
|----------------|---|------------------------------|--|
| 00 | Opening Ceremony | 305a | D7 - Pine wilt disease: progress in understanding the dynamics and developing contro measures |
| 1:30 | Rolf Böhme Saal (Konzerthaus) | Organizer | Robinet C. (France) |
| | Science in Dialogue Sessions | Chairs | Bonifacio L. (Portugal), Nakamura K. (Japan) |
|)1 | Statement by Federal Ministers | 1004 | Xylem dysfunction in pine trees suffered from pine wilt disease <i>lkeda T. (Japan)</i> |
| 0 | Rolf Böhme Saal (Konzerthaus) | 3415 | Transcriptome Analysis and Identification of Differential Gene Expression to Response of Pine Wilt Disease |
| | Science in Dialogue Sessions | | Pinus densiflora Shim D. (South Korea (ROK)) |
| | Science meets Policy Panel Discussion | 2585 | Unraveling the pinewood nematode pathogenicity: Bursaphelenchus xylophilus and B. mucronatus secret |
| | | | differences |
| | Rolf Böhme Saal (Konzerthaus) | | Cardoso J. (Portugal) |
| _ | Science in Dialogue Sessions Science meets Business Panel Discussion | 1746 | Volatiles from different Cerambycidae beetles that colonize pine wilt Pinus pinaster trees in Portugal Bonifacio L. (Portugal) |
| | Science meets dusiness Panel Discussion | 1761 | Advances in the Galician Pinus pinaster breeding program against the pinewood nematode (Bursaphelenc |
| | K 2-4 (Konzerthaus) | | xylophilus) |
| | All Division 4 (Forest Assessment, Modelling and Management) Meeting | | Diaz R. (Spain) |
| | D4 - Impacts of environmental changes on growth and productivity of managed and unmanaged forests | 15:00 – 17:00 | KG I - 1009 (University Freiburg) |
| | Kahle H. (Germany) | | All Division 9 (Forest Policy and Economics) Meeting |
| | Mäkinen H. (Finland) | 7 | D9 - Europe Inside / Outside - The export of European forest policies, objectives and |
| | Introduction | Organizar | architecture through public and private governance arrangements? Puelzl H. (Austria) |
| | Environment-induced growth changes in the Finnish forests during 1971 – 2010 – an analysis based on | Organizer Chairs | Edwards P. (New Zealand) |
| | National Forest Inventory | Citalia | Centrifugation of European legality frontiers in global timber supply chains |
| | A | 712 | |
| | Mäkinen H. (Finland) | 712 | de Jong W. (Japan) |
| ı | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, | 712 3902 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach |
| | Mäkinen H. (Finland) NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts Bontemps J. (France) | | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) |
| | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts Bontemps J. (France) Recent growth trends for main European tree species and their drivers | | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy |
| | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts Bontemps J. (France) Recent growth trends for main European tree species and their drivers Muys B. (Belgium) | 3902 4069 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy Chen X. (China) |
| | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts **Bontemps J. (France)** **Recent growth trends for main European tree species and their drivers **Muys B. (Belgium)** **Increased Production of Norway Spruce: An examination of the effects of climate change in managed and | 3902 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy |
| | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts <i>Bontemps J. (France)</i> | 3902 4069 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy Chen X. (China) Changing patterns in wood trade: the emerging EU regional market |
| | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts <i>Bontemps J. (France)</i> Recent growth trends for main European tree species and their drivers <i>Muys B. (Belgium)</i> Increased Production of Norway Spruce: An examination of the effects of climate change in managed and unmanaged forests in Norway | 3902 4069 3174 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy Chen X. (China) Changing patterns in wood trade: the emerging EU regional market Masiero M. (Italy) Restoring Government Forest Policy Prerogative? The EU FLEGT Ambivalent Relationship with Private Rulemaking in the Congolese Case |
| | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts **Bontemps J. (France)** **Recent growth trends for main European tree species and their drivers **Muys B. (Belgium)** **Increased Production of Norway Spruce: An examination of the effects of climate change in managed and unmanaged forests in Norway **Allen M. (Norway)** **Growth and mortality analyses in central European forest ecosystems based on long-term monitoring and gradient studies** | 3902 4069 3174 2016 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy Chen X. (China) Changing patterns in wood trade: the emerging EU regional market Masiero M. (Italy) Restoring Government Forest Policy Prerogative? The EU FLEGT Ambivalent Relationship with Private Rulemaking in the Congolese Case Montouroy Y. (Guadeloupe) |
| <u>)</u> 7 | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts Bontemps J. (France) Recent growth trends for main European tree species and their drivers Muys B. (Belgium) Increased Production of Norway Spruce: An examination of the effects of climate change in managed and unmanaged forests in Norway Allen M. (Norway) Growth and mortality analyses in central European forest ecosystems based on long-term monitoring and gradient studies Rigling A. (Switzerland) | 3902 4069 3174 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy Chen X. (China) Changing patterns in wood trade: the emerging EU regional market Masiero M. (Italy) Restoring Government Forest Policy Prerogative? The EU FLEGT Ambivalent Relationship with Private Rulemaking in the Congolese Case Montouroy Y. (Guadeloupe) Developing a National Forest Policy in New Zealand - European Influences |
| | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts Bontemps J. (France) Recent growth trends for main European tree species and their drivers Muys B. (Belgium) Increased Production of Norway Spruce: An examination of the effects of climate change in managed and unmanaged forests in Norway Allen M. (Norway) Growth and mortality analyses in central European forest ecosystems based on long-term monitoring and gradient studies Rigling A. (Switzerland) Norway spruce trees long-term growth with account for possible climate change in the Leningrad Region of | 3902 4069 3174 2016 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy Chen X. (China) Changing patterns in wood trade: the emerging EU regional market Masiero M. (Italy) Restoring Government Forest Policy Prerogative? The EU FLEGT Ambivalent Relationship with Private Rulemaking in the Congolese Case Montouroy Y. (Guadeloupe) Developing a National Forest Policy in New Zealand - European Influences Edwards P. (New Zealand) |
| | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts Bontemps J. (France) Recent growth trends for main European tree species and their drivers Muys B. (Belgium) Increased Production of Norway Spruce: An examination of the effects of climate change in managed and unmanaged forests in Norway Allen M. (Norway) Growth and mortality analyses in central European forest ecosystems based on long-term monitoring and gradient studies Rigling A. (Switzerland) | 3902 4069 3174 2016 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy Chen X. (China) Changing patterns in wood trade: the emerging EU regional market Masiero M. (Italy) Restoring Government Forest Policy Prerogative? The EU FLEGT Ambivalent Relationship with Private Rulemaking in the Congolese Case Montouroy Y. (Guadeloupe) Developing a National Forest Policy in New Zealand - European Influences |
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| 9 2 7 7 4 | NFI-based investigations of recent changes in forest growth in Western Europe: variations across tree species, geographical scales, and climatic contexts <i>Bontemps J. (France)</i> Recent growth trends for main European tree species and their drivers <i>Muys B. (Belgium)</i> Increased Production of Norway Spruce: An examination of the effects of climate change in managed and unmanaged forests in Norway <i>Allen M. (Norway)</i> Growth and mortality analyses in central European forest ecosystems based on long-term monitoring and gradient studies <i>Rigling A. (Switzerland)</i> Norway spruce trees long-term growth with account for possible climate change in the Leningrad Region of Russian Federation. <i>Alekseev A. (Russian Federation)</i> | 3902 4069 3174 2016 | de Jong W. (Japan) Smart Mix against Tropical Illegal Logging: Towards an Integrated Approach Lan C. (Netherlands) EU FLEGT Action Plan's impacts to China's forestry trade policy Chen X. (China) Changing patterns in wood trade: the emerging EU regional market Masiero M. (Italy) Restoring Government Forest Policy Prerogative? The EU FLEGT Ambivalent Relationship with Private Rulemaking in the Congolese Case Montouroy Y. (Guadeloupe) Developing a National Forest Policy in New Zealand - European Influences Edwards P. (New Zealand) Transitioning to a forest-based Bioeconomy? Lessons from Germany and Scandinavia |

78 Discussion

| 15:00 – 17:00 | KG I - 1010 (University Freiburg) | 15:00 – 17:00 | KG I - 1098 (University Freiburg) |
|---------------------|---|-------------------------|---|
| 106- | Theme 2: Forests and Climate Change | 140- | All Division 6 (Social Aspects of Forests |
| 186a Organizar | T2 - Changing forest disturbance regimes: Patterns, consequences, and responses Seidl R. (Austria) | 140a | D6 - Forest education - the consequence Paschalis Jakubowicz P. (Poland) |
| Organizer 1167 | Frontiers in forest disturbance research Seidl R. (Austria) | Organizer 1958 | Higher education in ergonomics – added value of Sowa J. (Poland) |
| 660 | Reconstructing past disturbance regimes across conifer and broadleaf forests of central, eastern and south-eastern Europe as a baseline to assess future regime shifts | 4159 | Outcome-oriented curriculum design Heinimann H. (Singapore) |
| 2618 | Svoboda M. (Czech Republic) Spatial organization related with disturbance history in monospecific spruce old-growth Carpathians forest Vitková L. (Czech Republic) | 1283 | Non-formal environmental education in Poland - Piasecka A. (Poland) |
| 1557 | Historic, present and potential future fire regimes in the Pacific Northwest | 3643 | Introduction of the novel master programme "Urb Steinebach S. (Germany) |
| 161 | Spies T. (United States of America) Interactions between disturbances: Describing and anticipating complete and complex regimes Puma P. (United States of America) | 2546 | Observer effects during habitat tree selection Cosyns H. (Switzerland) |
| 2882 | Buma B. (United States of America) Coupled effects of wind-storms and drought on forest damage in managed coniferous forest in the Western Alps and the Jura mountains Csillery K. (Switzerland) | 3522 | The Innovation of Educational Activities at the Facult Remes J. (Czech Republic) |
| 375 | Ecological resilience to natural disturbances: Lessons learned from Yellowstone National Park (USA) Turner M. (United States of America) | 15:00 – 17:00 | KG II - Auditorium Maximum (University Fr Theme 3: Forests and Forest-Based Produc |
| 643 | Forest biodiversity in the era of changing disturbance regimes: Case studies from Japan <i>Mori A. (Japan)</i> | 82a Organizer | T3 - Traditional coppice: ecology, silvicultu Johnson C. (United States of America) |
| 15:00 – 17:00 | KG I - 1015 (University Freiburg) | 1041 | Traditional Coppice Management - Legacy and Poten Network 'EuroCoppice' Becker G. (Germany) |
| 45a | Theme 4: Biodiversity, Ecosystem Services and Biological Invasions T4 - Forest policy and biodiversity strategy: The relevance of forest genetic resources | 477 | Terminology and multilingual glossary on Coppice te Kofman P. (Ireland) |
| Organizer Chairs | Kraigher H. (Slovenia) Fady B. (France), Kraigher H. (Slovenia) | 93 | Harvesting of traditional coppice stands: results from Spinelli R. (Italy) |
| 2224 | Pan-European efforts in biodiversity conservation Skoberne P. (Slovenia) | 1742 | Factors affecting biomass and wood extraction from technological changes. Tolosana E. (Spain) |
| 2395 | The importance of genetic diversity for sustainable forestry Fady B. (France) | 100 | The impact of mechanized cutting on coppice mortal Magagnotti N. (Italy) |
| 3544 | Selection of best management practices for conservation of spatial genetic structure diversity and dynamics in beech forests Vettori C. (Italy) | 1099 | Coppice conversion, a difficult and long-lasting proce Nicolescu V. (Romania) |
| 1320 | The days of the Serbian spruce in its natural habitat are numbered Aleksic J. (Serbia) | 1845 | Natural seed regeneration in chestnut coppices: a key Marcolin E. (Italy) |
| 3644 | LocalyTREE – DNA-based analytics to characterise 'genetic' regions of Lower Austria aiming to support the selection and plantation of native shrub species Sehr E. (Austria) | | , |
| 3378 | Regional Cooperation for Genetic Diversity Conservation of Pinus pumila in East Asia Kang H. (South Korea (ROK)) | | |
| 4046 | Wild Plants Conservation through Seed Vault in the Republic of Korea | | |

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Bang M. (South Korea (ROK))

climate change Yue C. (Germany)

Schelhaas M. (Netherlands)

Schneider R. (Canada)

2671 Developing individual-tree diameter growth functions for Europe

1344 Evaluating future carbon stocks in forests: the importance of stem form

| 15:00 – 17:00 | KG I - 1199 (University Freiburg) Theme 5: Forests, Soil and Water Interactions | 3590 | Productivity loss expected for Austrian forests in consequence of climate warming Vospernik S. (Austria) |
|---------------|---|---------------|--|
| 50a | T5 - Soil Processes and Sustainable Forest Management (IUSS) | 3178 | Projecting forest productivity under climate change at the European scale: a metamodeling approach |
| Organizer | Becker G. (Germany) | | Lafond V. (Switzerland) |
| Chairs | Nicolescu V. (Romania) | | Discussion |
| 2956 | Consequences of mineral fertilization and biosolid application on nutrient leaching over an entire rotation in Brazilian eucalypt plantations Laclau J. (France) | 17:30 – 19:30 | K9 (Konzerthaus) All Division 7 (Forest Health) Meeting |
| 2075 | Long-term fate of applied nitrogen in managed pine ecosystems of the southeastern United States using 15N Raymond J. (United States of America) | 305b | D7 - Pine wilt disease: progress in understanding the dynamics and developing control measures |
| 1720 | The impact of secondary forests conversion into larch plantations on C, N, P, K, Ca and Mg concentrations and | Organizer | Robinet C. (France) |
| | stocks in forest floor and soils | Chairs | Bonifacio L. (Portugal), Nakamura K. (Japan) |
| 3115 | Yang K. (China) N20 and N0 fluxes from different land uses in the Mau Forest Complex, Kenya: An incubation experiment with | 3207 | Naphthoquinones: potential bionematicides for pinewood nematode eradication from wood Fonseca L. (Portugal) |
| | intact soil cores. Arias-Navarro C. (Germany) | 1846 | Are there any breaks to the dispersal of the Pine Wood Nematode across Europe? A phylogeographic study of its vector, Monochamus galloprovincialis (Coleoptera, Cerambycidae). |
| 3185 | Soil nutrients and fractions. Forest management : climate change 1 – 0 | | Roux G. (France) |
| 2735 | Lanfranchi M. (United Kingdom) Effects of forests management on soil functions – results of the national forest soil inventories in Germany | 691 | The role of latent carrier tree : A small field experiment brought about informative results <i>Futai K. (Japan)</i> |
| | Wellbrock N. (Germany) | 3155 | Fifteen years monitoring in Norway without finding Bursaphelenchus xylophilus Magnusson C. (Norway) |
| 17:30 – 19:00 | Rolf Böhme Saal (Konzerthaus) Science in Dialogue Sessions | 1065 | Pine Wood Nematode (PWN) and Pine Wilt Disease (PWD) – new recommendations for control actions and forest management. |
| SID4 | Science meets Stakeholders Panel Discussion | | Isacsson G. (Sweden) |
| 17:30 – 19:30 | K 2-4 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting | 17:30 – 19:30 | KG I - 1009 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
| 15b | D4 - Impacts of environmental changes on growth and productivity of managed and | 138 | D9 - The potential contribution of forest related indicators to global issues |
| | unmanaged forests | Organizer | Linser S. (Austria) |
| Organizer | Kahle H. (Germany) | 954 | 25 years of C&I for SFM – Did they make a difference? |
| Chairs | Mäkinen H. (Finland) | | Linser S. (Austria) |
| 677 | Modelling climatic effects on site productivity of jack pine and black spruce plantations Sharma M. (Canada) | 3416 | Forest sustainability indicators in the new light of a bioeconomy Wolfslehner B. (Austria) |
| 2032 | Nonlinear mixed models for tree growth: Combining climate, site, stand, management, and nutrient effects <i>Rohner B. (Switzerland)</i> | 1160 | Requirements for appropriate sustainability indication Somogyi Z. (Hungary) |
| 3105 | A dynamic environment-sensitive site index model for the prediction of site productivity potential under climate change | 2905 | Forest related indicators to assess sustainability impacts of policy options on the Greek forests <i>Kazana V. (Greece)</i> |

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188 The Austrian Forest Biodiversity Index - Concepts and Results

3942 Including forest certification indicators in promoting and monitoring implementation of the Sustainable

Geburek T. (Austria)

Development Goals

Hontelez J. (Netherlands)

| 2940 | Another brick in the Great Green Wall? Criteria and Indicators to monitor Forest and Landscape Restoration in | 17:30 – 19:30 | KG I - 1098 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
|--------------|--|---------------|--|
| | Burkina Faso Huber P. (Austria) | 140b | |
| 3450 | "Indicators - a task for citizen's science? | Organizer | D6 - Forest education - the consequences of interaction: innovation and curricula Paschalis Jakubowicz P. (Poland) |
| | Pülzl H. (Austria) | 2288 | The Forest Culture Centre in Goluchów as an important link between the forest education and Polish societ Antonowicz A. (Poland) |
| | KG I - 1010 (University Freiburg) Theme 2: Forests and Climate Change | 4174 | Developing a Competency-Based Climate Education Program for U.S. County Extension Agents Hubbard W. (United States of America) |
| 186b | T2 - Changing forest disturbance regimes: Patterns, consequences, and responses | 2175 | Mathematics and Statistics - Their Role in Modern Forest Curricula |
| Organizer | Seidl R. (Austria) | | Merkel H. (Germany) |
| 1540 | Intermediate severity windthrow effects on forest structure and carbon dynamics in the eastern United States: implications for adaptive management Keeton W. (United States of America) | 3478 | Developing a novel Master on Sustainable Forest Resource Economics: Chances and Challenges Cremer T. (Germany) |
| 566 | Providing multiple ecosystem services in the face of changing disturbance regimes Albrich K. (Austria) | 17:30 – 19:30 | KG II - Auditorium Maximum (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
| 824 | Tools for assessing the impacts of climate variability and change on wildfire regimes in forests Herawati H. (Indonesia) | 82b | T3 - Traditional coppice: ecology, silviculture and socio-economic aspects |
| 1713 | Modeling wildfires in Indonesia with the FLAM model | Organizer | Johnson C. (United States of America) |
| | Krasovskii A. (Austria) | 1531 | Coppicing restoration in two contrasting land use situations: effects on biodiversity of vascular plants and invertebrates |
| 2324 | Understanding fire, weather and land cover interactions from long-term terrestrial observations and satellite data in a north to south transect in Europe and North Africa | | Hédl R. (Czech Republic) |
| | Koutsias N. (Switzerland) | 3117 | Restoration of coppice-with-standards management: effects on ground vegetation and bryophytes. Van der Aa B. (Belgium) |
| 2257 | Changing climate and forest pest insects in Finland, Observed patterns and future projections Viiri H. (Finland) | 1394 | Effect of tree age and stump height on initial Nothofagus antarctica stump sprouting in Chilean Patagonia <i>Promis A. (Chile)</i> |
| 7:30 – 19:30 | KG I - 1015 (University Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions | 2802 | The drivers of tree productivity in newly restored coppices: effects of tree size, competition and diversity Matula R. (Czech Republic) |
| 45b | T4 - Forest policy and biodiversity strategy: The relevance of forest genetic resources | 2399 | The potential barriers to persistence and development of small scale coppice forest management in Europe Bartlett D. (United Kingdom) |
| Organizer | Kraigher H. (Slovenia) | 2858 | Legislative framework for coppice silviculture in Italy |
| Chairs | Orlovic S. (Serbia), Westergren M. (Slovenia) | | Mairota P. (Italy) |
| 1749 | Conservation and management of forest genetic resources: overview on forest policies in countries of South Eastern Europe (SEE) | 17:30 – 19:30 | KG I - 1199 (University Freiburg) |
| | Stojnic S. (Serbia) | | Theme 5: Forests, Soil and Water Interactions |
| 661 | Forest genetic monitoring: an overview of concepts and definitions Fussi B. (Germany) | 50b | T5 - Soil Processes and Sustainable Forest Management (IUSS) |
| 2465 | Monitoring flowering synchronization discrepancies and their impact on seed crop genetic diversity – An early | Organizer | Becker G. (Germany) |
| | warning system in a changing climate | Chairs | Nicolescu V. (Romania) |
| | | | |

2578 Sustainable nutrient supply and maintenance of forest soil through improved liming practices Jansone L. (Germany) 1992 Communicating the value of forest related nature's services and genetic resources today for tomorrow Baloh T. (Slovenia) Coarse Woody Debris Management for Forest Soil Functioning Stutz K. (Germany) The future of forest genetic monitoring (FGM): a contribution to FGM objectives and strategies from local to Spatial patterns of organic matter decomposition in a high mountain forest environment Hellwig N. (Germany) Aravanopoulos F. (Greece)

84

global

20:00 - 2

20:00 - 2

20:00 - 2

Organizer

| NTIFIC P | ROGRAM TUESDAY 19 SEPTEMBER 2017 |
|------------|---|
| 3007 | The FACE Wood Decomposition Experiment: Abiotic and biotic controls on the fate of carbon from dead wood <i>Trettin C. (United States of America)</i> |
| 3031 | Stump harvesting, surface disturbance and time – what happens to C and N pools Kaarakka L. (Finland) |
| 00 – 21:45 | KG I - 1015 (University Freiburg) Side Events |
| BM 5 | Division 9 Business Meeting |
| Organizer | Kleinschmit D. (Germany) |
| 00 – 21:00 | KG I - 1134 (University Freiburg) Side Events |
| BM 6 | Meliaceae Working Party (IUFRO Working Group 1.02.04) |
| Organizer | Ward S. (Puerto Rico) |
| 00 – 21:00 | KG I - 1199 (University Freiburg) Side Events |
| BM 4 | Division 7 Business Meeting |

| 01ga2c. | Stockerson E. (item Ecalana) | |
|---------------|--|--|
| 20:00 – 21:45 | KG I - 1098 (University Freiburg) Side Events | |
| DM 1 | Division 2 Dusiness Meeting | |

| RWI | Division 3 Business Meeting |
|-----------|-------------------------------------|
| Organizer | Chung W. (United States of America) |

Brockerhoff F. (New 7ealand)

| 20:00 – 21:45 | KG I - 1224 (University Freiburg) Side Events |
|---------------|---|
| RM 3 | Division 6 Rusiness Meeting |

Sievänen T. (Finland)

| 20:00 – 21:45 | KG I - 1228 (University Freiburg) Side Events |
|---------------|--|
| BM 2 | Division 4 Business Meeting |

Organizer Peyron J.-L. (France)

| 20:00 – 21:00 | KG I - 1243 (University Freiburg) Side Events |
|---------------|--|
| RM 7 | Mountain Forest Management (Working Unit 1 01 05) Rusiness Meeting |

tain Forest Management (Working Unit 1.01.05) Business Meeting

Park P. S. (South Korea (ROK)), Lexer M. (Austria)



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FSC® General Assembly 2017 Vancouver, Canada, 8-13 October

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| | KONZERTHAUS | | | | | |
|-------|--|---|---|---|--|--|
| | Rolf Böhme Saal | K1 | K2-4 | K5-7 | | |
| 8:00 | 146 D7 - Climate change and air | 2T4 - Co-existence of human | 188a D7 – Managing pests and | 90a D4 - Advanced Methods for | | |
| 8:30 | pollution impacts on forest health status and productivity | and wildlife in changing land- scapes and climate | diseases in commercial plantations | Measuring, Monitoring and Assessing Forests to Meet | | |
| 9:00 | | | | Societal Challenges | | |
| 9:30 | | | | | | |
| 10:00 | | Coffee Break (Konzert | chaus & University KG I) | | | |
| 10:30 | LIVE STREAM | 136 D7 - Hierarchical modelling | 188b D7 - Managing pests and | 90b D4 - Advanced Methods for | | |
| 11:00 | SID5 Science meets Science Panel Discussion. | framework to quantify and forecast climate change and | diseases in commercial plantations | Measuring, Monitoring and Assessing Forests to Meet | | |
| 11:30 | More details on page 92 | air pollution impacts on forest ecosystems | | Societal Challenges | | |
| 12:00 | Lun | nch break (Mensa) and visit of the Po | ster Exhibition (University, KG II, HS2 | 121) | | |
| 13:30 | LIVE STREAM | | | | | |
| 14:00 | SP1 Communicating with Einstein — about forest facts, | | | | | |
| 14:30 | feelings and fake news More details on page 94 | | | | | |
| 15:00 | | Coffee Break (Konzert | rhaus & University KG I) | | | |
| 15:30 | 121a D3 - Reforestation | | 197a D4 - Ecosystem | 15:30 – 17:45 | | |
| 16:00 | challenges: planting material, ecophysiology, biodiversity, | | services and the well-being of forest-dependent communities: | 57 D7 - Invasive Alien Species and International Trade - | | |
| 16:30 | climate change mitigation and adaptation, and disaster risk | | enhancing social innovation and building resilience to global | Detection Prior to Introduction, Measures and Policy for | | |
| 17:00 | reduction | | changes in remote rural areas | Mitigation | | |
| 17:30 | Cofi | fee Break (Konzerthaus & University | KG I) | | | |
| 18:00 | 121b D3 - Reforestation | 191 D7 - Nitrogen deposition: | 197b D4 - Ecosystem | | | |
| 18:30 | challenges: planting material, ecophysiology, biodiversity, | spatial-temporal change and ecological impacts | services and the well-being of forest-dependent communities: | | | |
| 19:00 | climate change mitigation and adaptation, | | enhancing social innovation and building resilience to global | | | |
| 19:30 | | | | | | |
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| KONZEF | RTHAUS | | NOVOTEL | |
|---|---|--|---|---|
| К8 | К9 | Room "Basel + Mühlhausen" | Room "Baden-Baden" | Room "Colmar" |
| | 122a D7 – Invasive species surveillance: New methods and tools for survey and early detection | 302a T2 – Tropical wetlands for climate change adapta- tion and mitigation | 105aT3 - Sustainable co-production of wood and non-wood forest products | 183a T1 – Forest Education |
| | Coffee | Break (Konzerthaus & University | KG I) | |
| 36 D4 - Interactions of Global Forest Resources and Climate | 122b D7 – Invasive species surveillance: New methods and tools for survey and early detection | 302b T2 - Tropical wetlands for climate change adapta- tion and mitigation | 105bT3 - Sustainable co-production of wood and non-wood forest products | 183bT1 – Forest Educatio |
| | Lunch break (Mensa) an | d visit of the Poster Exhibition (Ur | niversity, KG II, HS2121) | |
| | | | | |
| | | | | |
| | Coffee | Break (Konzerthaus & University | KG I) | |
| | 29a D4 - Integrating climate change, disturbances and diversity effects into growth models: from understanding ecological processes to predicting forest growth and yield | 94a T3 - Ecologically-based silviculture | 190 T2 - Climate change and forest health: insights from the IUFRO Task Force | 301a T1 – Enhancing Forest Education through Regional Cooperation |
| | Coffee | Break (Konzerthaus & University | KG I) | |
| 24T4 – Growth and Dynamics of Pine in Mixed Forests | 29b D4 - Integrating cli- mate change, disturbances and diversity effects into growth models: from understanding ecological | 94bT3 – Ecologically–based silviculture | 208 D7 - Social and Economic dimensions of forest health: Contributing to a biosecure future | 301bT1 - Enhancing Forest Education through Regional Cooperation |
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Theme 5: Forests, Soil and Water Interactions

| | | | UNIVERSITY | | |
|-------|--|--|--|---|----------------------------------|
| | KG I - 1009 | KG I - 1010 | KG I - 1015 | KG I - 1098 | KG I - Aula |
| 8:00 | 131 T5 - Exploring the | 9a T4 – IUFRO Task Force | 73 D6 - But is it represen- | 168a D3 - Sustainable | |
| 8:30 | contribution of the tree-soil metagenomes | on Biological Invasions in Forests | tative? Exploring the epistemological grounds | forest operations - A foundation of the green | |
| 9:00 | to forest resilience | | of qualitative methods in forestry research | economy | |
| 9:30 | | | | | |
| 10:00 | | Coffee | Break (Konzerthaus & Univers | sity KG I) | |
| 10:30 | | 9b T4 – IUFRO Task Force | | 168b D3 - Sustainable | 93 T4 - Silviculture for |
| 11:00 | | on Biological Invasions in Forests | | forest operations - A foundation of the green | non-wood ecosystem services |
| 11:30 | | | | economy | |
| 12:00 | Lunch break (Mensa) and | visit of the Poster Exhibition | 12:45 – 13:30 | Lunch break (Mensa) and | visit of the Poster Exhibition |
| 13:30 | | | BL 1 Book Launch: A History of IUFRO Congresses, | | |
| 14:00 | | | Forest Research and Russia's Participation | | |
| 14:30 | | | | | |
| 15:00 | | Coffee | Break (Konzerthaus & Univers | sity KG I) | |
| 15:30 | 63 D9 - Forests for the | 92a T4 – Concepts and | 19a D6 - The role of | 205a T5 - Phloem | 303 T3 - Research Ad- |
| 16:00 | Health of the People | assessments of forest ecosystem services and | forests in sustainable rural development in | function and dysfunction under drought | vances for the Meliaceae |
| 16:30 | | benefits | developing countries: livelihoods and quality | | |
| 17:00 | | | of life | | |
| 17:30 | | Coffee | Break (Konzerthaus & Univers | sity KG I) | |
| 18:00 | 174 D9 - Connecting | 92b T4 – Concepts and | 19b D6 - The role of | 205b T5 - Phloem | IY IFSA Youth Incubator |
| 18:30 | People to Forest Science: Innovative Communica- | assessments of forest ecosystem services and | forests in sustainable rural development in | function and dysfunction under drought | Session A series of TED Talks |
| 19:00 | tion Approaches for Delivering Science | benefits | developing countries: livelihoods and | | |
| 19:30 | | | | | |
| 20:00 | | | | | |
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| | | UNIVE | RSITY | | |
|---|---|--|--|---|--|
| KG I - 1199 | KG I - 1224 | KG I - 1228 | KG I - 1231 | KG II - Auditorium Maximum | KG II - 2121 |
| 108T2 - Resilience of planted forests under global change: learning from the past preparing next generation | | 26 D9 - Policy learning across governance levels for durable results | | 139a D9 – Towards a sustainable European forest based bioeco- nomy | Poster Exhibition for more Details se page 200 |
| | Coffee Bi | reak (Konzerthaus & Unive | rsity KG I) | | |
| 164T1 – How forest investment science can support sustainable forest management? | 200 D6 - Gender, climate policy and the future of the forests | 115 T3 - Recent Strategies of Tree Genomic Researches for High Value Forest Products and Sustainability | 125 D3 - Planning methods in ensuring a continued license to practice | 139b D9 – Towards a sustainable European forest based bioeco- nomy | |
| I | unch break (Mensa) and v | visit of the Poster Exhibition | n (University, KG II, HS212 | 1) | |
| | | | | SP2 Innovative forest assessment and sustainable management in a changing world | |
| | Coffee Break (Konzert | haus & University KG I) | | More details on page 95 | |
| 77a D9 - The Global Forest Environmental Frontier - What has changed, what has remained unchanged, how will the future look like? | | 35 D9 – "Après Paris": global integration of forest climate governance | | 177a D7 - Forest Health in a Changing Climate | |
| | Coffee Br | reak (Konzerthaus & Unive | rsity KG I) | | |
| 77b D9 - The Global Forest Environmental Frontier - What has changed, what has remained | | 160 D9 – Wood based fuels for transports – conditions for their market entry and impacts on the | | 177b D7 – Forest Health in a Changing Climate | |
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Wednesday

In the series of Science in Dialogue Sessions, high-level speakers from various sectors will join a panel to discuss the overarching theme Challenges of sustainable development: implications for forests and forest science from their perspectives. Introductory statements will be followed by a moderated discussion with panelists, and an open discussion with the audience. The sessions will be streamed live.

These Sessions will deliver input for the IUFRO Strategy 2019 – 2024.

| 0:30 – 12:00 | Rolf Böhme Saal (Konzerthaus Freiburg) LIVE STREAM Science in Dialogue Sessions | |
|--------------|---|--|
| SID5 | SID5 Science meets Science Panel Discussion | |
| Organized by | IUFRO Special Programme Directors' Forum | |
| Moderator | Peter Mayer, Director of Austrian Research and Training Centre for Forests, Natural Hazards and Landscape; Deputy Coordinator, IUFRO Directors' Forum, Vienna (Austria) | |
| Keynote | Peter Holmgren, Director General, Center for International Forestry Research, Bogor (Indonesia) | |
| Panel | Mari Walls, President, Natural Resources Institute of Finland, Helsinki (Finland) | |
| | Carlos Rodriguez Franco, Deputy Chief for Research and Development, US Forest Service, Washington (USA) | |
| | Erich Schaitza, Brazilian Agricultural Research Corporation (Embrapa), Curitiba (Brazil) | |
| | Lee Chang-jae, President, National Institue of Forest Science (NIFoS), Seoul (Republic of Korea) | |
| | Daniel Ofori, Director, CSIR-Forestry Research Institute of Ghana, Kumasi (Ghana) | |
| | Charles Erkelens, Operations Director, International Council for Science, Paris (France) | |

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Sub-plenary Sessions

| 13:30 – 15:00 | Rolf Böhme Saal (Konzerthaus Freiburg) LIVE STREAM Sub-plenary Session 1 |
|---------------|---|
| SP1 | Communicating with Einstein – about forest facts, feelings and fake news |
| Organizers | UNECE-FAO Forest Communicators Network and IUFRO |
| Moderator | Robert Burt, IUFRO, CANADA |
| | "it is harder to crack a prejudice than an atom" (A Einstein) — Why we need to communicate effectively Kai Lintunen, Finnish Forest Association, FINLAND and Ingwald Gschwandtl, Federal Ministry of Agriculture, Forestry, Environment and Water Management, AUSTRIA |
| | "In the middle of difficulty lies opportunity" (A Einstein) — How science and scientists have an important part to play Jennifer Hayes, U.S. Forest Service Rocky Mountain Research Station UNITED STATES, and Yasmeen Sands, U.S. Forest Service Pacific Northwest Research Station, UNITED STATES |
| | "Everything should be as simple as possible, but not simpler" (A Einstein) — How and why we often get it wrong Kai Lintunen, Finnish Forest Association FINLAND |
| | "If you can't explain it simply, you don't understand it well enough" (A Einstein) — How to do well, effectively Maria de Cristofaro, FAO Forestry Department, ITALY |
| | Question and answers |

| 13:30 – 15:00 | KG II - Auditorium Maximum (University Freiburg) LIVE STREAM Sub-plenary Session 2 | |
|------------------|--|--|
| SP2 | Innovative forest assessment and sustainable management in a changing world | |
| Organizers | IUFRO Division 4, Forest Assessment, Modelling and Management | |
| Moderator | Jean-Luc Peyron (IUFRO Division 4 Coordinator), Public Interest Group (GIP) on Forest Ecosystems (ECOFOR), FRANCE | |
| | SUMFOREST: A transnational research programme on innovations in sustainable and multifunctional forest management Martin Greimel, Coordinator of ERANET Sumforest, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria | |
| Panel Discussion | On opportunities for innovations in observation, inventory, monitoring, modelling, evaluation methods, products, processes and markets to cope with challenges facing sustainable forest management due to both the multiple impacts of human activities and changes in social demands for goods and services. | |
| | Margarida Tomé, former Coordinator of Division 4, Deputy Coordinatoor of Task Force "Sustainable planted forests for a greener future" (t.b.c.) | |
| | Jerry Vanclay, Deputy Coordinator of Division 4, Chair of IUFRO World Congress Science Committee (t.b.c.) | |
| | Lidija Zadnik Stirn, Deputy Coordinator of Division 4, Coordinator of Unit 4.05.00 "Managerial economics and accounting" | |
| | Ronald E McRoberts, Deputy Coordinator of Division 4, Coordinator of unit 4.03.00 "informatics, modelling and statistics" (t.b.c.) | |
| | Hubert Hasenhauer, Deputy Coordinator of Unit 4.01.00 "Forest mensuration and modelling" | |
| | Gherardo Chirici, Coordinator of Unit 4.02.04 "Geographic and management information systems" (t.b.c.) | |
| | Robert Marusak, Coordinator of Unit 4.04.00 "Forest management planning" (t.b.c.) | |
| | Discussion with audience participation | |

|)8:00 – 10:00 | Rolf Böhme Saal (Konzerthaus) All Division 7 (Forest Health) Meeting |
|---------------|---|
| 146 | D7 - Climate change and air pollution impacts on forest health status and productivity |
| Organizer | Augustaitis A. (Lithuania) |
| Chairs | Badea O. (Romania) |
| 1404 | Biogenic Organic Aerosol as an indicator of the forest abiotic stress Ulevicius V. (Lithuania) |
| 1036 | Change in Sulphur pools in forest ecosystems following the reduction of atmospheric SO2 Prescher A. (Germany) |
| 2344 | Forest ecosystem status in the Romanian LTER sites under the air pollution and climate change stress <i>Badea O. (Romania)</i> |
| 460 | Long-term impacts of ozone and climate change on forest productivity and dynamics in Switzerland: a hybrid modeling approach Cailleret M. (Switzerland) |
| 556 | Climate change-related dieback of evergreen conifers and adaptation options Lim J. (South Korea (ROK)) |
| 2128 | The response of intra-annual stem circumference of prevailing in Lithuania tree species to meteorology and air pollution under different site condition Augustaitis A. (Lithuania) |

| 0 – 10:00 | K 1 (Konzerthaus) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|-----------|--|
| 2 | T4 - Co-existence of human and wildlife in changing landscapes and climate |
| Organizer | Djagoun C. (Benin) |
| 1601 | Roles of non-protected areas for habitat of endangered Proboscis Monkey (Nasalis larvatus) under current land-use policy in West Kalimantan Province, Indonesia Tutthoyyibah W. (Indonesia) |
| 3997 | Religious and ethnological forces shaping perceptions and conservation of warthog in Benin <i>Nago G. (Benin)</i> |
| 1607 | Predicted Distribution of The Sunda Pangolin (Manis javanica) on Southest Asia Damiska S. (Indonesia) |
| 906 | Effectiveness of protected area in conserving the highly hinting bush meat species in Southern Benin <i>Chabi D. (Benin)</i> |
| 3870 | Planning the future forests: managing for wildlife in a climate constrained landscape Kraxner F. (Austria) |

|)8:00 — 10:00 | K 2-4 (Konzerthaus) All Division 7 (Forest Health) Meeting |
|---------------|--|
| 188a | D7 - Managing pests and diseases in commercial plantations |
| Organizer | Ganley B. (New Zealand) |
| 3350 | A new threat for Eucalyptus plantations in Uruguay: Teratosphaeria pseudoeucalypti the causal agent of Teratosphaeria Leaf Blight Perez C. (Uruguay) |
| 356 | Management of red needle cast caused by Phytophthora pluvialis Ganley B. (New Zealand) |
| 2302 | Enhancing biological control in short rotation coppices: possibilities and limitations Georgi R. (Germany) |
| 2304 | Biological control of Thaumastocoris peregrinus Carpintero and Dellappé (Heteroptera: Thaumastocoridae): towards the development of a mycoinsecticide Simeto S. (Uruguay) |
| 4109 | Picea abies stump size and efficacy from treatment with Phlebiopsis gigantea and urea against Heterobasidion in Sweden Rönnberg J. (Sweden) |
| 877 | Productivity losses caused by Teratosphaeria nubilosa on Eucalyptus globulus and Eucalyptus maidenii in Uruguay Balmelli G. (Uruguay) |

| 0 – 10:00 | K 5-7 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|-----------|--|
| 90a | D4 - Advanced Methods for Measuring, Monitoring and Assessing Forests to Meet Societal Challenges |
| Organizer | Amateis R. (United States of America) |
| Chairs | Tewari V. (India), Marshall P. (Canada) |
| 1579 | A comparison of annual composites versus the full temporal sequence in satellite imagery time series for forest disturbance mapping <i>Hislop S. (Australia)</i> |
| 893 | Fast normalized cross correlation for Araucaria angustifolia detection in canopy height models derived from Aerial Laser Scanning data Pereira J. (Germany) |
| 3432 | Determining and modeling biomass of large irregular trees in the tropics <i>Kleinn C. (Germany)</i> |
| 3479 | Regional scale simulation of the forest resources evolution in Southern Belgium Perin J. (Belgium) |
| 3545 | Long-term trends and patterns of forest disturbance dynamics in Central Europe from Landsat time series Pflugmacher D. (Germany) |
| 2612 | Plot dimension for continuing forest inventories in the state of Amapá, Eastern Amazon, Brazil da Silva J. (Brazil) |

| 08:00 – 10:00 | K9 (Konzerthaus) All Division 7 (Forest Health) Meeting | 2200 | The effect of peat swamp forest degradation on greenhouse gas fluxes in the Peruvian Amazon Van Lent J. (Indonesia) |
|---------------|--|---------------------|--|
| 122a | D7 - Invasive species surveillance: New methods and tools for survey and early detection | 2010 | Ecosystem carbon stocks and emissions arising from mangrove conversions in the Mahakam Delta, East |
| Organizer | Sweeney J. (Canada) | | Kalimantan, Indonesia Arifanti V. (Indonesia) |
| Chairs | Sweeney J. (Canada) | | Amunu v. (muonesia) |
| 2441 | Sentinel plantings provide early warning against alien tree pests prior to their arrival <i>Eschen R. (Switzerland)</i> | 08:00 – 10:00 | Room "Baden-Baden" (Novotel Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
| 343 | Identification and Use of Pheromones in Detection and Management of Cerambycid Beetles Millar J. (United States of America) | 105a | T3 - Sustainable co-production of wood and non-wood forest products |
| 127 | Factors Affecting the Efficacy of Detecting Forest Coleoptera in Traps - A Meta-Analysis Allison J. (Canada) | Organizer Chairs | Mutke S. (Spain) Chamberlain J. (United States of America), Shen H. (China) |
| 3931 | Combining lures for more effective surveillance of invasive wood borers and bark beetles Brockerhoff E. (New Zealand) | 2209 | Scientific, technical and social challenges in compatible use of multipurpose native tree species in Northeas China |
| 1869 | The effect of forest landscape, trap height, trap color and lure on longhorn beetle communities detected in survey traps **Rassati D. (Italy)** | 793 | Shen H. (China) Multipurpose trees and non-wood forest products, a challenge and opportunity for European silviculture Sheppard J. (Germany) |
| 866 | Recent improvements in trapping methods for surveillance of bark and wood boring beetles Sweeney J. (Canada) | 3520 | Collection and consumption of non-wood forest products in Europe Lovric M. (Finland) |
| 3120 | High catches in North America and in China show that traps and lures developed and used in Europe are efficient for detecting exotic Monochamus spp. vectors of Bursaphelenchus xylophilus | 3278 | The prospection on non-timber forest product at Brazilian Forestry Service - Brazil <i>Lopes L. (Brazil)</i> |
| , | Grégoire J. (Belgium) | 3866 | Optimizing the joint production of pine honey and timber in Mediterranean forests de Miguel S. (Spain) |
| 08:00 – 10:00 | Room "Basel + Mühlhausen" (Novotel Freiburg) Theme 2: Forests and Climate Change | 2782 | Discussion on several problems about the cultivation of fruit forests for Korean pine ZHANG P. (China) |
| 302a | T2 - Tropical wetlands for climate change adaptation and mitigation | 3834 | Critical Challenges of Sustainable Production of NTFPs from Tropical Forests: Innovative Approaches to |
| Organizer | Murdiyarso D. (Indonesia) | | Safeguard Livelihood and Resources Bhattacharya P. (India) |
| Chairs | Lilleskov E. (United States of America) | | Distriction y a 1 (miles) |
| 1520 | Total and heterotrophic soil respiration as impacted by peat swamp forest conversion to oil palm plantation in Central Kalimantan, Indonesia Hergoualc'h K. (Peru) | 08:00 - 10:00 | Room "Colmar" (Novotel Freiburg) Theme 1: Forests for People |
| 1117 | Greenhouse gases emissions in restored secondary tropical peat swamp forests | 183a | T1 - Forest Education |
| | Murdiyarso D. (Indonesia) | Organizer | Rodriguez S. (Mexico) |
| 2040 | Ecosystem productivity in response to land use change in tropical coastal peatlands | Chairs | Lackner M. (Austria), Burns J. (Austria) |
| 1571 | Basuki I. (Indonesia) Variablity of hydraulic conductivity in tropical peatlands | 3504 | Connecting FAO and University Educators for Effective Forestry Education <i>Weston C. (Australia)</i> |
| 2890 | Kurnianto S. (Indonesia) Is Indonesian peatland loss a cautionary tale for Peru? Lilleskov E. (United States of America) | 2001 | Creating the best joint educational platform in forestry – Case study: 3+2 transfer programs between UBC and partner universities in China Zhu X. (Canada) |
| 3302 | Impacts on forest degradation on the carbon stocks of freshwater peatlands in the Pastaza-Marañón river basin of Peruvian Amazonia Bhomia R. (United States of America) | 2943 | Practitioners' Experiences and Perspectives on Learning and Education for Future Forestry Pohlschneider S. (United Kingdom) |

| | Kalimantan, Indonesia Arifanti V. (Indonesia) |
|----------------------|---|
| 08:00 – 10:00 | Room "Baden-Baden" (Novotel Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
| 105a | T3 - Sustainable co-production of wood and non-wood forest products |
| Organizer | Mutke S. (Spain) |
| Chairs | Chamberlain J. (United States of America), Shen H. (China) |
| 2209 | Scientific, technical and social challenges in compatible use of multipurpose native tree species in Northeast China Shen H. (China) |
| 793 | Multipurpose trees and non-wood forest products, a challenge and opportunity for European silviculture Sheppard J. (Germany) |
| 3520 | Collection and consumption of non-wood forest products in Europe Lovric M. (Finland) |
| 3278 | The prospection on non-timber forest product at Brazilian Forestry Service - Brazil Lopes L. (Brazil) |
| 3866 | Optimizing the joint production of pine honey and timber in Mediterranean forests de Miguel S. (Spain) |
| 2782 | Discussion on several problems about the cultivation of fruit forests for Korean pine ZHANG P. (China) |
| 3834 | Critical Challenges of Sustainable Production of NTFPs from Tropical Forests: Innovative Approaches to Safeguard Livelihood and Resources Bhattacharya P. (India) |
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| 3504 | Connecting FAO and University Educators for Effective Forestry Education <i>Weston C. (Australia)</i> |
| 2001 | Creating the best joint educational platform in forestry – Case study: 3+2 transfer programs between UBC and partner universities in China |

| 3387 | Behavioral Event Interviews (BEI) related to skills and capabilities needed in current forest sector – results from the Global Outlook on Forest Education Rekola M. (Finland) |
|---------------|---|
| 3407 | A review of Forestry Curricula in South African tertiary institutions Mgaga P. (South Africa) |
| 2471 | Analysis of competences of a Forestry engineering program: A case of Colombia Villarraga Flórez L. (Colombia) |
| 3836 | Swedish forestry education for the 21st century A case study on graduates from Swedish forestry schools. Lundsten J. (Sweden) |
| 08:00 – 10:00 | KG I - 1009 (University Freiburg) Theme 5: Forests, Soil and Water Interactions |
| 131 | T5 - Exploring the contribution of the tree-soil metagenomes to forest resilience |
| Organizer | Seguin A. (Canada) |
| 285 | Soil microbiome biology for healthy forests: An introductory talk. Seguin A. (Canada) |
| 1788 | A decade of irrigation transforms the soil microbiome of a water-limited pine forest <i>Hartmann M. (Switzerland)</i> |
| 2051 | The phylogenetic and functional composition of forest soil ecosystems may be more susceptible to shifts in climate than land use Wakelin S. (New Zealand) |
| 2244 | Bringing a microbial dimension to the management of current and future forests Smaill S. (New Zealand) |
| 08:00 – 10:00 | KG I - 1010 (University Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
| 9a | T4 - IUFRO Task Force on Biological Invasions in Forests |
| Organizer | Liebhold A. (United States of America) |
| 135 | Biological Invasions in Forests: A Global Threat <i>Liebhold A. (United States of America)</i> |
| 2607 | Biotic resistance in forest ecosystems Fei S. (United States of America) |
| 2895 | Everything you always wanted to know about classical biological control against forest pests (but were afraid to ask) Kenis M. (Switzerland) |
| 884 | Are non-native forest insects recently established in Europe spreading faster than before? Roques A. (France) |
| 3296 | Country regulations of non-native tree species in Europe Pötzelsberger E. (Austria) |
| 1475 | From climate change to new diseases Santini A. (Italy) |
| | |

| :00 – 10:00 | KG I - 1015 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
|-------------|--|
| 73 | D6 - But is it representative? Exploring the epistemological grounds of qualitative methods in forestry research |
| Organizer | Bethmann S. (Germany) |
| 3217 | Unity and Variation. The logic of qualitative inquiry in forestry research. Bethmann S. (Germany) |
| 1524 | Qualitative interviewing: a self-reflection on two decades of personal experience Brukas V. (Sweden) |
| 4090 | Qualitative Research between wish and reality: the challenge of managing "imperfect" data Berzborn S. (Germany) |
| 2853 | Materially engaging with the forest - Doing research on body practices in forestry Mikoleit R. (Germany) |
| 2868 | Reaching out to diverse and excluded groups O'Brien L. (United Kingdom) |
| 2364 | Going deeper with documents: exploring new applications for extant texts in forestry research Siegner M. (Canada) |
| :00 – 10:00 | KG I - 1098 (University Freiburg) All Division 3 (Forest Operations Engineering and Management) Meeting |

| 168a Organizer | D3 - Sustainable forest operations - A foundation of the green economy Chung W. (United States of America), Marchi E. (Italy) |
|--------------------------|--|
| 829 | The "Sustainable Forest Operations" Concept: Past, Present, and Future Marchi E. (Italy) |
| 258 | Forest Operations and Sustainable Supply Chains Abbas D. (United States of America) |
| 422 | Ergonomics as A Pillar of Sustainable Forest Operation Yovi E. (Indonesia) |
| 574 | Environmental aspects of forest operation dedicated to industrial uses Gonzalez-Garcia S. (Spain) |
| 3608 | Green logistics and multi-criteria optimization in biomass supply - methods and challenges: A review <i>Kanzian C. (Austria)</i> |
| 3318 | Development of forest biomass harvesting guidelines based on assessing changes in soil nutrient status de Vries W. (Netherlands) |

08:00 – 10:00 KG I - 1199 (University Freiburg) Theme 2: Forests and Climate Change

108 T2 - Resilience of planted forests under global change : learning from the past – preparing next generation

Organizer Orazio C. (France)

2884 Evaluating forest species response to different climate conditions using REINFFORCE arboreta network Correia A. (Portugal)

| 3162 | Site selection and silvicultural management systems for sustainable plantations in dry and drying climates Harper R. (Australia) |
|------|--|
| 749 | Academia, NGOs, private and public forest sectors - what proposal for the new generation? Neves Silva L. (Switzerland) |
| 2223 | Investments in planted forests in southern Europe: an ex-post estimation of returns over the last 15 years Pra A. (Italy) |
| 1672 | Building climate resilient coastal forests applying assessment of vulnerability to climate change and livelihoods of local people Al-Amin M. (Bangladesh) |
| | Panel Discussion |

| 08:00 – 10:00 | KG I - 1228 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|---------------|--|
| 26 | D9 - Policy learning across governance levels for durable results |
| Organizer | Nathan I. (Denmark) |
| 2775 | Towards durable solutions in sustainable forest management: A reflexive overview on the pilot application of a policy learning protocol to legality verification and community rights in Peru <i>Humphreys D. (United Kingdom)</i> |
| 673 | Moving beyond forest governance in silos in the Democratic Republic of Congo Wardell D. (France) |
| 1392 | Policy learning through access to information – a case study of non-state regulatory authority and transparency through REDD+ and FLEGT/VPA implementation in Cameroon <i>Carodenuto S. (Germany)</i> |
| 4098 | Seducing the already seduced? The potential of soft-governance instruments and processes for making the forestry sector more competitive through gender equality Appelstrand M. (Sweden) |
| 1893 | Do policy actors learn through forward-thinking? Conflict and cooperation relating to sustainable forest management in Germany Sotirov M. (Germany) |
| 2720 | Venue shopping or policy learning? Chinese enterprises' responses to international legality requirements Nathan I. (Denmark) |
| 3382 | Setting up a Durable Policy: Challenges and Opportunities for China's Forestry Trade Policy <i>Chen X. (China)</i> |
| | |

| 08:0 | 00 – 10:00 | KG II - Auditorium Maximum (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|------|------------|--|
| | 139a | D9 - Towards a sustainable European forest based bioeconomy |
| | Organizer | Winkel G. (Germany) |
| | 1799 | Bioecionomy- the political framework Puelzl H. (Austria) |
| | 3140 | The environmental dimension of a European forest based bio-economy <i>Nabuurs G. (Netherlands)</i> |
| 102 | 3998 | The social dimension of a sustainable European forest based bioeconomy Winkel G. (Germany) |

| 511 | Economic sustainability in European forest bioeconomy: prospects and challenges? Toppinen A. (Finland) |
|------|---|
| 1273 | Outlook for forest-based bioeconomy in Europe Hetemäki L. (Finland) |

| 10:30 – 12:00 | Rolf Böhme Saal (Konzerthaus) Science in Dialogue Sessions |
|---------------|---|
| SID5 | Science meets Science Panel Discussion |
| 10:30 – 12:00 | K 1 (Konzerthaus) All Division 7 (Forest Health) Meeting |
| 136 | D7 - Hierarchical modelling framework to quantify and forecast climate change and air pollution impacts on forest ecosystems |
| Organizer | De Marco A. (Italy) |
| Chairs | Sicard P. (France) |
| 1330 | Ozone-induced stomatal sluggishness changes carbon and water balance of temperate deciduous forests Hoshika Y. (Italy) |
| 1236 | Increased cumulative 03 uptake accelerates autumn senescence in an 03-sensitive beech forest with use of CO2 flux monitoring data <i>Koike T. (Japan)</i> |
| 3796 | Reaction patterns of Fagus sylvatica L. and Picea abies Karst. in Switzerland to various environmental factors derived from growth data Braun S. (Switzerland) |
| 69 | Modelling long-term impacts of changes in climate, nitrogen deposition and ozone exposure on carbon sequestration of European forest ecosystems |

de Vries W. (Netherlands)

| 10:30 – 12:00 | K 2-4 (Konzerthaus) All Division 7 (Forest Health) Meeting |
|---------------|---|
| 188b | D7 - Managing pests and diseases in commercial plantations |
| Organizer | Ganley B. (New Zealand) |
| 3314 | The eucalyptus weevil Gonipterus spp. – semiochemicals with monitoring and control potential <i>Paiva M. (Portugal)</i> |
| 785 | Deep planting benefits Norway spruce seedlings Viiri H. (Finland) |
| 2505 | Biological control of the Eucalyptus bronze bug Thaumastocoris peregrinus with Cleruchoides noackae: setting up the rearing system Martínez G. (Uruguay) |
| 3152 | Heterobasidion And Armillaria Root And Stem Rot Diseases In Turkish Forests Beram R. (Turkey) |
| 3369 | Current status of forest plantation health in Colombia <i>Rodas C. (Colombia)</i> |

| 0:30 – 12:00 | K 5-7 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|--------------|--|
| 90b | D4 - Advanced Methods for Measuring, Monitoring and Assessing Forests to Meet Societal Challenges |
| Organizer | Amateis R. (United States of America) |
| Chairs | Tewari V. (India), Marshall P. (Canada) |
| 215 | Forest Observational Studies – an Essential National Green Infrastructure for measuring & monitoring forest ecosystem dynamics and climate change impacts Tewari V. (India) |
| 856 | Balancing timber mobilization and biodiversity conservation in mixed broadleaf-conifer forests: an invento- ry-based scenario analysis Temperli C. (Switzerland) |
| 3052 | Multipurpose long term monitoring study on thinning intensity of major coniferous plantations in the Republic of Korea Seo Y. (South Korea (ROK)) |
| 3284 | Combined usage of Terrestrial Laser Scanner (TLS) and Drone as an effective tool for forest parameters extraction Papalampros L. (Greece) |
| 3666 | Measuring canopy cover, upper layer tree crowns and determining canopy gaps' properties with UAV in "Izvoarele Nerei" Reserve, Romania Banu T. (Romania) |

| 0:30 – 12:00 | K 8 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|--------------|---|
| 36 | D4 - Interactions of Global Forest Resources and Climate |
| Organizer | Yousefpour R. (Germany) |
| Chairs | Naudts K. (Germany) |
| 3036 | The Effect of Technological Change on Forest Carbon Fluxes: Massive Timber Construction and Genetically-enhanced Species van Kooten G. (Canada) |
| 3930 | Impact of age-dependent harvest in land-surface models Naudts K. (Germany) |
| 2673 | Impact of climate change mitigation on the global woody biomass use in 2010-2100 <i>Lauri P. (Austria)</i> |
| 2734 | Impact of forest management regimes on forest carbon cycling and other ecosystem processes in Europe Metzger C. (Germany) |
| 3079 | Model meets data: Challenges and opportunities to implement land management in Earth system models Naudts K. (Germany) |
| 3624 | Global Forest Resources Utilization by Adaptining Sustained Yield Harvesting to Future Climate Change Yousefpour R. (Germany) |

| 0:30 – 12:00 | K9 (Konzerthaus) All Division 7 (Forest Health) Meeting |
|--------------|--|
| 122b | D7 - Invasive species surveillance: New methods and tools for survey and early detection |
| Organizer | Sweeney J. (Canada) |
| Chairs | Rassati D. (Italy) |
| 1853 | Biosurveillance of Alien Forest Enemies (bioSAFE) – creating new genomic tools to meet the challenges posed by forest alien invasives <i>Roe A. (Canada)</i> |
| 1441 | Portable LAMP (loop mediated isothermal amplification): a new molecular assay to detect Phytophthora ramorum Aglietti C. (Italy) |
| 3773 | Spore trapping and high throughput molecular detection approaches for forest pathogens. Stenlid J. (Sweden) |
| 1438 | Scent detection dogs for detection of trees infested by Asian longhorned beetle Hoch G. (Austria) |
| 3586 | Use of the KORINA-App for engaging citizens and agencies in detection of invasive plant species in Saxony-Anhalt, Germany Schneider K. (Germany) |
| 1055 | Finding a needle in a haystack - how to detect harmful new organisms on trees Forster B. (Switzerland) |

10:30 – 12:00 Room "Basel + Mühlhausen" (Novotel Freiburg) Theme 2: Forests and Climate Change

302b T2 - Tropical wetlands for climate change adaptation and mitigation

| Organizer | Murdiyarso D. (Indonesia) |
|-----------|---|
| Chairs | Lilleskov E. (United States of America) |
| 3008 | Carbon Stocks of Mangroves on Two Large River Deltas in East Africa Trettin C. (United States of America) |
| 2327 | Impacts of land use on mangrove carbon stocks and greenhouse gas fluxes MacKenzie R. (United States of America) |
| 2379 | A global analysis of mangrove ecosystem carbon stocks along broad environmental gradients: results from the SWAMP mangrove plot network Kauffman J. (United States of America) |
| 2888 | Mapping approaches for developing regional estimates of tropical wetland extent, carbon storage, and degradation Hribljan J. (United States of America) |

| 10:30 – 12:00 | Room "Baden-Baden" (Novotel Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
|---------------|--|
| 105b | T3 - Sustainable co-production of wood and non-wood forest products |
| Organizer | Mutke S. (Spain) |
| Chairs | Chamberlain J. (United States of America), Shen H. (China) |
| 3984 | The potential of Wild Forest Products – a Multi Criteria Analysis across six European case studies <i>Huber P. (Austria)</i> |
| 639 | Co-Managing Forests for Wood and Non-Wood: Integrating food and medicinal products with timbe production for rural people in North America. Chamberlain J. (United States of America) |
| | Panel Discussion |
| 10:30 – 12:00 | Room "Colmar" (Novotel Freiburg) Theme 1: Forests for People |
| 183b | T1 - Forest Education |
| Organizer | Rodriguez S. (Mexico) |
| Chairs | Lackner M. (Austria), Burns J. (Austria) |
| 3607 | Planned educational infrastructure in Kutno Forest District (Poland) Blasiak A. (Poland) |
| | |

| 10:30 – 12:00 | KG I - 1010 (University Freiburg) |
|---------------|--|
| | Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |

1525 Adapting forestry education in New Zealand to a changing environment

| 1525 | Manley B. (New Zealand) |
|-----------|--|
|) – 12:00 | KG I - 1010 (University Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
| 9b | T4 - IUFRO Task Force on Biological Invasions in Forests |
| Organizer | Liebhold A. (United States of America) |
| 4033 | Evaluating the invasion potential of non-native tree species in Europe Wohlgemuth T. (Switzerland) |
| 2830 | Insights into the invasiveness of eucalypts - the particular case of Eucalyptus globulus Silva J. (Portugal) |
| 176 | Assessment of invasiveness of introduced tree species in Europe Bindewald A. (Germany) |
| 2021 | Douglas-fir as a plantation tree in New Zealand – invasion potential meets forest management <i>Paul T. (New Zealand)</i> |
| 1442 | Invasion patterns and ecological impacts of an exotic herbivore – emerald ash borer in North American forests J.K. Gandhi K. (United States of America) |

|):30 – 12:00 | KG I - 1098 (University Freiburg) All Division 3 (Forest Operations Engineering and Management) Meeting |
|--------------|--|
| 168b | D3 - Sustainable forest operations - A foundation of the green economy |
| Organizer | Chung W. (United States of America), Marchi E. (Italy) |
| 1257 | Influence of soil compaction on Quercus robur seedlings establishment <i>Mariotti B. (Italy)</i> |
| 1275 | Benchmarking of Cost Rates in Forest Harvesting Operations in Different Global Regions <i>Di Fulvio F. (Austria)</i> |
| 1732 | Life Cycle Analysis of thermal use of woodchips from conifer thinnings considering delivered heat (MWht) as functional unit: A case-study from a logistic terminal close to Madrid (Spain). <i>Tolosana E. (Spain)</i> |
| 3246 | Photogrammetry estimation of wheel ruts dimension and soil compaction caused by a forwarder. Marra E. (Italy) |
|):30 – 12:00 | KG I - Aula (University Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
| 93 | T4 - Silviculture for non-wood ecosystem services |
| Organizer | Skovsgaard J. (Sweden) |
| Chairs | Peyron J. (France), Sievänen T. (Finland), Kleinschmit D. (Germany) |
| 333 | Comparing supply and demand of forest ecosystem services for urban and rural forests Meyer M. (Germany) |
| 2472 | A pre-commercial thinning intervention designed to reduce impacts on wildlife habitat while reaching timber production objectives more cost-effectively Soucy M. (Canada) |
| 3294 | Mycosilviculture: managing forests for the provision of fungal ecosystem services de Miguel S. (Spain) |
| 1148 | Assessing the Non timber forest products in tropical forest: case of study Imataca forest reserve Venezuela |

Gutiérrez N. (Venezuela) 10:30 – 12:00 KG I - 1199 (University Freiburg)

164 T1 - How forest investment science can support sustainable forest management? Organizer Siry J. (United States of America)

1513 Origins and Sustainability of Institutional Timberland Investing Caulfield J. (United States of America) 1727 Timberland investing and forest conservation and sustainability Morales Olmos V. (Uruguay) 2386 Achieving Forest Sustainability from an Operator's Perspective

Thomas M. (United States of America) 2688 A Lender's Perspective on Forest Investments

Schlesinger R. (United States of America) Educating timberland investment professionals Izlar B. (United States of America)

| 10:30 – 12:00 | KG I - 1224 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
|---------------|--|
| 200 | D6 - Gender, climate policy and the future of the forests |
| Organizer | Arora-Jonsson S. (Sweden) |
| Chairs | Westholm L. (Sweden) |
| 284 | Gender norms and gendered impacts of oil palm conversion in Indonesia: Challenging private sector commitments to climate change mitigation Sijapati Basnett B. (Indonesia) |
| 2496 | Gender Perspectives in Local Nature Protection Initiatives: Experiences from Sweden Eckerberg K. (Sweden) |
| 694 | Gender, climate and forest governance in Canada Reed M. (Canada) |
| 754 | New types of private forest owners: Understanding female forest owner behaviour towards Climate Change Adaptation <i>Pröbstl–Haider U. (Austria)</i> |
| | Panel Discussion |
| 10:30 – 12:00 | KG I - 1228 (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
| 115 | T3 - Recent Strategies of Tree Genomic Researches for High Value Forest Products and |

| 115 | 13 - Recent Strategies of Tree Genomic Researches for High Value Forest Products and Sustainability of Forest Ecosystems under Climate Change |
|-----------|--|
| Organizer | Park E. (South Korea (ROK)) |
| Chairs | Fladung M. (Germany) |
| 1168 | Managing Agroforestry Interventions in Tanzania: A Descriptive Analysis Milanzi M. (Tanzania) |
| 3232 | Application of NGS to develop molecular markers for monitoring and selection purposes in the context of climate change *Kersten B. (Germany)* |
| 277 | An economic framework for forest genomics research and development in North America <i>Porth I. (Canada)</i> |
| 102 | Functional Genomics of High-Value Bioproducts in Tropical Sandalwood Bohlmann J. (Canada) |
| | Panel Discussion |

| 0:30 – 12:00 | KG I - 1231 (University Freiburg) All Division 3 (Forest Operations Engineering and Management) Meeting |
|--------------|--|
| 125 | D3 - Planning methods in ensuring a continued license to practice |
| Organizer | Talbot B. (Norway) |
| Chairs | Seeling U. (Germany) |
| 2270 | Wet area maps for efficient planning and risk mitigation for mechanized logging operations on French mineral soils Vuillermoz M. (France) |
| 2762 | Harvester CAN-bus data for site trafficability mapping Ala-llomäki J. (Finland) |
| 534 | "Waterproof" harvesting with GIS in the Swedish forestry Friberg G. (Sweden) |
| 2705 | Optimized Routing in Forestry with the Consideration of Multiple Economical and Ecological Objectives Hosseini A. (Sweden) |
| 3409 | Soil strength in relation to moisture content in fine-grained mineral forest soils in southern Finland <i>Uusitalo J. (Finland)</i> |
| 0:30 – 12:00 | KG II - Auditorium Maximum (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
| 139b | D9 - Towards a sustainable European forest based bioeconomy |
| Organizer | Winkel G. (Germany) |
| 1795 | The impact of increased EU bioenergy demand on the use of woody biomass for material and energy Korosuo A. (Austria) |
| 465 | Climate change mitigation challenge for wood utilization – the case of Finland Valsta L. (Finland) |
| 3096 | Social sustainability and multiple-use of forests in Finnish bioeconomy Tokola N. (Finland) |
| 3934 | Assumptions on forest owner behavior and their implications for ecosystem service provisioning Eriksson L. (Sweden) |
| 3180 | Looking at bioeconomy from different perspectives: technological and social innovation approaches Pettenella D. (Italy) |
| | Panel Discussion |
| 12:45- 13:30 | KG I - 1015 (University Freiburg) Side Events |

BL 1 Book Launch: A History of IUFRO Congresses, Forest Research and Russia's Participation

Teplyakov V. (Russian Federation), Shalaev V. (Russian Federation) Organizer

| 13:30 – 15:00 | Rolf Böhme Saal (Konzerthaus) Sub-plenary Sessions |
|---------------|---|
| SP1 | Communicating with Einstein – about forest facts, feelings and fake news UNECE-FAO Forest Communicators' Network and IUFRO |
| Organizer | Moderator: Burt R. (Canada) |
| 4204 | Introduction and historic video recording of an interview with Albert Einstein Burt R. (Canada) |
| 4205 | 'It is harder to crack a prejudice than an atom' (A. Einstein) - Why we need to communicate effectively Geschwandtl I. (Austria), Lintunen K. (Finland) |
| 4206 | 'In the middle of difficulty lies opportunity' (A. Einstein) – How science and scientists have an important part to play Hayes J., Sands Y. (United States of America) |
| 4207 | 'Everything should be as simple as possible, but not simpler' (A. Einstein) - How and why we often get it wrong Lintunen K. (Finland) |
| 4208 | 'If you can't explain it simply, you don't understand it well enough' (A. Einstein) - How to do well, effectively de Cristofaro M. (Italy) |
| 13:30 – 15:00 | KG II - Auditorium Maximum (University Freiburg) Sub-plenary Sessions |
| SP2 | Innovative forest assessment and sustainable management in a changing world |

| 0 – 15:00 | KG II - Auditorium Maximum (University Freiburg) Sub-plenary Sessions | LIVE STREAM |
|-----------|--|---------------|
| SP2 | Innovative forest assessment and sustainable management in a cl IUFRO Division 4, Forest Assessment, Modelling and Management | nanging world |
| Organizer | Moderator: Peyron J. (France) | |

| 15:30 – 17:30 | Rolf Böhme Saal (Konzerthaus) All Division 3 (Forest Operations Engineering and Management) Meeting |
|---------------|--|
| 121a | D3 - Reforestation challenges: planting material, ecophysiology, biodiversity, climate change mitigation and adaptation, and disaster risk reduction |

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|--|
| lvetic V. (Serbia) |
| Haase D. (United States of America), Saksa T. (Finland) |
| Impact of Light and Moisture on the Survival and Development of Planted Pacific Northwest Timber Species Aghai M. (United States of America) |
| Cultivation of containerized forest planting material in Sweden - state-of-the-art and future technology Mattsson A. (Sweden) |
| Possibilities in using different light qualities in modifying growth and morphology of Scots pine seedlings under nursery conditions Riikonen J. (Finland) |
| The Effects of Varying Light and Rhizosphere Moisture on Early Growth and Development of Pacific Northwest Timber Species Moskowitz O. (United States of America) |
| The economic and social consequences of introduced tree species silviculture - in the case of Douglas fir, red |
| |

oak and black locust in Central Europe

Gruchala A. (Poland)

| 1333 | Direct Seeding in Reforestation – A Field Performance Review |
|------|--|
| | lvetic V. (Serbia) |
| 3918 | Importance of Developing and Supporting Quality Nursery Facilities and Staff to Meet Reforestation Needs |
| | Haase D. (United States of America) |

| 15:30 – 17:30 | K 2-4 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---------------|--|
| 197a | D4 - Ecosystem services and the well-being of forest-dependent communities: enhancing social innovation and building resilience to global changes in remote rural areas |
| Organizer | Nijnik M. (United Kingdom) |
| Chairs | Melnykovych M. (Ukraine) |
| 3911 | Assessing social innovation and its impacts in forest dependent communities: a preliminary methodological framework Secco L. (Italy) |
| 3309 | Integrating of Forest Ecosystem Services into Climate Change Adaptation Plan: A Case Study of Nepal Khadka C. (Czech Republic) |
| 2020 | Can Carbon Offset Trading Promote Economic Development in Rural Communities? van Kooten G. (Canada) |
| 610 | Identifying Green Energy Options for the Ukrainian Carpathians Björnsen Gurung A. (Switzerland) |
| 1092 | Building capacities for sustainability of local communities in marginalized rural areas: lessons learnt in the Ukraine's Carpathians and Scotland's uplands Melnykovych M. (Ukraine) |
| 2050 | Social Innovation: key for forest recreation infrastructure provisioning? Wilkes-Allemann J. (Switzerland) |
| 1040 | Assessing forest policy options through an improved understanding of the attitudes prevailing in forest-dependent communities and building resilience in the Ukraine's Carpathians <i>Kopiy S. (Ukraine)</i> |

15:30 – 17:45 K 5-7 (Konzerthaus) All Division 7 (Forest Health) Meeting

57 D7 - Invasive Alien Species and International Trade - Detection Prior to Introduction, Measures and Policy for Mitigation

| | Measures and Policy for Mitigation | |
|-----------|---|----|
| Organizer | Eschen R. (Switzerland) | |
| Chairs | Woodward S. (United Kingdom), Vannini A. (Italy) | |
| 882 | Identification of potentially invasive pests through sentinel plantings and surveys in botanical gardens: A manual for assessing insect and pathogen damage proposed by the COST Action "Global Warning" Roques A. (France) | |
| 2909 | Sentinel nurseries as tools for pathway risk assessment: insects found on Chinese woody plants commonly shipped to Europe Kenis M. (Switzerland) | |
| 1824 | Sentinel nurseries, plantations and arboreta, different approaches to tackle potential invasive plant pathoge before they move from their area of origin: the study case of China. | ns |
| | Vannini A. (Italy) | 11 |

| 2721 | An overview of national regulations for sentinel plantings Grégoire J. (Belgium) |
|------|---|
| 1518 | Sentinel arboreta as 'bridge environment' to study novel host-pathogens interactions and detect potentially alien plant pathogens Vannini A. (Italy) |
| 1213 | Improved sampling of pests in traded seeds and seeds from botanical gardens Franic I. (Switzerland) |
| 1981 | Why a regional approach to management of forest pests and diseases in Eastern Africa? <i>Gichora M. (Kenya)</i> |
| 1471 | Population diversity and dynamics of the Asian Longhorned beetle Anoplophora glabripennis within invasive outbreaks Tsykun T. (Switzerland) |
| 2907 | Determinants of global variation in habitat susceptibility to insect invasions Liebhold A. (United States of America) |

| 15:30 – 17:30 | K9 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---------------|---|
| 29a | D4 - Integrating climate change, disturbances and diversity effects into growth models: from understanding ecological processes to predicting forest growth and yield |
| Organizer | Schneider R. (Canada) |
| Chairs | Albrecht A. (Germany) |
| 2049 | Tree allometric relationships for structurally and species diverse forests Forrester D. (Switzerland) |
| 2126 | Effects of Diversity and Competition on Individual Tree Growth and Productivity Evidence from two Species-rich Afrotemperate Forests Seifert T. (Germany) |
| 3860 | Modelling the growth and yield of mixed-species stands with the Tree and Stand Simulator (TASS) Bealle Statland C. (Canada) |
| 105 | A copula-based stochastic individual tree growth model for mixed species Acadian Forests <i>Kershaw J. (Canada)</i> |
| 1215 | Scenario analyses of the transition to close-to-nature mountain forest management from the perspective of climate change Hilmers T. (Germany) |
| 1032 | Stability of tree increment to episodic drought in uneven-aged, mixed stands Danescu A. (Germany) |
| 1051 | Predicting future harvesting potential in Switzerland: evaluation of a new climate-sensitive growth function in the scenario model Massimo Stadelmann G. (Switzerland) |

| 30 – 17:30 | Room "Basel + Mühlhausen" (Novotel Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
|------------|---|
| 94a | T3 - Ecologically-based silviculture |
| Organizer | Skovsgaard J. (Sweden) |
| Chairs | El-Kassaby Y. (Canada) |
| 3831 | Changing stand structures in plantations: a very large challenge Dupont-Leduc L. (Canada) |
| 4107 | Evaluating structural, compositional and economic tradeoffs of ecologically-based silvicultural approaches in mixed-species forests of the Mississippi River floodplain Frey B. (United States of America) |
| 3897 | Understanding growth: scaling production ecology from trees to stands Fernandez-Tschieder E. (United States of America) |
| 439 | The temporal dynamics of net primary production of loblolly pine plantations in the southern United States <i>Zhao D. (United States of America)</i> |
| | |

15:30 – 17:30 Room "Baden-Baden" (Novotel Freiburg)

| | Theme 2: Forests and Climate Change |
|-----------|--|
| 190 | T2 - Climate change and forest health: insights from the IUFRO Task Force |
| Organizer | Paoletti E. (Italy) |
| 1000 | Are forest disturbances amplifying or cancelling out climate change-induced productivity changes in European forests? Reyer C. (Germany) |
| 3022 | Climatic influences on tree-killing bark beetles: A comparison of North American and European species Bentz B. (United States of America) |
| 3351 | A 30 year, acid deposition and climate change field experiment on high-elevation spruce-fir forest structure and function McNulty S. (United States of America) |
| 1881 | New development in modelling impacts of ozone and climate change on forests De Marco A. (Italy) |
| 2439 | Water starvation impacts faster and more severely phenology and growth than carbon starvation in ten years old beech trees. Massonnet C. (France) |
| 4041 | Tree growth patterns and water relations in beech, spruce, pine and oak trees across Switzerland Etzold S. (Switzerland) |
| 1078 | Multi-scale drivers of forest disturbances across European temperate forests Senf C. (Germany) |

Panel Discussion

| 15:30 – 17:30 | Room "Colmar" (Novotel Freiburg) Theme 1: Forests for People |
|---------------|---|
| 301a | T1 - Enhancing Forest Education through Regional Cooperation |
| Organizer | Zeng M. (Canada) |
| Chairs | Innes J. (Canada), Wang G. (Canada) |
| 2000 | Forestry Education in Asia-Pacific Region: Challenges and Opportunities <i>Innes J. (Canada)</i> |
| 2635 | Student Mobility and Faculty Exchange Based on Joint Undergraduate Program of BFU and UBC <i>Lin Y. (China)</i> |
| 2911 | Facing the Challenge of Internationalization: UPLB's Initiatives in Forestry Education and Research <i>Pulhin J. (Philippines)</i> |
| 3347 | Forestry education collaboration across national borders – opportunities and challenges <i>Weston C. (Australia)</i> |
| 2849 | International cooperation for tropical forestry education partnership towards 21st century Pipatwattanakul D. (Thailand) |
| 15:30 – 17:30 | KG I - 1009 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
| 63 | D9 - Forests for the Health of the People |
| Organizer | Kleinschmit D. (Germany) |
| Chairs | Selter A. (Germany) |
| 3123 | Forests, meadows or vineyards? Results of landscape effects on human health in the Wienerwald Biosphere Reserve Arnberger A. (Austria) |
| 2993 | How can forests contribute to restoration and what kind of forest is best suited to foster restoration and wellbeing? Bauer N. (Switzerland) |
| 291 | Management effectiveness of Secondary coniferous forests on Landscape appreciation and Psychological Restorativeness Takayama N. (Japan) |
| 3165 | The meaning of wilderness: emotional mapping in the Black Forest National Park Ensinger K. (Germany) |
| 3753 | Forest related art of leisure – concepts in history and presence Selter A. (Germany) |

| 30 – 17:30 | KG I - 1010 (University Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|------------|---|
| 92a | T4 - Concepts and assessments of forest ecosystem services and benefits |
| Organizer | Meyer M. (Germany) |
| Chairs | Schulz C. (Germany) |
| 1658 | Trade-offs and synergies among multiple ecosystem services under future oil palm expansion scenarios in Indonesia Pacheco P. (Indonesia) |
| 807 | Quantifying and understanding spatio-temporal ecosystem services interactions in transformed forest landscapes: insights from a Patagonian biodiversity hotspot Locher-Krause K. (Germany) |
| 455 | Approaches and methods for ecosystem services assessment in the North of Portugal: from supply modeling to land management optimization Azevedo J. (Portugal) |
| 3339 | Afforested Plantations Alter Ecosystem Services in Pampas Grasslands in Argentina <i>Phifer C. (United States of America)</i> |
| 1269 | Backcasting future states to match supply and demand for ecosystem services in Slovakian regions of Podpolanie and Kysuce Smrecek R. (Slovakia) |
| 1664 | Silviculture, Climate Change and Ecosystem Service Provision. Simulation Studies in Two Contrasting German Forest Landscapes Poschenrieder W. (Germany) |

15:30 – 17:30 KG I - 1015 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting

Ignacio J. D. (Spain)

19a D6 - The role of forests in sustainable rural development in developing countries: livelihoods and quality of life

| | livelihoods and quality of life |
|-----------|---|
| Organizer | Diaz-Maroto I. (Spain) |
| 2894 | Changes in the ecosystem services obtainable in native forests: economic evaluation <i>Ignacio J. D. (Spain)</i> |
| 806 | Examining the role of markets in non-timber forest products and the implications for climate change adaptation in Uganda Tumuheirwe Kakooko Ndyomugyenyi E. (Uganda) |
| 3880 | Land use planning tools for forest and rural development in Delta del Paraná Fernandez E. (Argentina) |
| 3723 | Supporting sustainable development and responsible forest management by giving forest communities new tools to access benefits from ecosystem services and ecosystem service markets Henschel C. (Germany) |
| 1676 | The impact of forest plantations on the household's access to natural forests and farmland in East Africa |

The impact of forest plantations on the household's access to natural forests and farmland in East Africa Ingram V. (Netherlands)
 The role of natural forests in the sustainable development of rural communities

| 15:30 – 17:30 | KG I - 1098 (University Freiburg) |
|---------------|--|
| | Theme 5: Forests, Soil and Water Interactions |
| 205a | T5 - Phloem function and dysfunction under drought |
| Organizer | Epron D. (France) |
| Chairs | Dannoura M. (Japan), Hölttä T. (Finland) |
| 1391 | Long-term effects of repeated summer drought on phloem functionality in adult trees Grams T. (Germany) |
| 1733 | Effect of phloem transport disruption during lethal drought on plant carbon-source and sink activity. Salmon Y. (Finland) |
| 1791 | 13 CO2 pulse labelling experiment reveals phloem function impairment in young beech trees subjected to severe drought Desalme D. (France) |
| 1624 | Differences in phloem anatomy alters its function under drought stress Dannoura M. (Japan) |
| 3067 | Phloem function and physiological mechanisms of sapling survival and mortality during drought <i>Ishida A. (Japan)</i> |

| | Theme 3: Forests and Forest-Based Products for a Greener Future |
|-----------|--|
| 303 | T3 - Research Advances for the Meliaceae |
| Organizer | Ward S. (Puerto Rico) |
| 3263 | Patterns of pollen- and seed-mediated gene flow in three rain forest timber species from the Entandrophagma genus (Melicaeae) Park E. (South Korea (ROK)) |
| 1110 | Selection of seed sources – a crucial factor for effective conservation of genetic resources of Melia Dubia Warrier R. (India) |
| 2604 | Survival and growth of mahogany (Swietenia macrophylla) 20 years after planting in Mexico's community forests: effects of silvicultural treatments |

Genetic trials of mahogany and Spanish cedar in Quintana Roo, Mexico after almost 20 years

Ward S. (Puerto Rico)

| 5:30 – 17:30 | KG I - 1199 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|--------------|---|
| 77a | D9 - The Global Forest Environmental Frontier - What has changed, what has remained unchanged, how will the future look like? |
| Organizer | Winkel G. (Germany) |
| Chairs | Sotirov M. (Germany), Moseley C. (United States of America) |
| 3858 | The Climate Change Frontier: Power and Politics in Forest-based Adaptation and Mitigation, and a Green Economy Brockhaus M. (Finland) |
| 2881 | The Bioeconomy Frontier Puelzl H. (Austria) |
| 2039 | Forest-Community Relationships in the Age of Collaboration Moseley C. (United States of America) |
| 1238 | The Forest Environmental Frontier in Australia and New Zealand Edwards P. (New Zealand) |
| 1001 | Using international environmental governance interventions as a tool of territorialisation: the case of FLEGT and REDD+ in Laos Ramcilovic-Suominen S. (Finland) |

| 15:30 – 17:30 | KG I - 1228 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|---------------|---|
| 35 | D9 - "Après Paris": global integration of forest climate governance |
| Organizer | Reinecke S. (Germany) |
| Chairs | Partzsch L. (Germany) |
| 1954 | Concerting climate action on forests: the role of non-state actors Reinecke S. (Germany) |
| 413 | Non-State Circulation in Forest and Climate Change Governance: the Case of the FLEGT-REDD+ Linkages Montouroy Y. (Guadeloupe) |
| 3680 | Thinking beyond the Paris conference: the importance of understanding the North-South cooperation context on climate change in the Congo Basin Nago Zeufack M. (Germany) |
| 977 | Sustainable biofuels: Opportunities and challenges of polycentrism in global governance Partzsch L. (Germany) |
| 3960 | Greening supply chain of leather: Opportunities and challenges of involving smallholder farmers in zero deforestation economy Mammadova A. (Italy) |
| | Panel Discussion |

| 5:30 – 17:30 | KG II - Auditorium Maximum (University Freiburg) All Division 7 (Forest Health) Meeting |
|--------------|--|
| 177a | D7 - Forest Health in a Changing Climate |
| Organizer | Fettig C. (United States of America) |
| Chairs | Delb H. (Germany) |
| 3324 | The Scientific Basis of Climate Change and the Observed Impacts and Risks on Forests and Watersheds across National Forest System Lands in the United States Levinson D. (United States of America) |
| 3908 | Hotter Drought Effects on Forests – Emerging Global Patterns of Forest Stress, Disturbance, and Mortality Allen C. (United States of America) |
| 231 | Changing disturbance regimes and their impact on the climate regulating function of forests <i>Thom D. (Austria)</i> |
| 1517 | Tree mortality during drought: the biotic connection Kolb T. (United States of America) |
| 3288 | Rapid phenological changes in foliar chemistry impact gypsy moth performance: Implications to altered synchrony induced by warming climate Raffa K. (United States of America) |
| 2887 | Health and growth of Betula pendula trees under the changing climate in Lithuania <i>Araminiene V. (Lithuania)</i> |
| | |

| 18:00 – 19:30 | Rolf Böhme Saal (Konzerthaus) All Division 3 (Forest Operations Engineering and Management) Meeting |
|---------------|--|
| 121b | D3 - Reforestation challenges: planting material, ecophysiology, biodiversity, climate change mitigation and adaptation, and disaster risk reduction |
| Organizer | lvetic V. (Serbia) |
| Chairs | Haase D. (United States of America), Saksa T. (Finland) |
| 2142 | Scots pine (Pinus sylvestris L.) growth response to variable environmental conditions in Poland <i>Kowalczyk J. (Poland)</i> |
| 1043 | Prospects for restoration of degraded landscapes within the Yavoriv sulphur quarry (Ukraine) through woodland development. Kopiy S. (Ukraine) |
| 1274 | Control of forest reproductive material in the Single European Market Konnert M. (Germany) |
| 1045 | Reforestation challenges on fine-textured soils in boreal forest Saksa T. (Finland) |
| | |

| 18:00 – 19:30 | K 1 (Konzerthaus) All Division 7 (Forest Health) Meeting |
|-------------------------|--|
| 191 Organizer | D7 - Nitrogen deposition: spatial-temporal change and ecological impacts Du E. (China) |
| 427 | Inorganic nitrogen deposition to forest ecosystems in Europe – spatial patterns and temporal changes in the past 15 years Schmitz A. (Germany) |
| 2639 | Response of temperate forest N status to long-term recovery from acidification and decreasing atmospheric N deposition Verstraeten A. (Belgium) |
| 404 | Integrating species composition and leaf nitrogen content to indicate effects of nitrogen deposition <i>Du E. (China)</i> |

| 00 – 19:30 | K 2-4 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|------------|---|
| 197b | D4 - Ecosystem services and the well-being of forest-dependent communities: enhancing social innovation and building resilience to global changes in remote rural areas |
| Organizer | Nijnik M. (United Kingdom) |
| Chairs | Melnykovych M. (Ukraine) |
| 1360 | Social innovation in the Welsh Woodlands: the case of community efforts in woodland-based Third-Sector engagement Ludvig A. (Germany) |
| 4086 | Social innovation, forest ecosystem services and sustainable agriculture: tensions and synergies around the valorisation of Guadeloupean forest (FWI) Barlagne C. (United Kingdom) |
| 1011 | Benefits and Perceptions of Forests: The Case of Rural People in Bago Yoma, Myanmar Soe K. (South Korea (ROK)) |
| 3267 | Biodiversity and ecosystem services in a rural to urban forested watershed near Mexico City Gonzalez-Martinez T. (Mexico) |

| 18:00 – 19:30 | K 8 (Konzerthaus) |
|---------------|--|
| | Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |

24 T4 - Growth and Dynamics of Pine in Mixed Forests

| Organizer | Ducey M. (United States of America) |
|-----------|--|
| Chairs | Bravo F. (Spain) |
| 3940 | Mediterranean mixed pine forests: the role of stand density on growth efficiency and pine decline Bravo F. (Spain) |
| 4085 | Growth partitioning and growing space efficiency of eastern white pine (Pinus strobus) in mixed-species forests of the northeastern United States Ducey M. (United States of America) |

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|---------------|---|
| 18:00 – 19:30 | K9 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
| 29b | D4 - Integrating climate change, disturbances and diversity effects into growth models: from understanding ecological processes to predicting forest growth and yield |
| Organizer | Schneider R. (Canada) |
| Chairs | Albrecht A. (Germany) |
| 3244 | Addressing the Confounding Effect of Insect Disturbance when Assessing Growth in Mixed Species Stands Following Pre-commercial Thinning Marshall P. (Canada) |
| 1496 | Integrating effects of diversity, disturbances, and climate change into forest landscape modeling <i>Rammer W. (Austria)</i> |
| 2442 | Development of simulation framework WINDROT for prediction of damages caused by root rot, wind disturbance and European spruce bark beetle Honkaniemi J. (Finland) |
| 2995 | PINEA.pt – a tree growth and yield model for Pinus pinea L. in a multispecies and climate change paradigm <i>Tomé M. (Portugal)</i> |
| 18:00 – 19:30 | Room "Basel + Mühlhausen" (Novotel Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
| 94b | T3 - Ecologically-based silviculture |
| Organizer | Skovsgaard J. (Sweden) |
| Chairs | El-Kassaby Y. (Canada) |
| 298 | A Comparison of Ecophysiology, Growth and Biomass Allocation in Clonal Pinus tadea Growing in the US and Brazil Fox T. (United States of America) |
| 575 | Climatic and genetic control on carbon fluxes and partitioning in Eucalyptus plantations <i>Campoe O. (Brazil)</i> |
| 2477 | Responses of photosynthesis and growth of sprouting seedlings for three different shade-tolerate tree species to gaps of temperate secondary forests: the roles of gap size and within-gap position <i>Yan Q. (China)</i> |
| 4111 | Growth dominance across a productivity gradient: light competition and light use efficiency |

| 18:00 – 19:30 | Room "Baden-Baden" (Novotel Freiburg) All Division 7 (Forest Health) Meeting |
|---------------|---|
| 208 | D7 - Social and Economic dimensions of forest health: Contributing to a biosecure future |
| Organizer | Marzano M. (United Kingdom) |
| 901 | Investigating the public response and risk perceptions in relation to tree pest and disease outbreaks in the UK <i>Urquhart J. (United Kingdom)</i> |
| 3134 | Socio economic implications of Forest pest outbreaks in developing and countries with economies in transition <i>Sathyapala S. (Italy)</i> |

1626 Improving risk communication and engagement within biosecurity agencies

Allen W. (New Zealand)

Fernandez-Tschieder E. (United States of America)

| 317 | Are we ready/able to protect urban trees? Jones G. (United Kingdom) |
|------|--|
| 3073 | Societal costs of urban tree diseases Price C. (United Kingdom) |
| 462 | Plants, pathology and practice: bridging the gap between knowledge and action in UK nurseries <i>Marzano M. (United Kingdom)</i> |

| 18:00 – 19:30 | Room "Colmar" (Novotel Freiburg) Theme 1: Forests for People |
|----------------------|--|
| 301b | T1 - Enhancing Forest Education through Regional Cooperation |
| Organizer | Zeng M. (Canada) |
| Chairs | Innes J. (Canada), Wang G. (Canada) |
| 2790 | Forest education of Kyoto University in collaboration with partner universities in ASEAN: Challenges for trans-disciplinarity and trans-border Kanzaki M. (Japan) |
| 2543 | Benefits of international collaboration for the New Zealand School of Forestry Manley B. (New Zealand) |
| 3048 | Sustainable Management of Educational Forest Without Cutting Trees: A Case of Bogor Agricultural University, Indonesia Soekmadi R. (Indonesia) |
| 1673 | Sketching future forestry education for South East Asia: perspective Bangladesh Al-Amin M. (Bangladesh) |
| 2675 | Innovative Forestry Education Wang G. (Canada) |

174 D9 - Connecting People to Forest Science: Innovative Communication Approaches for Delivering Science

| | Denvering Science |
|-----------|--|
| Organizer | Miner C. (United States of America) |
| 106 | Knowledge sharing in Forestry Ferreira dos Santos V. (Italy) |
| 3780 | Forest communication: are we doing right? An online survey on public knowledge and perception of forests and forestry terminology in Italy <i>Da Re R. (Italy)</i> |
| 3679 | Using Social Media to Promote a Forestry Conference: European Forum on Urban Forestry 2016 Case Study <i>Rantaša B. (Slovenia)</i> |
| 2485 | Australia's approach for connecting forests, science and people in national forest reporting <i>Hunn T. (Australia)</i> |
| 2500 | Raising awareness on forest genetic diversity through Wikipedia Hermanowicz E. (Italy) |

| 18:00 – 19:30 | KG I - 1010 (University Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|---------------|---|
| 92b | T4 - Concepts and assessments of forest ecosystem services and benefits |
| Organizer | Meyer M. (Germany) |
| Chairs | Schulz C. (Germany) |
| 863 | Considering Ecosystem Services and their Uncertainties in Forest Management Planning <i>Knoke T. (Germany)</i> |
| 1366 | Mitigating forest biodiversity and ecosystem service losses in the era of bio-based economy Eyvindson K. (Finland) |
| 379 | Spatial Assessment of Differences in Ecosystem Functions and Services on Forest Air Purification in South Korea Song C. (South Korea (ROK)) |
| 4002 | Green infrastructures for human well-being in European forest landscapes Elbakidze M. (Sweden) |
| 18:00 – 19:30 | KG I - 1015 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
| 19b | D6 - The role of forests in sustainable rural development in developing countries: livelihoods and quality of life |

| | · |
|-----------|--|
| Organizer | Diaz-Maroto I. (Spain) |
| 116 | A multidimensional participatory strategic model for promoting the sustainable community forestry and human wellbeing in México **Lujan-Alvarez C. (Mexico)** |
| 3537 | Typology of Smallholder Industrial Tree Plantations (ITP) in Caraga region, Philippines <i>Grefalda L. (Philippines)</i> |
| 2938 | Collecting Styrax benzoin tap and conflicts of land tenure in customary forest in North Sumatra, Indonesia <i>Harada k. (Japan</i>) |
| 2516 | The complex balance between nature conservation and livelihood of local residents in a State Park Magro T. (Brazil) |
| 778 | Endogenous knowledges, use and folk perception on conservation status of orchids in Sudanian zone of Bénin Assédé E. (Benin) |
| | |

| :00 – 19:30 | KG I - 1098 (University Freiburg) Theme 5: Forests, Soil and Water Interactions |
|-------------|--|
| 205b | T5 - Phloem function and dysfunction under drought |
| Organizer | Epron D. (France) |
| Chairs | Dannoura M. (Japan), Hölttä T. (Finland) |
| 492 | Carbon allocation, drought and source-sink relationships in trees Gessler A. (Switzerland) |
| 314 | Potassium nutrition and water availability affect phloem transport of photosynthetic carbon in eucalypt trees <i>Epron D. (France)</i> |
| 1830 | Tree response to drought under changing climate regimes: mitigation or amelioration? Hubeau M. (Belgium) |
| 1008 | Phloem sap as a diagnostic assessment of plant water and nutritional status Merchant A. (Australia) |

| 18:00 – 19:30 | KG I - 1199 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|---------------|---|
| 77b | D9 - The Global Forest Environmental Frontier - What has changed, what has remained unchanged, how will the future look like? |
| Organizer | Winkel G. (Germany) |
| Chairs | Sotirov M. (Germany), Moseley C. (United States of America) |
| 3145 | The forest environmental frontier in the Congo basin: past, present and future Omar Cerutti P. (Kenya) |
| 831 | From forest frontier to forest landscape arena: A trajectory of forest development aspirations, discourse and practice in Amazonia de Jong W. (Japan) |
| 634 | The Forest Environmental Frontier in North America Schultz C. (United States of America) |
| 1904 | The Politics of the Forest Environmental Nexus in Europe Sotirov M. (Germany) |
| | |

2018 Legality frontiers between State and local communities in Myanmar, Cambodia, Laos and Indonesia *Nathan I. (Denmark)*

| 18:00 – 19:30 | KG I - 1228 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|---------------|---|
| 160 | D9 - Wood based fuels for transports - conditions for their market entry and impacts on the wood-using sector and climate change mitigation |
| Organizer | Kallio M. (Finland) |
| Chairs | Latta G. (United States of America) |
| 2676 | Global trade of wood biomass for energy: a tradeoff between biofuels and pellets <i>Lauri P. (Austria)</i> |
| 3629 | Optimal use of woody biomass for biofuel production in Europe Leduc S. (Austria) |
| 2564 | Prospects for producing liquid wood-based biofuels and their impacts on the forest sector in Europe Kallio M. (Finland) |
| 2781 | Considerations in estimating residue based feedstock supply curves for biojet facilities in the northwestern United States Latta G. (United States of America) |
| 1640 | Forest-Based Biofuel Production in the Nordic Countries: Modelling of Optimal Allocation and Relative Cost Competitiveness Mustapha W. (Norway) |
| 3926 | Bioenergy from young dense stands – a long term sector analysis for Sweden Eriksson L. (Sweden) |

| 18:00 – 19:30 | KG II - Auditorium Maximum (University Freiburg) |
|---------------|--|
| | All Division 7 (Forest Health) Meeting |

Oliver C. (United States of America)

Waring K. (United States of America)

177b D7 - Forest Health in a Changing Climate

| Organizer | Fettig C. (United States of America) |
|-----------|---|
| Chairs | Delb H. (Germany) |
| 3308 | Impacts of forest insects on the carbon cycle and possible mitigation options <i>Kurz W. (Canada)</i> |
| 601 | Climate change and wildfire – managing in the face of uncertainty Stephens S. (United States of America) |
| 3328 | Vulnerability of United States Tree Species to Environmental Disturbance and Change Monahan W. (United States of America) |

Quantifying forest resilience to disturbance and climate

Carbon Mitigation and Other Ecosystem Services with Wood Products and Forests

18:00 – 19:30 KG I Aula (University Freiburg)

IY IFSA Youth Incubator Session

A series of TED Talks

 $Coppicing\ ability\ of\ Searsia\ lance a\ stems\ of\ different\ size\ under\ different\ harvesting\ intensities$

Abera Getahun

Forestry lidar: to infinity and beyond?

Alberto Tordesillas Torres

Estimation of boreal forest LAI using satellite data and reflectance models

Daniel Schraik

Analysis of the institutional diversity in the decentralised management of protected areas: the case study of the forest reserve of Bapouh-Bana in the west region of Cameroon

Djomo Jocelyne

Project of Peatlands as Conservation of Peat Forests Based on Local Wisdom in Central Borneo

Febi Maulana Nugraha

Swedish forestry education for the 21st century. A case study on graduates from the Swedish University of Agricultural Sciences (SLU)

Joakim Lundsten

Julian Geisel

(t.b.c.)

 $Estimating\ above-ground\ stem\ volume\ and\ tree\ biomass\ models\ for\ Searsia\ lance a\ in\ central\ bushveld,$

South Africa

Kassahun Maru

Cropland nitrogen dynamics following a three-year conservation-oriented set aside in Delta, British Columbia.

Khalil Walji

Lisa Prior

(t.b.c.)

 $Analysis\ of\ stakeholders'\ behavior\ toward\ management\ of\ community\ forest\ in\ west\ Bogor\ area, Indonesia$

Mahtut Ikhsan

Adapt or transform? Assessing 20 years of recommendations for forest adaptation in light of climate change *Ricardo Pelai*

| | | KONZERTH | IAUS | |
|-------|---|--|--|---|
| | Rolf Böhme Saal | K1 | K2-4 | K5-7 |
| 8:00 | 58a T4 - Managing forests for | 4a D4 – Open Session | 72 T4 - Oak forests and | 40 D6 - Engaging equality: The |
| 8:30 | Biodiversity and Resilience | | management for different ecosystem services | construction of gender and forest through processes of gender |
| 9:00 | | | | mainstreaming |
| 9:30 | | | | |
| 10:00 | | Coffee Break (Konzert | haus & University KG I) | |
| 10:30 | LIVE STREAM | | | |
| 11:00 | KP1 Keynote Plenary Session More details on page 130 | | | |
| 11:30 | | | | |
| 12:00 | Lunch brea | ak (Mensa) | 12:00 – 12:45 | Lunch break (Mensa) |
| 13:30 | LIVE STREAM | | YSI IUFRO-EFI Young Scientist's Initiative | |
| 14:00 | SP5 Our Future Forests — organized by IFSA | | | |
| 14:30 | - More details on page 133 | | | |
| 15:00 | | Coffee Break (Konzert | haus & University KG I) | |
| 15:30 | | 76T5 – Understanding the | 185a D4 – Towards robust | 49 T1 - Impact of forestry |
| 16:00 | | Forest-Water Nexus | projections of forests under climate change | research on policy, livelihoods and economic development in |
| 16:30 | | | | sub-Saharan Africa |
| 17:00 | | | | |
| 17:30 | | | | |
| 18:00 | | 111 T2 – Today ignored, rediscov– | 185b D4 - Towards robust | |
| 18:30 | | ered tomorrow: The importance of minor tree species in future | projections of forests under climate change | |
| 19:00 | | | | |
| 19:30 | Anniversary Gala | | | |
| 20:00 | More details on page 227 | | | |
| 20:30 | | | | |
| 21:00 | | | | |
| 21:30 | | | | |
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| KONZE | RTHAUS | NOVOTEL | | | |
|--|---|--|---|---|--|
| К8 | К9 | Room "Basel + Mühlhausen" | Room "Baden-Baden" | Room "Colmar" | |
| 5 D7 - Open Session | 66 T5 – Water Related Ecosystems Services under Risk | 86a D7 - The science of tree health and how we can use it: Multidisciplinary research from the Tree Health and Plant Biosecurity Initiative (THAPBI). | 53 T2 - The role of forestry science in promoting resilient and carbon dense forests | | |
| | Coffee | Break (Konzerthaus & University | KG I) | | |
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| | Lunch break (Mensa) an | d visit of the Poster Exhibition (Ur | niversity, KG II, HS2121) | | |
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| | Coffee | Break (Konzerthaus & University | KG I) | | |
| 13 T3 – 125 years of cultivating Norway spruce – what have we earnt and lessons for the future | 199a D7 - Effects of global change on Mediterranean forest insects and interac- tions with pathogens | 86b D7 - The science of tree health and how we can use it: Multidisciplinary research from the Tree Health and Plant Biosecurity Initiative (THAPBI). | 165a D7 – Dothistroma and other needle diseases of pine | 181a D4 - Cross-boundary modelling a changing world | |
| | | | | | |
| | 199b D7 - Effects of global change on Mediterranean forest insects and interac- tions with pathogens | 54T1 – Global Forest Technology Sharing Framework | 165b D7 - Dothistroma and other needle diseases of pine | 181b D4 - Cross-boundary modelling a changing world | |
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Theme 5: Forests, Soil and Water Interactions

| UNIVERSITY | | | | | | |
|--------------|--------------------------|--|--|--|--|--|
| | KG I - 1009 | KG I - 1010 | KG I - 1015 | KG I - 1098 | KG I - Aula | KG I - 1132 |
| 8:00 8:30 | 12a D9 – Open Session | | 123a T5 – Roots and Ecosystem Services | 206T4 - Operational methods for monitoring and | 30 D6 - Managing recreation: Empirical insights | |
| 9:00 | | | | assessment of forested landscapes | and forest manage- ment instruments. | |
| 9:30 | | | | | | |
| 10:00 | | | Coffee Break (Konzert | haus & University KG I) | | |
| 10:30 | | | | | | |
| 11:00 | | | | | | |
| 11:30 | | | | | | |
| 12:00 | Lunch brea | ak (Mensa) | 12:30 – 13:15 | | Lunch break (Mensa) | |
| 13:30 | | SP3 Forests in cities | BL 2 Book Launch: The Earthscan Reader on Gender | | | |
| 14:00 | | and in wilderness offer recreation and | and Forests. | | | |
| 14:30 | | health benefits More details on page 132 | | | | |
| 15:00 | | | Coffee Break (Konzert | haus & University KG I) | | |
| 15:30 | 12b D9 - Open | 58b T4 - Managing | 123b T5 - Roots and | 68a T2 - Forest | 184a T3 - Marketing | 133 D6 - Social |
| 16:00 | Session | forests for Biodiversi- ty and Resilience | Ecosystem Services | Adaptation and Restoration under | and Business Practices of the | dimension of wildlife conservation |
| 16:30 | | | | Global Change | Bioeconomy | and management |
| 17:00 | | | | | | |
| 17:30 | | | | | | |
| 18:00 | 12c D9 - Open | 58c T4 - Managing | 123cT5 - Roots and | 68b T2 - Forest | 184b T3 - Marketing | 155 D6 - Cities, Trees, |
| 18:30 | Session | forests for Biodiversi- ty and Resilience | Ecosystem Services | Adaptation and Restoration under | and Business Practices of the | Carbon, and Climate Change Mitigation |
| 19:00 | | | | Global Change | Bioeconomy | |
| 19:30 | | | | | | |
| 20:00 | | | | | | |
| 20:30 | | | | | | |
| 21:00 | | | | | | |
| 21:30 | | | | | | |

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|---|--|---|--|--|---|
| KG I - 1139 | KG I - 1199 | KG I - 1224 | KG I - 1228 | KG II - Auditorium Maximum | KG II - 2121 |
| 114 D3 – Transforming low grade logs and residues into higher value products through improved supply chain man- agement | 152 T3 - Resources for the Future Task Force: Institutions for Forest Transformation | 159 D9 - Developing the dialogue about forests and forestry with society - the challenge to tell good stories and the need for Forestpedagogy | 166 T2 - Develop- ment of Adaptation Strategies for Climate Change using GM Trees | 10 D3 – Innovations in forest operations for better serving evolv- ing societal needs | Poster Exhibition for more Details see page 208 |
| | Coffee Br | eak (Konzerthaus & Unive | rsity KG I) | | |
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| I | unch break (Mensa) and v | isit of the Poster Exhibition | n (University, KG II, HS212 | 1) | |
| | | | | LIVE STREAM | |
| | | | | SP4 Forest health — critical global issues in the 21st century More details on page 132 | |
| | Coffee Br | eak (Konzerthaus & Unive | rsity KG I) | | |
| 84a T4 – Promoting forest resilience, adaptive capacity, and ecosystem services through diverse forest ecosystems | 83a D7 – Are we doing the right things to deal with invasive forest pest and pathogens? Lessons from history and current strategies | 151a D3 - History, Findings, and Future Directions of Forest Landowner Research | 38 D9 - Impacts of voluntary forest management certification: challeng- es and solutions in measuring results | 127 D9 - The politics of forest governance | |
| | | | | | |
| 84bT4 – Promoting forest resilience, adaptive capacity, and ecosystem services through diverse | 383b D7 - Are we doing the right things to deal with invasive forest pest and pathogens? | 151b D3 – History, Findings, and Future Directions of Forest Landowner Research | 104 D9 - Valuation of Multipurpose Forest Management Options under Changing Climate | | |
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Theme 1: Forests for People

Theme 2: Forests and Climate Change

Thursday

Keynote Plenary Session

10:30 - 12:00

Rolf Böhme Saal (Konzerthaus Freiburg)

LIVE STREAM

Keynote Plenary Session 1

Challenges for future forest research

Moderator

Björn Hånell (IUFRO vice-president), SLU, SWEDEN



The potential contribution of the forest sector to climate change mitigation Werner Kurz, Canadian Forest Service (Natural Resources Canada), CANADA

Werner Kurz is a Senior Research Scientist at the Canadian Forest Service (Natural Resources Canada) in Victoria, BC. He leads the development of Canada's National Forest Carbon Monitoring, Accounting and Reporting System and the Forest Carbon Management Project of the Pacific Institute for Climate Solutions. His research focuses on carbon dynamics in forests and harvested wood products and the opportunities of the forest sector to contribute to climate change mitigation. Dr. Kurz co-authored six reports of the Intergovernmental Panel on Climate Change (IPCC), published over 125 peer-reviewed scientific papers, and many other reports. He serves as adjunct professor at the University of British Columbia (UBC) and at Simon Fraser University. He obtained his PhD in Forest Ecology from UBC and an honorary doctorate from the Swedish Land University.



The Earth System, the Anthropocene and the world's forests Will Steffen, The Australian National University and the Stockholm Resilience Centre, AUSTRALIA

Will Steffen is a Councilor on the publicly-funded Climate Council of Australia that delivers independent expert information about climate change, an Emeritus Professor at the Australian National University (ANU), Canberra, and a Senior Fellow at the Stockholm Resilience Centre, Sweden. He is also an Adjunct Professor at the University of Canberra, working with the Canberra Urban and Regional Futures (CURF) program, and is a member of the ACT Climate Change Council. He is chair of the jury for the Volvo Environment Prize and is a member of the International Advisory Board for the Centre for Collective Action Research, Gothenburg University, Sweden. From 1998 to mid-2004, Steffen served as Executive Director of the International Geosphere-Biosphere Program, based in Stockholm, Sweden, and is currently a Senior Fellow at the Stockholm Resilience Centre and a member of the Anthropocene Working Group. His research interests span a broad range within the fields of climate and Earth System science, with an emphasis on incorporation of human processes in Earth System modelling and analysis; and on sustainability and climate change, particularly in the context of urban areas.







European forests are expected to provide a broad range of ecosystem services. This capacity is, however, questioned due to uncertainties of climate change, the complex dynamics of evolving global markets, and the pressures for increased use of bioenergy. These developments might call for adjusting well-established forest management approaches.

ALTERFOR examines alternative forest management models (FMM) currently in use and the potential to optimize them for use in different European countries. The work is being carried out in ten carefully designed case studies representing different forest management practices and socio-ecological conditions prevailing in Europe. The case study areas are in Germany, Italy, Ireland, Lithuania, the

Netherlands, Portugal, Slovakia, Sweden, and Turkey.

The main goals in ALTERFOR are:

- to identify and develop FMMs robust in their capacity to deliver ES and reduce vulnerabilities at stand to landscape levels
- to assess the impact of different FMM combinations in terms of resultant ES baskets on the European level and
- to facilitate the implementation of desired FMMs through the integration of scientific research and its practical utilisation.

Coordinator: Swedish University of Agricultural Sciences (SLU), Sweden.

For more information visit www.alterfor-project.eu.

Sub-plenary Sessions

| 13:30 – 15:00 | KG I - 1010 (University Freiburg) | LIVE STREAM | Sub-plenary Session 3 | 13:30 – 15:00 | Rolf Böhme Saal (Konzerthaus Freiburg) | LIVE STREAM | Sub-plenary Session 5 |
|---------------|--|---------------------------------|---------------------------|-----------------------------|---|----------------------------|--------------------------|
| SP3 | Forests in cities and in wilderness of | fer recreation and healt | h benefits | SP5 | Our Future Forests | | |
| Organizer | IUFRO Division 6 — Social Aspects of Forests | and Forestry | | Organizer | International Forestry Students' Association (IFSA) | | |
| Moderator | Tuija Sievänen (coordinator, IUFRO Division 6 |), Luonnonvarakeskus (Luke), | FINLAND | Moderator | IFSA President Salina Abraham, USA | | |
| | Benefits of visitor monitoring for society and Arne Arnberger, Institut für Landschaftsentwic | | | | Our Future Forests: Introduction Michael Wingfield (IUFRO President), University of Prete | oria, SOUTH AFRICA | |
| | Urban forests and public health — challenges | | | | Statements/questions from remote IFSA members wo | orldwide via video | |
| | Matilda van den Bosch , The University of Briti. | sn Columbia, Canada | | Remarks by panel members | Definition of Forestry Peter Holmgren, Center for International Forestry Resea. | rch (CIFOR), INDONESIA | |
| 13:30 – 15:00 | KG II - Auditorium Maximum (Univer | sity Freiburg) LIVE STR | EAM Sub-plenary Session 4 | | Forestry Innovations | | |
| SP4 | Forest health – critical global issues | in the 21st century | | | Bernard de Galembert, Confederation of European Pape | r Industries (CEPI), Belgi | um |
| Organizer | IUFRO Division 7, Forest Health | | | | Forestry Education | 5 5 5 | |
| Moderator | Eckehard Brockerhoff (IUFRO Division 7 coord | dinator) Scion Research, Christ | church, New Zealand | | Sandra Rodriguez (Coordinator, Joint IUFRO-IFSA Task Universidad Autónoma de Chihuahua, MEXICO | Force on Forest Educatio | n) |
| | Forest insect invasions - the role of global ch Andrea Battisti, University of Padova , ITALY | ange | | | Climate Change Mercy Derkyi (Deputy Coordinator, IUFRO Division 9), U | niversity of Energy and N | latural Resources, GHANA |
| | The history of air pollution and forests, from William Manning, University of Massachusett. | | | | Audience participation | | |

| 8:00 – 10:00 | Rolf Böhme Saal (Konzerthaus) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|--------------|--|
| 58a | T4 - Managing forests for Biodiversity and Resilience |
| Organizer | Oxbrough A. (United Kingdom) |
| 1630 | Even-aged rather than uneven-aged forest management promotes the regional biodiversity of multiple taxa in European beech forests Gossner M. (Switzerland) |
| 1163 | A systematic approach to reviewing biodiversity effects of active forest conservation <i>Müller J. (Germany)</i> |
| 1535 | Rethinking forest resilience through colonization and emergance rates of saproxylic beetles Work T. (Canada) |
| 4028 | Epiphytic lichens as indicators of sustainable forest management Arsenault A. (Canada) |
| 1967 | More than trees: a European scientific network to assess the relationships between forest structural heterogeneity, multi-taxon biodiversity, and carbon storage Sabatini F. (Germany) |
| 3408 | Responses of dead-wood dependent beetles to continuous-cover forestry <i>Koivula M. (Finland)</i> |
| 3965 | Retention harvesting promotes resilience of boreal mixedwood forest biodiversity by retaining ecosystem memory of historical wildfires Bergeron C. (Canada) |

| 08:00 - 10:00 | K 1 (Konzerthaus) |
|---------------|--|
| | All Division 4 (Forest Assessment, Modelling and Management) Meeting |

4a D4 - Open Session

Grabska E. (Poland)

| Organizer | Peyron J. (France) |
|-----------|--|
| Chairs | Tomé M. (Portugal) |
| 517 | Developing Yield Model of Major Coniferous Species in South Korea Lee D. (South Korea (ROK)) |
| 2360 | Determining nutrient sustainability of wood-biomass harvesting in German Forests based on monitoring data von Wilpert K. (Germany) |
| 680 | Area-level analysis of forest inventory variables Magnussen s. (Canada) |
| 2548 | Options for utilizing satellite LiDAR measurements in large-area forest monitoring Schnell S. (Germany) |
| 686 | Establishing Confidence Envelopes for Trends and Their Derivatives in Phenological Time Series Guan B. (Taiwan) |
| 719 | Forest structure assessment based on terrestrial laser scanning Seidel D. (Germany) |
| 3653 | Forest tree species mapping with use of Sentinel 2 imagery and forest inventory data: the case study in the Polish Carpathians |

4094 An Historically Consistent and Broadly Applicable Monitoring, Reporting, and Verification System Based on Landsat Time-series

Cohen W. (United States of America)

| 8:00 – 10:00 | K 2-4 (Konzerthaus) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|--------------|---|
| 72 | T4 - Oak forests and management for different ecosystem services |
| Organizer | Löf M. (Sweden) |
| 2836 | Ecology and silviculture of four important oak tree species in East and South Asia: a review <i>Cheng Z. (China)</i> |
| 821 | The silviculture of restoring oak woodlands and savannas Dey D. (United States of America) |
| 2152 | Actions to mitigate the biodiversity loss in oak habitats in Southern Sweden Lindbladh M. (Sweden) |
| 770 | Regeneration of deciduous oak (Quercus) species in temperate Europe under near-natural conditions, and implications for management <i>Reif A. (Germany)</i> |
| 2857 | Oak natural regeneration in Scots pine (Pinus sylvestris L.) stands in Poland Dobrowolska D. (Poland) |
| 1037 | Long-term oak regeneration dynamics in southern Sweden (1923-2015) Petersson L. (Sweden) |
| 3081 | Trade-offs in ecosystem services supply from Himalayan Oak forests: Global conservation targets vs. local livelihoods needs Schmerbeck J. (Germany) |

| 08:00 — 10:00 K 5-7 (Konzerthaus) All Division 6 (Social Aspects of Forests and Forestry) Meeting | 40 | D6 - Engaging equality: The construction of gender and forest through pro |
|---|---------------|---|
| | 08:00 – 10:00 | |

40 D6 - Engaging equality: The construction of gender and forest through processes of gender mainstreaming

| Organizer | Lidestav G. (Sweden) |
|-----------|--|
| 551 | The gender bias in forest ownership succession Staal Wästerlund D. (Sweden) |
| 1698 | Gender aspects in Lithuanian private forest ownership Silingiene R. (Lithuania) |
| 2138 | Different but equal - Polish women in forestry education situation Nowacka W. (Poland) |
| 2759 | Women in Forestry Association – a good practice in gender mainstreaming example <i>Pigan I. (Poland)</i> |
| 1973 | Tropical forest work: certification requirements and gendered data Karmann M. (Germany) |
| | Panel Discussion |

08:00 - 10:00

08:00 - 10:00

Organizer

Organizer

| - 10:00 | K 8 (Konzerthaus) All Division 7 (Forest Health) Meeting | 1196 | Efficiency of water protection methods in forestry operations in the Baltic Sea Region Finér L. (Finland) |
|---------------------|---|---------------|---|
| 5 | D7 - Open Session | 1122 | Interception of tree crowns under the influence of pollution and climate change Klamerus-Iwan A. (Poland) |
|)rganizer Chaire | Brockerhoff E. (New Zealand) | 387 | Water consumption comparison of sample trees with dfferent DBH in the same stand |
| Chairs 1477 | Ramsfield T. (Canada) Botryosphaeriaceae species composition on native Melastomataceae (Myrtales) shrubs in South Africa and | | Özçelik M. (Turkey) |
| 1777 | Southern China | | |
| | Pavlic-Zupanc D. (South Africa) | 08:00 – 10:00 | Room "Basel + Mühlhausen" (Novotel Freiburg) All Division 7 (Forest Health) Meeting |
| 1299 | Management strategies for biological control: Utilising DNA barcoding to increase diversity and abundance of Diptera and Hymenoptera. Bence S. (United Kingdom) | 86a | D7 - The science of tree health and how we can use it: Multidisciplinary research from the Tree Health and Plant Biosecurity Initiative (THAPBI). |
| 1258 | Comparison of the Botryosphaeriaceae on Acacia koa and A. heterophylla: Evidence of a long-standing | Organizer | Thompson J. (United Kingdom) |
| | separation of two genetically close, but geographically isolated, tree populations Jami F. (South Africa) | Chairs | Sherwood P. (United Kingdom) |
| 1463 | First results of model development for risk assessment of oak processionary moth (Thaumetopoea processionea L.) | 3613 | Managing trees for resilience to multiple threats: the importance of diversity and adaptation to tree health. Cavers S. (United Kingdom) |
| 1420 | Halbig P. (Germany) | 1714 | Multiple origins of the Dothistroma outbreak on pine species in Scotland <i>Ennos R. (United Kingdom)</i> |
| 1439 | The effect of Amylostereum spp. on Forest Health in Alabama Wahl A. (United States of America) | 3816 | Genetic variation for susceptibility to Dothistroma septosporum in Scottish Scots pine (Pinus sylvestris) Cavers S. (United Kingdom) |
| 1500 | Genetic and physiological response of Scots pine saplings to artificial inoculation with Sphaeropsis sapinea, the pathogen causing Diplodia tip blight Peters F. (Germany) | 199 | The tree microbiome as part of the extended phenotype Schönrogge K. (United Kingdom) |
| 292 | Ecological and Economic Impact of Caliciopsis pinea on Pinus strobus in New England, U.S.A. Costanza K. (United States of America) | 1382 | Genomics of Fraxinus (Oleaceae); a genus under severe threat Kelly L. (United Kingdom) |
| | COSMIZE II (United States of America) | 900 | Tree pests and diseases and the social amplification of risk: an analysis of expert, policy and stakeholder risk |
| - 10:00 | K9 (Konzerthaus) Theme 5: Forests, Soil and Water Interactions | | perceptions Urquhart J. (United Kingdom) |
| 66 | T5 - Water Related Ecosystems Services under Risk | 08:00 – 10:00 | Room "Baden-Baden" (Novotel Freiburg) |
|)rganizer | Kalin L. (United States of America) | | Theme 2: Forests and Climate Change |
| 1971 | Patterns of ecosystem restoration in geographically-isolated forested wetlands following hydrologic recovery Anderson C. (United States of America) | 53 | T2 - The role of forestry science in promoting resilient and carbon dense forests |
| 1508 | Climate Change induced Risk to Freshwater Forested Wetlands along the Apalachicola Bay, USA | Organizer | Lund J. (Denmark) |
| | Kalin L. (United States of America) | 1995 | The Double Standard: Managing forests with and without a plan Sungusia E. (Tanzania) |
| 2371 | Use of LANDSAT 8 OLI, ALOS-PALSAR L-HH and L-HV, DEM and slope data for wetland mapping in southern New Brunswick <i>Leblon B. (Canada)</i> | 2127 | Scientification of community forestry in Tanzania: Are communities capable of adhering to scientific prescriptions? Amanzi N. (Tanzania) |
| 3538 | A holistic assesement of water related ecosystem services in urban forests Vilhar U. (Slovenia) | 372 | What's the Use of Community Forest Management Plans in Nepal? Basnyat B. (Nepal) |
| 930 | An Approach for Quantifying and Mapping Hydrological Ecosystem Services as a Watershed Management Tool Uygur Erdogan B. (Turkey) | 1605 | The contested role of inventory based management plans in Nepal's Community Forests Baral S. (Nepal) |

| 8:00 – 10:00 | KG I - 1009 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|--------------|--|
| 12a | D9 - Open Session |
| Organizer | Kleinschmit D. (Germany) |
| Chairs | Park M. (South Korea (ROK)) |
| 560 | Governance of green city areas on the background of the concept of "urban forestry" in Europe – case study of Poznan (Poland). Wajchman-Switalska S. (Poland) |
| 1264 | Drivers and barriers of urban forest governance: Lessons from the Republic of Korea case Park M. (South Korea (ROK)) |
| 3357 | Impact of national forest protection contract on local people's trust in government <i>Youn Y. (South Korea (ROK))</i> |
| 3962 | Positions revisited? An analysis of responses to public consultation concerning revisions of the Swiss Forest Act between 1993 and 2016 Schulz T. (Switzerland) |
| 2143 | Coordinating Collaborative Governance of Forest Water at the National Level Mancheva I. (Sweden) |

| 08:00 – 10:00 | KG I - 1015 (University Freiburg) Theme 5: Forests, Soil and Water Interactions |
|---------------|---|
| 123a | T5 - Roots and Ecosystem Services |

| 123a | 15 - Roots and Ecosystem Services |
|-----------|---|
| Organizer | Prescott C. (Canada) |
| 3691 | Adaptive root foraging strategies along a boreal-temperate forest gradient Ostonen I. (Estonia) |
| 2045 | Functional specialization of Eucalyptus grandis fine roots: contrasting potential uptake rates for nutrients in function of depth and soil fertility Bordron B. (Brazil) |
| 1430 | Root branching is a leading root trait of the plant economics spectrum in temperate trees <i>Meier I. (Germany)</i> |
| 1820 | Variation of root anatomical traits: from tropical forests to deserts |
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| | Ma Z. (China) |
|------|---|
| 1102 | Fine-root morphological traits in tropical forest ecosystems in relation to rainfall and temperature Addo-Danso S. (Canada) |
| 3764 | Belowground-aboveground relationships: responses to forest management Helmisaari H. (Finland) |

| 00 – 10:00 | KG I - 1098 (University Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|------------|---|
| 206 | T4 - Operational methods for monitoring and assessment of forested landscapes |
| Organizer | Vogt P. (Italy) |
| Chairs | Luque S. (France), Riitters K. (United States of America) |
| 95 | Practical data fusion: Using forest inventory data to improve thematic inferences from broad-scale landscape pattern analysis Riitters K. (United States of America) |
| 1190 | Assessment of forest ecosystems: support from operational spatially explicit methods Luque S. (France) |
| 1212 | Open Foris Initiative: Enabling multi-purpose forest monitoring, reporting and management. Pekkarinen A. (Italy) |
| 1265 | Priority areas for strict forest reserves: identifying hot spots with high conservation value Seebach L. (Germany) |
| 1121 | Connecting Natura 2000 forest sites: linkages, bottlenecks and priorities for conservation and restoration Mateo-Sánchez M. (Spain) |
| 1034 | Analysis of ecological connectivity to improve design of greenways as ecological corridors <i>Carlier J. (Ireland)</i> |
| 1408 | Does the forest fragmentation depend on the long-term forest history? Testing the 'landscape hypsometric curve' approach Kozak J. (Poland) |
| 265 | Analyzing forest landscapes: Digital image analysis based on geometric concepts Vogt P. (Italy) |
| | |

| 08:00 – 10:00 | KG I - Aula (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
|---------------|--|
| 30 | D6 - Managing recreation: Empirical insights and forest management instruments. |
| Organizer | Wurster M. (Germany) |
| Chairs | Burns R. (United States of America) |
| 1282 | Modeling forest recreation in Baden-Württemberg, Germany Wurster M. (Germany) |
| 2459 | Impacts of bark-beetle infested forests on recreation Arnberger A. (Austria) |
| 2105 | Impacts and Challenges of the Development of Recreational Sports in Forests in Japan Hirano Y. (Japan) |

2218 Balancing landscape-level forest management between recreation and wood production

Wilkes-Allemann J. (Switzerland)

Wyttenbach M. (Switzerland)

2259 Informal trails in forested areas close to Zurich. Consequences?

Eggers J. (Sweden)

Governance of forest recreation: the challenge of managing and planning forest recreation in urban forest areas.

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| 00 – 10:00 | KG I - 1139 (University Freiburg) All Division 3 (Forest Operations Engineering and Management) Meeting | 08:00 – 10:00 | KG I - 1224 (University Freiburg) All Division 9 (Forest Policy and Econor |
|------------|--|----------------|--|
| 114 | D3 - Transforming low grade logs and residues into higher value products through improved supply chain management | 159 | D9 - Developing the dialogue about for tell good stories and the need for Fore |
| Organizer | Anderson N. (United States of America) | Organizer | Schmechel D. (Germany) |
| Chairs | Chung W. (United States of America), Athanassiadis D. (Sweden) | Chairs | Vogl R. (Germany) |
| 1107 | Fuel consumption and GHG emissions of forest biomass supply chains in Northern Sweden: a comparison analysis between integrated and conventional supply chains De La Fuente T. (Sweden) | 2026 | Relevance of the "forests and health topic" for t pedagogy van den Bosch M. (Canada) |
| 2124 | Beetle-killed Biomass for Bioenergy: An Integrated Modeling Approach for Feedstock Supply and Logistics Chung W. (United States of America) | 1130 | Forestpedagogy – platform for the cross border Jaloviarová V. (Slovakia) |
| 1255 | Optimizing supply of unutilised Swedish biomass to produce torrefied pellets Athanassiadis D. (Sweden) | 951 | Fostering Sustainable Development (SD) in the <i>Vogl R. (Germany)</i> |
| 1632 | Forest operations and logistics to reduce costs and improve product value from forest restoration in the southern Rocky Mountains, USA Anderson N. (United States of America) | 1675 | Forestpedagogy – challenged to climb the higher Schmechel D. (Germany) |
| | | 08:00 - 10:00 | KG I - 1228 (University Freiburg) |
| 00 – 10:00 | KG I - 1199 (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future | | Theme 2: Forests and Climate Change |
| 152 | T3 - Resources for the Future Task Force: Institutions for Forest Transformation | 166 | T2 - Development of Adaptation Strate |
| Organizer | Innes J. (Canada) | Organizer | Park E. (South Korea (ROK)) |
| 1703 | Characteristics of co-benefit program development of Forest Carbon Projects in the Voluntary Carbon Market Lee D. (South Korea (ROK)) | Chairs 2752 | Fladung M. (Germany) Smallholder farmers' adaptation to climate chan Central Rift Valley of Ethiopia |
| 138 | A Framework for Governance of Institutional Investment in the Forestry Sector | | Belay A. (Ethiopia) |
| 1093 | Brand D. (Australia) Resources for the Future: An Overview Nikolakis W. (Canada) | 3384 | Downregulation of stress associated protein 1 (I expression of cation transporters across the plata Bae E. (South Korea (ROK)) |
| 1005 | Spatial distribution of households vulnerable to deforestation in non-timber forest product collections in Kampong Thom Province, Cambodia Ehara M. (Japan) | 2631 | Could poplar plants help reduce toxic metals in Luo Z. (China) |
| | | 3659 | Biosafety analysis of genetically modified trees |

4054 Institutions for transformation towards sustainable forest management: a comparison of NW Russia and

Sweden Angelstam P. (Sweden)

| | All Division 9 (Forest Policy and Economics) Meeting | |
|----------------|--|--|
| 159 | D9 - Developing the dialogue about forests and forestry with society - the challenge to tell good stories and the need for Forestpedagogy | |
| Organizer | Schmechel D. (Germany) | |
| Chairs | Vogl R. (Germany) | |
| 2026 | Relevance of the "forests and health topic" for the future dialogue with people and possibilities for Forest pedagogy van den Bosch M. (Canada) | |
| 1130 | Forestpedagogy – platform for the cross border dialogue between forestry and society Jaloviarová V. (Slovakia) | |
| 951 | Fostering Sustainable Development (SD) in the Context of Forest Education Vogl R. (Germany) | |
| 1675 | Forestpedagogy – challenged to climb the higher steps of Education for Sustainable Development <i>Schmechel D. (Germany)</i> | |
| B:00 – 10:00 | KG I - 1228 (University Freiburg) Theme 2: Forests and Climate Change | |
| 166 | T2 - Development of Adaptation Strategies for Climate Change using GM Trees | |
| Organizer | rganizer Park E. (South Korea (ROK)) | |
| | Tark E. (Joutil Rolea (nory) | |
| Chairs | Fladung M. (Germany) | |
| Chairs 2752 | | |
| | Fladung M. (Germany) Smallholder farmers' adaptation to climate change and determinants of their adaptation decisions in the Central Rift Valley of Ethiopia | |
| 2752 | Fladung M. (Germany) Smallholder farmers' adaptation to climate change and determinants of their adaptation decisions in the Central Rift Valley of Ethiopia Belay A. (Ethiopia) Downregulation of stress associated protein 1 (PagSAP1) improves salt tolerance by upregulating the expression of cation transporters across the plasmamembrane. | |

| 08:00 – 10:00 | KG II - Auditorium Maximum (University Freiburg) All Division 3 (Forest Operations Engineering and Management) Meeting | 13:30 – 15:00 | Rolf Böhme Saal (Konzerthaus) Sub-plenary Sessions |
|---------------|--|---------------|--|
| 10 | D3 - Innovations in forest operations for better serving evolving societal needs | SP5 | Our Future Forests – organized by IFSA |
| Organizer | Jaeger D. (Germany) | 4213 | Our Future Forests: Introduction Wingfield M. (South Africa) |
| Chairs | Sauter U. (Germany) | | |
| 1755 | French research and innovative plan by 2025 for wood-based industry: focus on precision forestry <i>Cacot E. (France)</i> | 13:30 – 15:00 | KG I - 1010 (University Freiburg) LIVE STREA |
| 1648 | New Market of Contractor Firms in the Slovak Forestry Service Sector and Innovation Policy <i>Sterbova M. (Slovakia)</i> | SP3 | Sub-plenary Sessions Forests in cities and in wilderness offer recreation and health benefits |
| 2156 | Pre-harvest tree and stand assessment for improved log allocation within the wood supply chain Opferkuch M. (Germany) | Organizer | IUFRO Division 6 — Social Aspects of Forests and Forestry Moderator: Sievänen T. (Finland) |
| 898 | Using a prototype load test platform to quantify the effects of steel flexible tracks on forwarder peak load distribution | 4209 | Benefits of visitor monitoring for society and agencies managing natural resources **Armberger A. (Austria)** |
| 4052 | Labelle E. (Germany) Modelling changes in surface flow after skid trail construction in steep terrain Talbot B. (Norway) | 4210 | Urban forests and public health — challenges and prospects? van den Bosch M. (Canada) |
| 1753 | Multifunctional biomass terminals in a bioeconomy Bergström D. (Sweden) | 13:30 – 15:00 | KG II - Auditorium Maximum (University Freiburg) LIVE STREA |
| 10:30 – 12:00 | Rolf Böhme Saal (Konzerthaus) Keynote Plenary Sessions | SP4 | Forest health – critical global issues in the 21st century IUFRO Division 7, Forest Health |
| VD4 | | Organizer | Moderator: Brockerhoff E. (New Zealand) |
| KP1 | Keynote Plenary Session | 4211 | Forest insect invasions - the role of global change Battisti A. (Italy) |
| 12:00-12:45 | K 2-4 (Konzerthaus) Side Events | 4212 | The history of air pollution and forests, from forest dieback to climate change Paoletti E. (Italy) |
| YSI | IUFRO-EFI Young Scientist's Initiative | | |
| Organizer | Boehnke D. (Austria) This is the launch of the latest collaboration between IUFRO and EFI. The Young Scientists' Initiative entails a grant offered to five young scientists from Africa, Asia and South America to work on a scientific collaboration with a European scientist and his/her host organisation in Europe annually from 2018. A short presentation and Q&A session will take place and is available to any interested parties. | 15:30 – 17:30 | K 1 (Konzerthaus) Theme 5: Forests, Soil and Water Interactions |
| | | 76 | T5 - Understanding the Forest-Water Nexus |
| | | Organizer | Springgay E. (Italy) |
| | | Chairs | del Campo A. (Spain), Harper R. (Australia) |
| 12:30 – 13:15 | KG I - 1015 (University Freiburg) Side Events | 3705 | Long-term soil solution monitoring in temperate and boreal forests under the International Co-operative Programme on Forests Nieminen T. (Finland) |
| BL 2 | Book Launch: The Earthscan Reader on Gender and Forests. Edited by Carol J. Pierce Colfer, Marlène Elias, Bimbika Sijapati Basnett and Susan Stevens. Routledge 2017. | 3280 | Methods and tools to assess impacts of climate change on the role of trees and forests in the hydrological conference of trees and forests in the hydrological conference of the conference of the hydrological conference of the hydrological conference of the conference of the hydrolo |
| Organizer | Arora-Jonsson S. (Sweden), Elias M. (Italy), Sijapati Basnett B. (Indonesia) | 3234 | Evaluating the Economic Value of Water Conservation by Forests: Evidences from Taiwan <i>Hsien C. (Taiwan)</i> |
| | | 1725 | Understanding the Forest-Water Nexus: a monitoring tool Springgay E. (Italy) |

Thursday

| 1469 | Ghana's high forests: trends, scenarios and pathways for future developments <i>Oduro K. (Ghana)</i> |
|------|--|
| 650 | A South African Integrated Forest Protection Strategy Upfold S. (South Africa) |
| 2787 | Utility of a typology of timber artisanal loggers, in order to contribute to the formulation of public policy on logging in Orientale province Legguer G. (Indonesia) |

3652 Prediction versus reality: the challenges in estimating below-ground forest carbon Sochacki S. (Australia) The Blue Targeting — designing a functional forest riparian zone Jägrud L. (Sweden) All Division 4 (Forest Assessment, Modelling and Management) Meeting Orc sts

SCIENTIFIC PROGRAM | THURSDAY 21 SEPTEMBER 2017

3606

Session overview Harper R. (Australia)

| 185a | D4 - Towards robust projections of forests under climate change |
|-----------|--|
| Irganizer | Reyer C. (Germany) |
| 999 | Overview and results of the PROFOUND/ISIMIP multi-model comparison of climate change impacts on forests <i>Reyer C. (Germany)</i> |
| 545 | Models and data available for projecting future forest functioning Ruiz-Benito P. (Spain) |
| 3214 | Bayesian inference for linking process-based forest models to data - state-of-the-art and challenges Hartig F. (Germany) |
| 1157 | Modeling changing forest disturbance regimes Seidl R. (Austria) |
| 3518 | Different formulations of tree mortality lead to vastly different forest dynamics: an assessment across 15 models from the stand to the global scale Bugmann H. (Switzerland) |
| 1688 | Modelling carbon allocation in forest ecosystems Merganicová K. (Slovakia) |

| | Theme 1: Forests for People |
|-----------|--|
| 49 | T1 - Impact of forestry research on policy, livelihoods and economic development in sub-Saharan Africa |
| Organizer | Ofori D. (Ghana) |
| 1909 | The Forestry Research Network for Sub-Saharan Africa at 16 : Opportunities and Challenges <i>Cobbinah J. (Ghana)</i> |
| 437 | Public-Private Partnerships for sustainable agroforestry and business innovations in Africa: Allanblackia species as a case study A. Ofori D. (Ghana) |
| 2073 | Potential contribution of bamboo based agroforestry to rural livelihoods in Omo Forest Reserve, Nigeria Olajuyigbe S. (Nigeria) |
| 3978 | Designing a PES strategy for Transboundary riverine Forest Ecosystem: The case of River Lumi Taita Tavetta county Kenya Ndalilo L. (Kenya) |
| 255 | The Impacts of Participatory Forest Management Implementation on the Community Livelihoods around Eburu forest, Kenya Kabasa M. (Kenya) |

T3 - 125 years of cultivating Norway spruce - what have we learnt and lessons for the future Johansson U. (Sweden) Organizer Mason B. (United Kingdom) History of thinning experiments in Sweden with Norway spruce Agestam E. (Sweden) Long-term study of advanced establishment of beech (Fagus sylvatica L.) below Norway spruce shelter (Picea abies [L.] Karst.) Böhme M. (Germany) 1316 High-quality Norway spruce for (clime-) dynamic breeding zones Volmer K. (Germany)

| | All Division 7 (Forest Health) Meeting |
|------|---|
| 199a | D7 - Effects of global change on Mediterranean forest insects and interactions with pathogens |

| Organizer | Paine T. (United States of America) |
|-----------|--|
| 2206 | Climate extremes promote prolonged diapause in winter pine processionary moth: consequences of bet-hedging Salman M. (Italy) |
| 500 | How does global change shape the distribution of forest insects and pathogens? |

Robinet C. (France) Patterns of expansion of pine processionary moth and its specialist egg parasitoid at the northern edge of its

distributional range. Simonato M. (France)

Climatic and anthropogenic influences on forest susceptibility to bark beetles in Mediterranean forests of California, U.S. Fettig C. (United States of America)

Various levels of interactions between an invasive ambrosia beetle Euwallacea nr. fornicatus, its symbiotic fungi and the host trees in the Mediterranean Mendel Z. (Israel)

144 145

15:30 – 17:30

K9 (Konzerthaus)

| 5:30 – 17:30 | Room "Basel + Mühlhausen" (Novotel Freiburg) All Division 7 (Forest Health) Meeting |
|--------------|--|
| 86b | D7 - The science of tree health and how we can use it: Multidisciplinary research from the Tree Health and Plant Biosecurity Initiative (THAPBI). |
| Organizer | Thompson J. (United Kingdom) |
| Chairs | Cavers S. (United Kingdom) |
| 2261 | Community-based biotic effects as determinants of tree resistance to pests and pathogens lason G. (United Kingdom) |
| 1977 | Discrimination Between Species of Phytophthora Using Volatile Organic Compound Signatures Woodward S. (United Kingdom) |
| 117 | Applying agent based modelling to inform on the impact of technological and behavioural changes in tree health management Crowe A. (United Kingdom) |
| 1662 | Pine processionary moth eggs, early instar larvae and pupae are susceptible to the entomopathogenic fungus Metarhizium brunneum <i>Karaca I. (Turkey)</i> |
| 2256 | Identifying resistance traits in Scots pine (Pinus sylvestris) to the pine tree lappet moth (Dendrolimus pini) Sherwood P. (United Kingdom) |
| 2346 | Using integrated epidemiological and economic modelling to assess silvicultural options for forest resilience under uncertain future risk of tree diseases Healey J. (United Kingdom) |
| 616 | Working with trees, ecosystems, diseases and people: developing new ways of researching tree health in the borderlands Geoghegan H. (United Kingdom) |
| | |
| 5.30 - 17.30 | Room "Raden-Raden" (Novotel Freiburg) |

| 15:30 - 17:30 | Room "Baden-Baden" (Novotel Freiburg) |
|---------------|--|
| 15.50 17.50 | noon baach baach (novoterricibary) |
| | All Division 7 (Forest Health) Meeting |
| | All Division 7 (1 of est fleditif) meeting |

D7 - Dothistroma and other needle diseases of pine

| Organizer | Bradshaw R. (New Zealand) |
|-----------|---|
| Chairs | Barnes I. (South Africa) |
| 3316 | Global geographic distribution of Dothistroma species and the population structure of D. septosporum in northern Europe and Asia Drenkhan R. (Estonia) |
| 3486 | Climatic influence on recent outbreaks of Dothistroma sentosporum and other needle diseases of nine in |

Climatic influence on recent outbreaks of Dothistroma septosporum and other needle diseases of pine in

Sweden.

Stenlid J. (Sweden)

2014 Dothistroma needle blight management and control

Bulman L. (New Zealand)

1476 Dothistroma needle blight in Alberta, Canada

Ramsfield T. (Canada)

1872 The hosts of Dothistroma pini and D. septosporum: their resistance and susceptibility

Fraser S. (New Zealand)

Dynamics of pine pathogens in Switzerland: analysis of 64 years diagnostics Queloz V. (Switzerland) 1002 Uncovering the role of secreted proteins in the Dothistroma - pine interaction Hunziker L. (New Zealand)

| 5:30 – 17:30 | Room "Colmar" (Novotel Freiburg) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|--------------|---|
| 181a | D4 - Cross-boundary modelling in a changing world |
| Organizer | Pommerening A. (Sweden) |
| Chairs | Hasenauer H. (Austria) |
| 405 | Cross-Boundary Modelling – The Paradigm of our Time? Pommerening A. (Sweden) |
| 479 | Analysis and modeling spatial and spatial-ontogenetic structure of old-growth boreal forests by random point process models with hierarchical interactions Grabarnik P. (Russian Federation) |
| 2493 | Modelling canopy variables related to wildfire hazard with field data, LiDAR and other remote sensors Álvarez-González J. (Spain) |
| 463 | Natural data assimilation with a view to forestry Muszta A. (Sweden) |
| 4070 | Balancing bioenergy production and ecosystem services in the Alps Leduc S. (Austria) |
| | |

15:30 – 17:30 KG I - 1009 (University Freiburg)

Gizachew Zeleke B. (Norway)

| 12b | D9 - Open Session |
|-----------|--|
| Organizer | Kleinschmit D. (Germany) |
| Chairs | Reinecke S. (Germany) |
| 1134 | Forest Research and networking in an ever-changing environment: The History of IUFRO <i>Johann E. (Austria)</i> |
| 3842 | Education, landscape approach and transdisciplinarity as tools to bridge policy-science-people barriers Angelstam P. (Sweden) |
| 752 | Spruce or not? Contextual and attitudinal drivers behind the choice of tree species in Southern Sweden <i>Lodin I. (Sweden)</i> |
| 3092 | Planted forests in emerging economies: Best practices for sustainable and responsible investments Brotto L. (Italy) |
| 864 | The State and Future of Forest Carbon Monitoring in Africa in the Context of Climate Change Mitigation |

1295 Exclusion of Community Forest Associations in decision making and its impact on forest condition; Case Study of Arabuko Sokoke, Upper Imenti and Ramogi forests, Kenya Ongugo R. (Kenya)

| 15.20 -17.20 | VC 1, 4040 (II. iis. F., il) |
|---------------|---|
| 15:30 – 17:30 | KG I - 1010 (University Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
| 58b | T4 - Managing forests for Biodiversity and Resilience |
| Organizer | Oxbrough A. (United Kingdom) |
| 2806 | High resilience of tropical forest diversity and structure after shifting cultivation in the Philippines uplands <i>Mukul S. (Bangladesh)</i> |
| 1953 | Functional diversity in temperate managed forest of Mexico: a new approach to assess the impact of harvest intensity. Hernández-de la Rosa P. (Mexico) |
| 1049 | Combining forest vegetation resurveys across regions to advance global change research Verheyen K. (Belgium) |
| 2944 | Soil humidity, potential solar radiation and altitude affects boreal beetle assemblages in dead wood Johansson T. (Sweden) |
| 15:30 – 17:30 | KG I - 1015 (University Freiburg) Theme 5: Forests, Soil and Water Interactions |
| 123b | T5 - Roots and Ecosystem Services |
| Organizer | Prescott C. (Canada) |
| 980 | Do residual roots and stumps mitigate mineral soil carbon loss?: An examination of harvesting and organic matter removal experiments across a range of forest types Hatten J. (United States of America) |
| 1308 | Fine root dynamics and their contribution to net primary production in cool-temperate forests An J. (Japan) |
| 2985 | Are tree species diversity and identity effects on soil carbon stocks linked with fine root biomass across Europe Vesterdal L. (Denmark) |
| 4076 | Including below-ground tree biomass in quantification of carbon pools before and after variable retention harvesting in the mixedwood boreal forest Bergeron C. (Canada) |
| 1178 | Estimates of roots using ground penetrating radar and root anchorage in a coastal Pinus thubergii forest Hirano Y. (Japan) |
| 1177 | Root growth dynamics of three beech (Fagus sylvatica L.) provenances Zeleznik P. (Slovenia) |
| 15:30 – 17:30 | KG I - 1098 (University Freiburg) Theme 2: Forests and Climate Change |
| 68a | T2 - Forest Adaptation and Restoration under Global Change |
| Organizer | Bolte A. (Germany) |
| 3223 | IUFRO TF Forest Adaptatation and Restoration under Global Change – summary of two years work <i>Bolte A. (Germany)</i> |
| 3826 | Addressing governance challenges for forest landscape restoration Mansourian S. (Switzerland) |

| - 17:30 | KG I - Aula (University Freiburg) |
|---------|--|
| 2315 | Plantation forestry in China: research advancement and future perspectives <i>Liu S. (China)</i> |
| 1483 | Performance of Nothofagus antarctica seedlings underplanted in different light environments and gap sizes for forest restoration under global change in Chilean Patagonia <i>Cruz G. (Chile)</i> |
| 3086 | Is Douglas-fir adaptation to drought rooted on provenance variation for cavitation vulnerability? <i>Chauvin T. (France)</i> |
| 383 | Identifying suitable species compositions to mitigate economic risks under climate change - A mechanistic modelling approach under uncertainty Paul C. (Germany) |
| 1403 | Climate, soil or seed origin: what drives forest growth? Chakraborty D. (Austria) |
| | |

T3 - Marketing and Business Practices of the Bioeconomy Organizer Smith B. (United States of America) Green, Circular, Bio economy: a comparative analysis of sustainability narratives D'Amato D. (Finland) 2817 Business Practices for a Circular Bioeconomy in Germany - An explorative analysis Leipold S. (Germany) 3650 A Ten-Year Review of Sustainable Development: A Case Study of Stora Enso and Asian Pulp & Paper Managerial Perceptions of Carbon Emission Trading in China: An Exploratory Study from the Domestic Forest Industry Li N. (China) Harnessing the Potential of Productive Forests and Timber Value Chains for Climate Change Mitigation and Green Growth: Private Sector Opportunities Held C. (Germany) The Logging Industry in the U.S. South: A Post-Recession Perspective Vlosky R. (United States of America)

| | All Division 6 (Social Aspects of Forests and Forestry) Meeting |
|-----------|--|
| 133 | D6 - Social dimension of wildlife conservation and management |
| Organizer | Skorupski M. (Poland) |
| Chairs | Lukowski A. (Poland) |
| 1381 | Social acceptability of pest management in UK forests: Does species and place matter? Marzano M. (United Kingdom) |
| 1154 | Social relation between deer damage in forests and hunting culture for finding future directions of rural community Kitajima K. (Japan) |

15:30 – 17:30 KG I - 1132 (University Freiburg)

| NIIFICP | NOUNAM INUNSDAT 21 SEPTEMBER 2017 |
|------------|---|
| 1588 | Crop damages by wildlife and citizens' willingness to pay for wildlife conservation in protected areas in Korea - The case of Jirisan National Park <i>Youn Y. (South Korea (ROK))</i> |
| 1834 | Don't be afraid, my deer: Analysing the wildlife's landscape of fear caused by recreational activities to minimise conflicts Brandenburg C. (Austria) |
| 3348 | Exploring human-nature relationships in Chile: a multi-stakeholder perspective to wildlife conservation management Bidegain I. (Chile) |
| 3399 | Nexus between local livelihood and wildlife conservation: Securing economic benefit and biodiversity conservation through Eco tourism in Chitwan National Park, Nepal <i>Kazuhiro H. (Japan</i>) |
| 3852 | The society of large cities and its attitude towards controlling game populations in municipal forests Gruchala A. (Poland) |
| 30 – 17:30 | KG I - 1139 (University Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
| 84a | T4 - Promoting forest resilience, adaptive capacity, and ecosystem services through diverse forest ecosystems |
| Organizer | Bauhus J. (Germany) |
| Chairs | Doyon F. (Canada), Puettmann K. (United States of America) |

T4 - Promoting forest resilience, adaptive capacity, and ecosystem services through diverse forest ecosystems Bauhus J. (Germany) Doyon F. (Canada), Puettmann K. (United States of America) Silvicultural treatments to increase the provision of multiple ecosystem goods and services Puettmann K. (United States of America) In search of robustness: modelling a portefolio of forest stand responses to different sylvicultural treatments under global change threats. Doyon F. (Canada) Enhanced carbon storage and co-benefits through management for structural complexity and old-growth characteristics in northern hardwood-conifer forests of North America Keeton W. (United States of America) Managing young and mid seral secondary forests to increase their oldgrowthness in Chile Donoso P. (Chile) Growth response on drought of European mixed-species stands compared with monocultures Pretzsch H. (Germany) The ecosystem service benefits of mixtures: Risk trade-offs and overcoming the implementation gap Felton A. (Sweden)

| 5:30 – 17:30 | KG I - 1199 (University Freiburg) All Division 7 (Forest Health) Meeting |
|--------------|---|
| 83a | D7 - Are we doing the right things to deal with invasive forest pest and pathogens? Lessons from history and current strategies |
| Organizer | Villari C. (United States of America) |
| Chairs | Bonello P. (United States of America), J.K. Gandhi K. (United States of America) |
| 156 | Tree Resistance as a Primary Tool for Managing Forest Pathogen and Insect Invasions in Defense-Free Space Bonello P. (United States of America) |
| 4044 | Role of sea containers in unintentional movement of invasive "hitchhiker" pests - a closer look at a barely managed pathway Brockerhoff E. (New Zealand) |
| 1331 | Different invasive forest pathogens need different management strategies, a view from a Mediterranean perspective Santini A. (Italy) |
| 1207 | Biological control of insects in plantation forests: Optimising an old approach for diverse and changing environments Hurley B. (South Africa) |
| 3061 | The role of molecular ecology in the management of invasive pests and pathogens in plantation forestry Slippers B. (South Africa) |
| 1538 | New methods for the biological control of chestnut blight assessed with a mark-release-recapture experiment <i>Meyer J. (Switzerland)</i> |
| | |

| 0 – 17:30 | KG I - 1224 (University Freiburg) All Division 3 (Forest Operations Engineering and Management) Meeting |
|-----------|---|
| 151a | D3 - History, Findings, and Future Directions of Forest Landowner Research |
| Organizer | Butler B. (United States of America) |
| 1429 | Forest Landowner Surveys in the USA: History, Findings, and Future Directions Butler B. (United States of America) |
| 1019 | Forest Landowner Surveys in Finland: History, Findings and Future Directions Karppinen H. (Finland) |
| 180 | Forest Landowner Surveys in Austria: History, Findings and Future Directions Sekot W. (Austria) |
| 1266 | Forest Owner Surveys in Japan: History, Findings, and Future Direction Ishizaki R. (Japan) |
| 139 | Unde venis – quo vadis accountancy network – from Fortran to Bayesian network Hartebrodt C. (Germany) |
| 2340 | Results from the long term Forest Accountancy Networks (FAN) of private forest enterprises in Westfalia-Lippe in Germany Dög M. (Germany) |
| 1789 | Trends of forest ownership in Lithuania <i>Lukmine D. (Lithuania)</i> |

| 15:30 – 17:30 | KG I - 1228 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting | |
|---------------|--|--|
| 38 | D9 - Impacts of voluntary forest management certification: challenges and solutions in measuring results | |
| Organizer | Karmann M. (Germany) | |
| Chairs | Kennedy E. (United States of America) | |
| 2656 | Monitoring and evaluating effects and impacts for FSC Forest management certification Kennedy E. (United States of America) | |
| 1239 | Influences of the FSC certification process on forest governance in the Congo basin <i>Lescuyer G. (Indonesia)</i> | |
| 3683 | A simple and effective methodology to show FSC impact on conservation von Stedingk H. (Sweden) | |
| 3187 | Do certified private forest plantations increase the provision of and access to social services for local communities? Degnet M. (Netherlands) | |
| 2773 | Impacts of forest tenure and management regimes on forest cover change – lessons learned from a pantropical evaluation Mo K. (United States of America) | |
| 4050 | Demonstrating impacts from certifying ecosystem services: Challenges and solutions Savilaakso S. (Indonesia) | |
| 3088 | Influence of corporate responsibility on financial return in planted forests: case studies from South East Asia and Africa Brotto L. (Italy) | |
| 15:30 – 17:30 | KG II - Auditorium Maximum (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting | |
| 127 | D9 - The politics of forest governance | |
| Organizer | Arts B. (Netherlands) | |
| Chairs | Behagel J. (Netherlands) | |
| 2871 | How to cut a virgin forest, a Romanian legal perspective Hanzu M. (Romania) | |
| 334 | Collaborating with the state: Explaining the dynamics of deliberations and political decision-making in the adoption of a National Forest Program <i>Johansson J. (Sweden)</i> | |
| 3763 | Increasing deregulation of the forest sector - implications for actors' cooperation Selter A. (Germany) | |
| 3037 | The politics of forest governance Behagel J. (Netherlands) | |
| 2205 | Obstacles to the Ecosystem Approach in Aquitaine forestry: analyzing coupling systems between science and politics in third party governance | |

| | K 1 (Konzerthaus) Theme 2: Forests and Climate Change |
|-----------|--|
| 111 | T2 - Today ignored, rediscovered tomorrow: The importance of minor tree species in future. |
| Organizer | Kunz J. (Germany) |
| 1499 | Silvicultural practices for wild pear (Pyrus pyraster) Asbeck T. (Germany) |
| 3519 | The potential of birch (Betula pendula Roth and B. pubescens Ehrh.) for forestry in Western Europe. Dubois H. (Belgium) |
| 2709 | Dynamics in flushing dates of Sorbus torminalis (L.) Crantz half-sibs families - a key issue for adaptation to climate change Sulkowska M. (Poland) |
| 2872 | How effective are plantings for genetic conservation to facilitate minor tree species in southwest Germany? Kunz J. (Germany) |
| | |

| U — 19:3U | R 2-4 (Konzertnaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|-----------|---|
| 185b | D4 - Towards robust projections of forests under climate change |
| Organizer | Reyer C. (Germany) |
| 1452 | Climate drivers of regional forest dynamics Lines E. (United Kingdom) |
| 3460 | Modeling forest dynamics across Europe: What can we learn from global sensitivity analysis? <i>Huber N. (Switzerland)</i> |
| 2217 | Identifying the knowledge gap between climate change forest-impact modelers and stakeholders Blennow K. (Sweden) |
| | |

| 00 – 19:30 | K9 (Konzerthaus) All Division 7 (Forest Health) Meeting |
|------------|--|
| 199b | D7 - Effects of global change on Mediterranean forest insects and interactions with pathogens |
| Organizer | Paine T. (United States of America) |
| 963 | Geographic Area of the Pin Processionary Moth (Thaumetopea pityocampa Schiff, Lepidoptera) in the Southern Aleppo Pine Forests and Effect of the Climatic Change Ben Jamaa M. (Tunisia) |
| 1482 | Review on the impact of Leptoglossus occidentalis on stone pine in the Mediterranean countries Branco M. (Portugal) |
| 2191 | Do fungal mutualists determine invasion success in competitive interactions between ambrosia beetles? Biedermann P. (Germany) |
| 2811 | Alien pathogens and native vectors: how to take advantages from new associations Battisti A. (Italy) |
| 191 | Emergence of pests as results of global change Paine T. (United States of America) |

152

Conchon P. (France)

| 18:00 – 19:30 | Room "Basel + Mühlhausen" (Novotel Freiburg) Theme 1: Forests for People |
|---------------|--|
| 54 | T1 - Global Forest Technology Sharing Framework |
| Organizer | Costanza A. (United States of America) |
| 1548 | Building the Open Forestry Framework to Connect and Curate Forestry Knowledge <i>Costanza A. (United States of America)</i> |
| 537 | Open Forestry, a new generations movement Neves Silva L. (Switzerland) |
| 2125 | An Open Science view of a technology sharing framework Garfinkel M. (Germany) |
| 2384 | Sustainable Intensification and Restoration: How to use technology to meet tomorrows demand and increase low-cost restoration of degraded land Braga E. (Brazil) Panel Discussion |
| 18:00 – 19:30 | Room "Baden-Baden" (Novotel Freiburg) All Division 7 (Forest Health) Meeting |
| 165b | D7 - Dothistroma and other needle diseases of pine |
| Organizer | Bradshaw R. (New Zealand) |
| Chairs | Barnes I. (South Africa) |
| 3147 | Shoot And Needle Diseases Of Pines In Turkey Lehtijärvi A. (Turkey) |
| 3862 | Insights into the pathways of spread and potential origins of Dothistroma septosporum in Britain <i>Mullett M. (United Kingdom)</i> |
| 3702 | High throughput monitoring of Dothistroma and Lecanosticta needle blight in Switzerland <i>Schneider S. (Switzerland)</i> |
| 2424 | New cryptic species and a putative center of diversity for the pine pathogens Dothistroma and Lecanosticta <i>Barnes I. (South Africa)</i> |
| 2556 | How Common is Dothistroma Needle Blight in Botanic Gardens and Arboreta? Oskay F. (Turkey) |
| 18:00 — 19:30 | Room "Colmar" (Novotel Freiburg) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
| 181b | D4 - Cross-boundary modelling in a changing world |
| Organizer | Pommerening A. (Sweden) |
| Chairs | Hasenauer H. (Austria) |
| 2936 | Mixed-effect models for nonlinear natural processes Mehtätalo L. (Finland) |
| 1393 | Genetic variation may buffer effects of climate change on distribution of forests: a trans continent application of species distribution model |

Chakraborty D. (Austria)

Modeling growth of trees by marked point processes evolving in time Särkkä A. (Sweden)

| 3:00 – 19:30 | KG I - 1009 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|--------------|---|
| 12c | D9 - Open Session |
| Organizer | Kleinschmit D. (Germany) |
| Chairs | Kruse S. (Germany) |
| 1416 | Biopiracy in Turkey Birben Ü. (Turkey) |
| 2597 | The Loss of Rare Plant Genetic Resources: A Case Study on Orchids in Yunnan Province in China Xie H. (China) |
| 1437 | Agroforestry research in Central Europe: Past, present and future Woitsch J. (Czech Republic) |
| 3423 | Promoting and hindering factors for the implementation of agroforestry systems in Germany Hübner R. (Germany) |
| 3503 | To implement or not to implement agroforestry practices: An Analytic Network Process approach for European biogeographical regions <i>Lovric M. (Finland)</i> |

58c T4 - Managing forests for Biodiversity and Resilience

| Organizer | Oxbrough A. (United Kingdom) |
|-----------|---|
| 2207 | Impact of restoration and surrounding landscape structure on the risk of bark beetle outbreak in boreal coniferous forests Hekkala A. (Sweden) |
| 3676 | Influence of forest tree species composition on bryophytic diversity in mixed and pure pine and oak stands |

- Gosselin M. (France)
- 2396 Influence of stand age and forest type on spider taxonomic and functional diversity in plantation forests Godsman K. (United Kingdom)
- 3138 Biodiversity resilience in the wake of variable retention harvest in the Canadian mixedwood Spence J. (Canada)
- Drivers of ground-dwelling arthropod diversity in small and isolated semi-natural woodlands Oxbrough A. (United Kingdom)
- Tree diversity in plantation forests: evidence for the "portfolio effect" in a large-scale diversity experiment Devaney J. (United States of America)

| 18:00 – 19:30 | KG I - 1015 (University Freiburg) Theme 5: Forests, Soil and Water Interactions |
|---------------|---|
| 123c | T5 - Roots and Ecosystem Services |
| Organizer | Prescott C. (Canada) |
| 85 | Responses of tree roots to drought and its effects on belowground carbon sequestration Brunner I. (Switzerland) |
| 2249 | Root and shoot phenology of boreal trees in relation to waterlogging and soil freezing <i>Repo T. (Finland)</i> |
| 579 | Active Recovery by Tree Roots Flores Fernandez J. (Germany) |
| 3761 | Analysing roots' response to low soil P supply Löw C. (Germany) |
| 1286 | Age of fine roots across a range of forest ecosystems Solly E. (Switzerland) |
| 1990 | A diversity of fungi adapt to form relationships with adventitious rooting systems developing in canopy soils of an old-growth temperate rainforest <i>Mafune K. (United States of America)</i> |
| 18:00 – 19:30 | KG I - 1098 (University Freiburg) |
| | Theme 2: Forests and Climate Change |
| 68b | T2 - Forest Adaptation and Restoration under Global Change |
| Organizer | Bolte A. (Germany) |
| 1085 | Biodiversity Conservation through Adaptive Forests Management in the Western Ghats Mountain under a Changing Climate Krishnapillai S. (India) |
| 1689 | Kawale dry season tree planting, an innovation amidst climate change, Malawi Jere N. (Malawi) |
| | Panel Discussion |
| 18:00 – 19:30 | KG I - Aula (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
| 184b | T3 - Marketing and Business Practices of the Bioeconomy |
| Organizer | Smith B. (United States of America) |
| 2470 | Opportunities and limitations of the non timber forestal products in the participatory guarantee systems of the plurinational state of Bolivia Lopez Rosse E. (Bolivia) |
| 1961 | Brazilian international market Fairtrade products Costa F. (Brazil) |

| 670 | Review on firm-level competitiveness in the forest sector Korhonen J. (Finland) |
|------|---|
| 1216 | Institutional investment in timberland, analysis of recent global trends Crespo Pinillos O. (United States of America) |
| 2847 | Frontiers of the European forest-based sector Lovric N. (Finland) |
| 671 | Shared logic and customer information as means for creating value-added in wood-based residential construction Toivonen R. (Finland) |
| | |

| 00 – 19:30 | KG I - 1132 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting |
|------------|--|
| 155 | D6 - Cities, Trees, Carbon, and Climate Change Mitigation |
| Organizer | Bettinger P. (United States of America) |
| Chairs | Siry J. (United States of America) |
| 34 | Geospatial Approaches to the Assessment of Urban Forest Cover Bettinger P. (United States of America) |
| 301 | Stakeholders support for using urban forests to mitigate and adapt to climate change Siry J. (United States of America) |
| 3054 | Spatio-temporal patterns of carbon storage by urban forest: implications for CO2 emissions mitigation under China's rapid urban expansion and greening Zheng H. (China) |
| 3904 | Engaging and mobilizing citizens in preparing our urban forests for climate change – reviewing the role of mapping and visualization tools Sheppard S. (Canada) |
| 1636 | Urbanization and forest type effect on landscape patterns, structural and taxonomic attributes and services of urban forests in Changchun, China <i>He X. (China)</i> |

| 8:00 - 19:30 | Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
|--------------|---|
| 84b | T4 - Promoting forest resilience, adaptive capacity, and ecosystem services through diverse forest ecosystems |
| Organizer | Bauhus J. (Germany) |
| Chairs | Doyon F. (Canada), Puettmann K. (United States of America) |
| 1202 | Ecological stability of mixed-species forests Bauhus J. (Germany) |
| 3038 | The role of tree diversity for ecosystem resilience and services Scherer-Lorenzen M. (Germany) |

| 18:00 – 19:30 | KG I - 1199 (University Freiburg) All Division 7 (Forest Health) Meeting |
|---------------|--|
| 83b | D7 - Are we doing the right things to deal with invasive forest pest and pathogens? Lessons from history and current strategies |
| Organizer | Villari C. (United States of America) |
| Chairs | Bonello P. (United States of America), J.K. Gandhi K. (United States of America) |
| 2172 | Management of invasive alien tree pests: Ash Dieback and Dutch Elm Disease as examples Vasaitis R. (Sweden) |
| 4049 | Ash dieback and modern techniques for resistance phenotyping Cleary M. (Sweden) |
| 1087 | The importance of climatic matching in classical biocontrol of an invasive forest insect <i>Corley J. (Argentina)</i> |
| | Panel Discussion |

| 18:00 – 19:30 | KG I - 1224 (University Freiburg) All Division 3 (Forest Operations Engineering and Management) Meeting |
|---------------|--|
| 151b | D3 - History, Findings, and Future Directions of Forest Landowner Research |
| Organizer | Butler B. (United States of America) |
| 3247 | Shaping forest owners behavior through norm sending structures and educational processes – the Swedish case Lidestav G. (Sweden) |
| 364 | Describing non-industrial private forest (NIPF) owners through their forests – an application of the place attachment framework <i>Põllumäe P. (Estonia)</i> |
| 3477 | Understanding small woodland owners and managers in the UK: evidence to promote resilient behaviour change? Ambrose-Oji B. (United Kingdom) |
| 3770 | Spatially-explicit analysis of forest landowners Ficko A. (Slovenia) |
| | Panel Discussion |

| :00 – 19:30 | KG I - 1228 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|-------------|--|
| 104 | D9 - Valuation of Multipurpose Forest Management Options under Changing Climate |
| Organizer | Liu S. (China) |
| 2022 | Multipurpose forestry – an adaptive system for the future? Spiecker H. (Germany) |
| 3543 | Economic and Life Cycle Analyses of Biomass Utilization for Bioenergy Products in the Northeastern United States Wang J. (United States of America) |
| 3633 | Simulating effects of Silvicultural treatments on selected forest goods and services – a case study in subtropical China Wu S. (China) |
| 336 | The spatial distribution of an economically important NWFPs-providing species, Juglans regia, in Arasbaran forests of Iran <i>ghanbari s. (Iran)</i> |
| 3125 | Playing games in forest based climate change mitigation Soltani A. (Norway) |

| | KONZERTHAUS | | | | | | |
|-------|---|--------------------------------------|---|---|--|--|--|
| | Rolf Böhme Saal | K1 | K2-4 | K5-7 | | | |
| 8:00 | 161 D7 - Combined and interac- | 4b D4 - Open Session | 202 D3 - Eco-friendly harvesting | 99 D4 - Adaptive spaces: can for- | | | |
| 8:30 | tive effects of multiple stressors on forest health | | operations in mountainous terrains | est planning support innovative forest practice and knowledge | | | |
| 9:00 | | | | co-creation | | | |
| 9:30 | | | | | | | |
| 10:00 | | Coffee Break (Konzert | thaus & University KG I) | | | | |
| 10:30 | LIVE STREAM | | | | | | |
| 11:00 | KP2 Keynote Plenary Session More details on page 164 | | | | | | |
| 11:30 | | | | | | | |
| 12:00 | Lun | ch break (Mensa) and visit of the Po | ster Exhibition (University, KG II, HS2 | 121) | | | |
| 13:30 | LIVE STREAM | | | | | | |
| 14:00 | SP8 Forest and Tree Research for Sustainable Development More details on page 168 | | | | | | |
| 14:30 | - More details of page 100 | | | | | | |
| 15:00 | | Coffee Break (Konzert | thaus & University KG I) | | | | |
| 15:30 | 192 D7 - Global decline of Frax- | 4c D4 – Open Session | | 60 T5 – Open Session | | | |
| 16:00 | inus species caused by invasive pests and pathogens | | | | | | |
| 16:30 | | | | | | | |
| 17:00 | | | | | | | |
| 17:30 | LIVE STREAM | | | | | | |
| 18:00 | CC - Closing Ceremony More details on page 227 | | | | | | |
| 18:30 | | | | | | | |
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| KONZERTHAUS | | NOVOTEL | | | |
|---|--|--------------------------------------|---|--|--|
| К8 | К9 | Room "Basel + Mühlhausen" | Room "Baden-Baden" | Room "Colmar" | |
| 170 D7 – Understanding viruses in trees – promoting nealthy plants in forest and urban open space | 25 T1 – Food-trees in forest and farmlands: improving livelihood of communities in tropical regions | 47aT4 - Open Session | 41T5 - Forest rhizosphere ecology and biogeochem- istry across environmental gradients | 23 T4 - Tree biodiversity at the genetic level: vital to confront environmental and livelihood challenges | |
| | Coffee | Break (Konzerthaus & University | KG I) | | |
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| | Lunch break (Mensa) an | d visit of the Poster Exhibition (Ui | niversity, KG II, HS2121) | | |
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| | Coffee | Break (Konzerthaus & University | KG I) | | |
| 120 D7 – Insect pests and pathogens of tree reproductive structures in a changing world: assessing vulnerability and mitigation strategies | 20T1 - Open Session | 47bT4 - Open Session | 187 D4 - Remote Sensing in Carbon Balance Evalua- tion and Monitoring | 33 T2 – Open Session | |
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Theme 1: Forests for People

| | | | UNIVERSITY | | | |
|-------|---|--|--|---|--|--|
| | KG I - 1009 | KG I - 1010 | KG I - 1015 | KG I - 1098 | KG I - Aula | |
| 8:00 | | 51aT2 - Forest | 37 D6 - Intact forest | 203 D9 - Forests for | 85 D7 - Sustaining | |
| 8:30 | | management strategies to enhance the mitigation | landscapes in the context of voluntary certification | sustainable development: shifting discourses and | Ecological Services and Preservation in an Era | |
| 9:00 | | potential of European forests | of forest management | approaches | of Climate Change, Fragmenting Boundaries, and Intensifying Native | |
| 9:30 | | | | | Invasive Disturbances | |
| 10:00 | | Coffee I | Break (Konzerthaus & Univers | ity KG I) | | |
| 10:30 | | | | | | |
| 11:00 | | | | | | |
| 11:30 | | | | | | |
| 12:00 | | | visit of the Poster Exhibition | (University, KG II, HS2121) | | |
| 13:30 | | SP6 Forest Operations | | | | |
| 14:00 | | Engineering and Management — | | | | |
| 14:30 | | Challenges and Oppor- tunities | | | | |
| 15:00 | Coffee Break | More details on page 166 | Coffee | Break (Konzerthaus & Univers | ity KG I) | |
| 15:30 | 135 T2 – Linkages | 51bT2 - Forest | | | 75 T3 - The nexus | |
| 16:00 | between carbon seques- tration and nutrient and water use efficiency in | management strategies to enhance the mitigation | | | | between bioeconomy and forest biomass: Challenges, opportunities |
| 16:30 | forests | forests | | | and necessary steps in the forthcoming decades | |
| 17:00 | | | | | | |
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|---|---|---|--|--|---|
| KG I - 1139 | KG I - 1199 | KG I - 1224 | KG I - 1228 | KG II - Auditorium Maximum | KG II - 2121 |
| 3 D3 – Open Session | 32T3 - Perspective of short rotation forestry for sustaining society and environment | 175 D9 - Research approaches to forest policy and governance analysis | 158 D9 - Publishing forest and wood science: Challenges for editors and publishers | 52T3 - Analyzing the context of energy wood production and use: policy and man- agement approaches adopted by selected countries | Poster Exhibition for more Details see page 216 |
| | Coffee Br | reak (Konzerthaus & Unive | ersity KG I) | | |
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| | Lunch brook (Manca) and a | vicia of also Donana Fulsikiain | / / / / / / / / / / / / / / / / / / / | 1) | |
| 1 | Lunch break (Mensa) and v | VISIT OF THE LOZIEL EXHIDITION | ii (Ulliveisity, Na II, N3212 | LIVE STREAM | |
| | | | | SP7 Changes in Forest Governance across the Globe: Implications for Sustainable Forest Management | |
| | Coffee Break (Konzert | haus & University KG I) | | More details on page 167 | |
| 27 D9 - Community for- estry/ Co-management as a possible solution for forest governance and ivelihood assurance for forest people in ight of | 69 D6 – Urban forestry for quality of life – the impacts of research on everyday practices | 70 D9 – Improved role of forests for people through favourable forest laws and environmental legislation | 137 D9 - How can we contribute to better information and more efficient communication among different fields of science? | | |
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UNIQUE orestry and land use

Keynote Plenary Session

10:30 – 12:00 Rolf Böhme Saal (Konzerthaus Freiburg)

LIVE STREAM

Keynote Plenary Session 2

KP2 Challenges for future forest research

Moderator John Parrotta (IUFRO vice-president), US Forest Service, USA



The perverse outcomes of incentives for forest conservation Arun Agrawal, University of Michigan, USA

Arun Agrawal is Samuel Trask Dana Professor of Sustainability and Governance at the School of Natural Resources and Environment at the University of Michigan, Ann Arbor. He also currently coordinates the International Forestry Resources and Institutions network, and is the co-founder of the FLARE (Forests and Livelihoods) community of practice. In addition to teaching, Arun serves as the editor-in-chief of World Development. Arun is the author of Greener Pastures and Environmentality, and his research has appeared in American Political Science Review, Conservation Biology, Current Anthropology, Science, and World Development among other journals.



Restoration Forestry: Challenges and Opportunities for Foresters, Forests, and Landscapes Robin Chazdon, University of Connecticut, USA

Robin Chazdon is a Research Professor at the University of Connecticut, USA; a Senior Research Associate with the International Institute for Sustainability, Rio de Janeiro, Brazil; a Research Professor with the Tropical Forests and People Centre, University of the Sunshine Coast, Australia; and an Adjunct Professor at the University of Colorado, USA. She studies the regeneration and restoration of tropical forests in human-modified landscapes. She is the Executive Director of the Association for Tropical Biology and Conservation and the Director of PARTNERS (People and Reforestation in the Tropics), an interdisciplinary research coordination network. She has published over 130 peer-reviewed papers. Her book "Second growth: The promise of tropical forest regeneration in an age of deforestation" was published in 2014.



Hidden biodiversity and forest dynamics Hojka Kraigher, Slovenian Forestry Institute, SLOVENIA

Hojka Kraigher, is the Head of Department for Forest Physiology and Genetics and of the Research Program Forest Biology, Ecology and Technology at the Slovenian Forestry Institute (http://en.gozdis.si/about/employees/?id=36). She is also an Associated Professor of Botany at the University of Ljubljana. Her expertise lies in physiology and ecology of forest trees and mycorrhiza, and in conservation of forest genetic resources. She coordinated the European Forest research and Innovation, EUFORINNO, dedicated to capacity building within the institute, and is at present coordinating a LIFE+ implementation project on development of a system for forest genetic monitoring "LIFEGENMON". She has been authorized by the Ministry for Agriculture, Forestry and Food to carry responsibility for the conservation of forest genetic resources and certification of the forest reproductive material, and has been the national coordinator of EUFORGEN since 1997. Moreover, she serves as the President of the Scientific Council for Biotechnical Sciences at the Slovenian Research Agency, and is the Scientific Advisor to the Slovenian Academy of Sciences and Arts in the field of forestry.

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Our divisions









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Sub-plenary Sessions

| 13:30 – 15:00 | KG I - 1010 (University Freiburg) LIVE STREAM | Sub-plenary Session 6 | 13:30 – 15:00 | KG II - Auditorium Maximum (University Freiburg) LIVE STREAM Sub-plenary Session 7 |
|---------------|--|-----------------------|---------------|---|
| SP6 | Forest Operations Engineering and Management – Challenge | s and Opportunities | SP7 | Changes in Forest Governance – Implications for Sustainable Forest Management |
| Organizer | IUFRO Division 3, Forest Operations Engineering and Management | | Organizer | IUFRO Division 9, Forest Policy and Economics |
| Moderator | Woodam Chung (coordinator, IUFRO Divison 3), Oregon State University, US/ | | Chairs | Daniela Kleinschmit, University of Freiburg, Germany Mercy Afua Adutwumwaa Derkyi, University of Energy and Natural Resources (UENR), Ghana |
| | Forest Operations Engineering and Management - Challenges and Opportur Woodam Chung, Oregon State University, USA | ities | | Changes in forest governance in South America and its implications for Sustainable Forest Management Pablo Pacheco, CIFOR/Indonesia |
| | Challenges in Forest Operations from Industry Perspective Lee Miller, Miller Timber Services, USA | | | Changes in forest governance in North America and its implications for Sustainable Forest Management Margaret Shannon, University of Freiburg, GERMANY |
| | The role of forest engineering research in developing and translating innovational content of the content of th | ions to practice | | Changes in forest governance in Africa and its implications for Sustainable Forest Management Paolo Omar Cerruti, CIFOR/ KENYA |
| | New Technologies and Innovations in Forest Harvesting and Transportation Dominik Röser, Finnish Forest Research Institute, FINLAND | | | Changes in forest governance in Europe and its implications for Sustainable Forest Management Metodi Sotirov, University of Freiburg, GERMANY |
| | The Future of Forest Engineering Hans Heinimann, ETH Zurich, SWITZERLAND | | | Changes in forest governance in Asia and its implications for Sustainable Forest Management Ahmas Maryudi, Universitas Gadjah Mada, INDONESIA |
| | Panel Discussion | | | |

Rolf Böhme Saal (Konzerthaus Freiburg)

Michael Kleine, Deputy Executive Director, IUFRO

Sustainable Forestry for Food Security and Nutrition

Development demand from member states

Center for International Forestry Research

Forest and Tree Research for Sustainable Development

International Union of Forest Research Organizations (IUFRO)

CGIAR Research Program on Forests, Trees and Agroforestry (FTA)

Keynote presentations Recommendations from science to the development agenda: the High Level Panel of Experts' report on

Hitori Mitsuqi, Food and Agriculture Organization of the United Nations, Rome, ITALY (to be confirmed)

American Studies\Center for African Studies, University of Florida, Gainesville, United States

Vincent Gitz, Director of the CGIAR Research Program on Forests, Trees and Agroforestry,

Herbert Christ, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Mercy Afua Adutwumwaa Derkyi, Lecturer, Department of Forest Science,

Glenn Galloway, Director, Master of Sustainable Development Practice Program (MDP), Center for Latin

Mónica Gabay, School of Politics and Government, National University of General San Martin, Argentina

Terry Sunderland, Centre for International Forestry Research, INDONESIA

Sub-plenary Sessions

13:30 - 15:00

Organizers

Moderator

Panel discussion

Tree Statics







Sub-plenary Session 8

We make your plants talk

Plant Growth Trunk - branch - root - fruit









Leaf Temperature broadleaf - conifer





Sap Flow





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17:30 -19:00

Rolf Böhme Saal (Konzerthaus Freiburg)

Discussion, questions and answers from and with the audience

University of Energy and Natural Resources, Ghana

LIVE STREAM

LIVE STREAM

Special Sessions

CC Closing Ceremony

For more details see page 227

| 08:00 – 10:00 | Rolf Böhme Saal (Konzerthaus) All Division 7 (Forest Health) Meeting |
|---------------|--|
| 161 | D7 - Combined and interactive effects of multiple stressors on forest health |
| Organizer | Paoletti E. (Italy) |
| 3210 | The Connection Between Climate and Declining Forest Health in the Western United States Cohen W. (United States of America) |
| 1964 | Beyond Drought: Excessive Wetness, Precipitation Variance and Forest Productivity Hubbart J. (United States of America) |
| 1831 | Multiple stressors of pine trees: Links between environmental heterogeneity, mammalian browsing and insect herbivory Björkman C. (Sweden) |
| 1709 | Interactive effects of ozone and soil on the decomposition process in a Free Air Controlled Exposure (FACE) system Agathokleous E. (Japan) |
| 3700 | Is there a mechanistic link between aerosol pollution and drought effects on trees? Burkhardt J. (Germany) |
| | 11 a 11 a 11 a 1 |

| 08:00 – 10:00 | K 1 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|---------------|---|
| 4b | D4 - Open Session |
| Organizer | Peyron J. (France) |
| Chairs | Tomé M. (Portugal) |
| 3225 | Price Impact Analysis of Increased Biofuel Production on Forest Feedstock Markets: A Spatial Explicit Approach for Sweden Ouraich I. (Sweden) |
| 1081 | A Monte Carlo appraisal of the estimation of forest tree abundance and basal area by terrestrial laser scanning Di Biase R. (Italy) |
| 349 | Geostatistical model-based estimation of forest biomass in interior Alaska combining landsat derived tree cover, sampled airborne lidar and field observations Babcock C. (United States of America) |
| 2420 | Identification of forest carbon stock change using Landsat data and field data for REDD+ reference setting Hirata Y. (Japan) |
| 1368 | New sustainable business models in forest bio-economy to gain added value for rural areas Hoffmann C. (Italy) |
| 842 | Analyses of value added chains and changes in value added in the wood-processing industries in Germany Rosenkranz L. (Germany) |
| 1351 | The last primary forest remnants in Europe: their spatial distribution and determinants Sabatini F. (Germany) |

| 08:00 – 10:00 | K 2-4 (Konzerthaus) All Division 3 (Forest Operations Engineering and Management) Meeting |
|---------------|--|
| 202 | D3 - Eco-friendly harvesting operations in mountainous terrains |
| Organizer | Cavalli R. (Italy) |
| Chairs | Heinimann H. (Switzerland), Abbas D. (United States of America) |
| 669 | Automatic harvest and cable road layout planning for multiple objectives Bont L. (Switzerland) |
| 257 | Forest Operations in Environmentally Sensitive Areas in Europe and the United States: A perspective Abbas D. (United States of America) |
| 2274 | A spatially explicit harvest scheduling model for optimal management of rockfall protection forests Maurer S. (Switzerland) |
| 3656 | Cable tension monitoring and setup time of winch assisted single-grip harvesters and forwarders in steep terrain operations Holzleitner F. (Austria) |
| 101 | Cable logging in the Italian Alps: survey of operations and machine fleet, business perspectives and contract rates Magagnotti N. (Italy) |
| 1224 | Short span logging cable systems in steep terrains: Running skyline and simple standing skyline systems oriented for small scale forestry Suzuki Y. (Japan) |
| 3085 | Evaluating the Productivity and Costs of HAM300 for Extract of Small and Medium Size Trees in South Korea <i>Lee E. (South Korea (ROK))</i> |

| | All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|-----------|--|
| 99 | D4 - Adaptive spaces: can forest planning support innovative forest practice and knowledge co-creation |
| Organizer | Lawrence A. (United Kingdom) |
| Chairs | Nelson H. (Canada), Hoogstra-Klein M. (Netherlands) |
| 2605 | Forest planning, innovative practice and knowledge co-creation: an overview Lawrence A. (United Kingdom) |
| 855 | Coping with uncertainty – exploring the adaptive capacity of Dutch forest managers Hoogstra-Klein M. (Netherlands) |
| 4077 | Climate futures in place: Using interated collaborative scenario building for adaptive landscape governance Williams D. (United States of America) |
| 1138 | Forest planning as a stick and a sermon: framing options for adaptation and innovation Brukas V. (Sweden) |
| 1941 | Adapting natural resource management to climate change through science-management partnerships Halofsky J. (United States of America) |

08:00 – 10:00 K 5-7 (Konzerthaus)

| 2967 | Role of local knowledge in community forest management: the case of idundakiyave miombo woodland, |
|------|---|
| | Tanzania |
| | Bala P. (Denmark) |
| 844 | Ideal versus Real forest management: a novel approach for applied cross-disciplinary research in forest science Lodin I. (Sweden) |

| 08:00 – 10:00 | K 8 (Konzerthaus) All Division 7 (Forest Health) Meeting |
|---------------|---|
| 170 | D7 - Understanding viruses in trees - promoting healthy plants in forest and urban open space |
| Organizer | Büttner C. (Germany) |
| 924 | Birch leaf-roll disease caused by Cherry Leaf-Roll Virus in Finland Jalkanen R. (Finland) |
| 502 | Viral presence in birch in urban areas – a study case from urban green of Berlin Landgraf M. (Germany) |
| 542 | Discovery of novel emaraviruses in diseased broad-leaved tree species von Bargen S. (Germany) |
| 2328 | A new plant virus in Quercus robur – a case study of a conservation seed orchard Bandte M. (Germany) |
| 3546 | Identification of virus-like structures in conifer extracts using electron microscopy and serology Reynard J. (Switzerland) |
| 535 | Mycoviruses in important tree pathogens Hantula J. (Finland) |
| 1369 | The frequent occurrence of the quarantine pest organism Candidatus Phytoplasma ulmi in North-Eastern Germany Kube M. (Germany) |

| 08:00 – 10:00 | K9 (Konzerthaus) Theme 1: Forests for People |
|---------------|--|
| 25 | T1 - Food-trees in forest and farmlands: improving livelihood of communities in tropical regions |
| Organizer | Muchugi A. (Kenya) |

| | regions |
|----------|--|
| rganizer | Muchugi A. (Kenya) |
| Chairs | Begeladze S. (United States of America) |
| 1947 | Safe guarding the forest food tree diversity Muchugi A. (Kenya) |
| 67 | The contribution of trees and palms to a balanced diet in three rural villages of the Fatick Province, Senegal Sambou A. (Senegal) |
| 3854 | Economic and ecological benefits of forest landscape restoration in food production systems at global and local level Begeladze S. (United States of America) |
| 3784 | Intergrated assesment of baobab value chain in semi-arid areas of Dodoma, Tanzania <i>Swamila M. (Tanzania)</i> |

An Assessment of Community-Based Biodiversity Conservation and Rural Livelihood Improvement in the Buffer Zone of Bardia National Park, Nepal Gaire D. (Nepal)
 Forest gardens improve food security and resilience Melvani K. (Australia)

| B:00 – 10:00 | Room "Basel + Mühlhausen" (Novotel Freiburg) |
|--------------|---|
| | Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
| 47a | T4 - Open Session |
| Organizer | Carnus J. (France) |
| Chairs | Luque S. (France) |
| 606 | Opportunities and Challenges for the Protection and Ecological Functions Promotion of Natural Forests in China <i>ZHOU L. (China)</i> |
| 407 | Assessment of conserved trees in selected recreation centers in Ibadan, Oyo State, Nigeria Bolanle-Ojo O. (Nigeria) |
| 3025 | Thinning enhances the resistance and resilience of forest ecosystems to drought <i>Bottero A. (Switzerland)</i> |
| 3197 | Land abandonment and spontaneous rewilding: effects of forest recovery Campagnaro T. (Italy) |
| 922 | Clonal propagation and cryopreservation of germplasm for coping with climate change in Japanese larch (Larix kaempferi) Kim Y. (South Korea (ROK)) |
| 1159 | Sub-national Forest Transitions: A matter of scale and regional drivers? Lippe M. (Germany) |

08:00 – 10:00 Room "Baden-Baden" (Novotel Freiburg) Theme 5: Forests, Soil and Water Interactions

| 41 | T5 - Forest rhizosphere ecology and biogeochemistry across environmental gradients |
|-----------|--|
| Organizer | Meier I. (Germany) |
| Chairs | Ostonen I. (Estonia), Soudzilovskaia N. (Netherlands) |
| 1740 | Priming effect in boreal forest soils along a fertility gradient Karhu K. (Finland) |
| 3664 | 14CO2 in combination with root-exclusion can be used to estimate plant-induced decomposition of soil organic matter <i>Heinonsalo J. (Finland)</i> |
| 3721 | The influence of roots on the decomposition of soil organic matter fractions in boreal forest soil <i>Heinonsalo J. (Finland)</i> |
| 812 | Long-Term Simulated Atmospheric Nitrogen Deposition Alters Leaf and Fine Root Decomposition Pregitzer K. (United States of America) |
| 2966 | The ability of beech seedlings to shape their rhizosphere in order to cope with low P availability Luster J. (Switzerland) |

| 1807 | Influence of the ectomycorrhizal colonization type on root functions under drought stress Liese R. (Germany) |
|------------|---|
| 3133 | Responses of fine root dynamics and mycelia production to climate-change driven treeline advances <i>Solly E. (Switzerland)</i> |
| 3957 | The impacts of forest management practices of Norway spruce on soil fungal communities in the Alps <i>La Porta N. (Italy)</i> |
| 00 – 10:00 | Room "Colmar" (Novotel Freiburg) Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |
| 23 | T4 - Tree biodiversity at the genetic level: vital to confront environmental and livelihood challenges |
| Organizer | Kettle C. (Switzerland) |
| 2700 | Conservation and sustainable use of food tree species in Burkina Faso: a special focus on the priority species Parkia biglobosa <i>Vinceti B. (Italy)</i> |
| 3759 | Tools for mapping threats and planning conservation of forest tree genetic resources Kettle C. (Switzerland) |
| 3813 | Development and implementation the in situ conservation strategy for the conservation and sustainable use of forest genetic resources in Europe <i>Bozzano M. (Italy)</i> |
| 724 | Potential population genetic consequences of habitat fragmentation for Central European forests <i>Dobes C. (Austria)</i> |
| 2934 | Genetic diversity structure of populus nigra populations in a major river system in Turkey. What is the role of human impact? <i>Ciftci A. (Turkey)</i> |

| 08:00 – 10:00 KG I - 1010 (University Freiburg) Theme 2: Forests and Climate Change | | | |
|---|---------------|-------------------------------------|--|
| | 08:00 - 10:00 | KG I - 1010 (University Freiburg) | |
| Theme 2: Forests and Climate Change | | | |
| | | Theme 2: Forests and Climate Change | |

51a T2 - Forest management strategies to enhance the mitigation potential of European forests

Involving stakeholders to develop a strategy for improved broadleaved trees: experiences from Britain and

Characterizations of Genetic Diversity and Population Structure of Salix alba Population in the Longest River

Organizer Mohren F. (Netherlands)

Chairs Hasenauer H. (Austria)

2828 FORest management strategies to enhance the MITigation potential of European forests (FORMIT)
Mohren F. (Netherlands)

813 Climate limits across space and time on European forest structure
Moreno A. (United States of America)

The mitigation potential of European forests
 Hasenauer H. (Austria)

 The FORMIT growth simulator and its application to projections of forest growth under climate change: A case study on trends in Northern Europe in 2010-2100
 Mäkelä A. (Finland)

 Incidence of extreme weather events on NPP and Biomass production
 Thivolle-Cazat A. (France)

 Mitigation potential of forest management and wood products use – Simulation study for intensive monitoring plots of Brandenburg, Germany
 Jochheim H. (Germany)

 The climate impact and mitigation potential of the European forestry sector
 Muys B. (Belgium)

08:00 – 10:00 KG I - 1015 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting

37 D6 - Intact forest landscapes in the context of voluntary certification of forest management.

| Organizer | Karmann M. (Germany) |
|-----------|---|
| Chairs | Franco Gil D. (Germany), Miettinen P. (Germany) |
| 1328 | High conservation values and intact forest landscapes – changes and challenges for certified operations Franco Gil D. (Germany) |
| 1875 | Impacts of logging roads on intact forest landscapes in the tropics Kleinschroth F. (Switzerland) |
| 3290 | Intact Forest Landscapes and FSC certification in Brazilian Amazon: challenges to sustainable management Garcia-Drigo I. (Brazil) |
| 1494 | The effectiveness of legal protection and FSC certification as instruments for slowing degradation of Intact Forest Landscapes Potapov P. (United States of America) |

Eves C. (United Kingdom)

Creating incentives for the protection of intact forest landscapes using new certification tools for ecosystem services

Henschel C. (Germany)

| 08:00 – 10:00 | KG I - 1098 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting |
|---------------|---|
| 203 | D9 - Forests for sustainable development: shifting discourses and approaches |

Driving progress towards best practice in IFLs: the role of transparency

Organizer Katila P. (Finland)

Chairs de Jong W. (Japan)

197 Forests for Sustainable Development: A process approach to forest sector contributions to the UN 2030 Agenda for Sustainable Development *El-Lakany H. (Canada)*

Ireland

Petrokofsky G. (United Kingdom)

Ecosystem in Middle Anatolia

Özdemir Degirmenci F. (Turkey)

Galloway G. (United States of America)

KG I - 1139 (University Freiburg)

reconstruction software

Acuna M. (Australia)

| 70 | REDD+ politics in the media: A case study from Vietnam PHAM T. (Indonesia) |
|------|---|
| 3396 | Exploring Illegal logging narratives accross the globe Winkel G. (Germany) |
| 792 | Forestry development priorities in Finnish national forest programmes Katila P. (Finland) |
| 3622 | Assessing the Impacts of Environmental Aid: Case Study on American and German Assistance Projects in Ghana Foster M. (United States of America) |
| 892 | Shifting global development discourses: Implications for forest-related development? |

KG I - Aula (University Freiburg) 08:00 - 10:00 All Division 7 (Forest Health) Meeting 85 D7 - Sustaining Ecological Services and Preservation in an Era of Climate Change, Fragmenting Boundaries, and Intensifying Native & Invasive Disturbances Raffa K. (United States of America) Organizer Challenges to Managing National Parks for Biodiversity and Ecosystem services under natural disturbances: Lessons from Bavarian Forest Nationalpark Müller J. (Germany) A global analysis of recent disturbance patterns in temperate forest ecosystems Sommerfeld A. (Austria) Microbial interactions with insect disturbance Karst J. (Canada) Ecological, social, and institutional dimensions of using wildfire to manage fire regimes Miller C. (United States of America) Interactions among population regulating agents, time delays, and defoliator outbreaks in a changing landscape Pureswaran D. (Canada) The last giant Araucaria angustifolia trees in southern Brazil Callegari Scipioni M. (Brazil)

| 3 | D3 - Open Session |
|-----------|--|
| Organizer | Lindroos O. (Sweden) |
| 2091 | An early crop tree release approach as a cost effective means of restoring hardwood stands in a Canadian context Soucy M. (Canada) |
| 1859 | What does landscape restoration at scale of Initiative 20x20 mean for FLR operations in Latin America? Zamora-Cristales R. (United States of America) |
| 495 | Automated volumetric measurement of truckloads through multi-view photogrammetry and 3D image |

All Division 3 (Forest Operations Engineering and Management) Meeting

Productivity and cost of cable-assisted felling and extraction in the Pacific Northwest, USA Green P. (United States of America)
 Roll over protective structure for quad bikes Nordfjell T. (Sweden)
 Education in safe chainsaw usage and its long term effects Häggström C. (Sweden)
 Drivers and barriers for effective health protection and accident prevention in small and micro service enterprises in forest operations Kastenholz E. (Germany)

| D8:00 – 10:00 | KG I - 1199 (University Freiburg) Theme 3: Forests and Forest-Based Products for a Greener Future |
|---------------|---|
| 32 | T3 - Perspective of short rotation forestry for sustaining society and environment |
| Organizer | Bruckman V. (Austria) |
| 1413 | Early growth, survival and above–ground biomass production in vegetatively regenerated hybrid aspen (Populus tremula $L. \times P$. tremuloides Michx.) coppice stand in hemiboreal conditions <i>Tullus H.</i> (<i>Estonia</i>) |
| 2515 | Canopy conformation for a greater solar radiation interception – a time-scale production system <i>Righi C. (Brazil)</i> |
| 4155 | Planted forests in Brazil: benefits and environmental impacts Malheiros de Oliveira Y. (Brazil) |
| 342 | Pulping potential of Corymbia citriodora, Corymbia torelliana and their hybrids Pamei N. (India) |
| 3751 | Potential of biomass productivity of poplar (Populus spp.) cultivars in short rotations in Poland <i>Niemczyk M. (Poland)</i> |
| 2499 | Traits to ecosystems: Linking plant traits to ecosystem processes in willow short rotation forest (ECOLINK-Salix, |

| 08:00 - 10:00 | KG I - 1224 (University Freiburg) |
|---------------|--|
| | All Division 9 (Forest Policy and Economics) Meeting |

175 D9 - Research approaches to forest policy and governance analysis

Weih M. (Sweden)

| 1/5 | b9 - Research approaches to forest policy and governance analysis |
|-----------|---|
| Organizer | Giessen L. (Germany) |
| Chairs | Arts B. (Netherlands) |
| 2994 | Institutional forest policy analysis: topics and trends Arts B. (Netherlands) |
| 3163 | Discourse analysis in forest policy research Kleinschmit D. (Germany) |
| 3329 | A practice based approach to forest policy and governance Behagel J. (Netherlands) |
| 2696 | The empirical-analytical approach to forest policy analysis Giessen L. (Germany) |

176

08:00 - 10:00

| 08:00 – 10:00 | KG I - 1228 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting | 1418 | Can private forest owners contribute to Wood Mobilisation? Case study on Croatia, Serbia, Bosnia and Herzegovina, FYR of Macedonia |
|----------------------|--|-------------------|---|
| 158 | D9 - Publishing forest and wood science: Challenges for editors and publishers | | Posavec S. (Croatia) |
| Organizer | Nygren P. (Finland) | 1421 | Factors and trends in the production and use of woody biomass: a case study of Slovenia Krc J. (Slovenia) |
| Chairs 3205 | Malinen J. (Finland) Quo vadis, forestry journal? The identity and scope of scholarly forestry journals in the era of megajournals and | 1507 | Evaluation of indicators that affect the utilization of wood for energy, case of municipality Sentjur, Slovenia Zadnik-Stirn L. (Slovenia) |
| | loT Witzell J. (Sweden) | | |
| 1582 | Coordinating multiple avenues of dissemination in today's technological environment: Extracting value from legacy publications | 10:30 – 12:00 | Rolf Böhme Saal (Konzerthaus) Keynote Plenary Sessions |
| | Moser W. (United States of America) | KP2 | Keynote Plenary Session |
| 2263 | Open science and the quality of science | | |
| 2198 | Nygren P. (Finland) Contribution of Forest Science journals to open data: a few examples and some issues. | 13:30 – 15:00 | Rolf Böhme Saal (Konzerthaus) Sub-plenary Sessions |
| | Dreyer E. (France) | SP8 | Forest and Tree Research for Sustainable Development |
| 3932 | Publishing survey-based research in forestry journals Stevanov M. (Slovakia) | Organizer | Moderator: Buck A. (Austria) |
| 3871 | Science to Sustain the World's Forest: publishing issues in Forest Ecology and Management Binkley D. (United States of America) | 13:30 – 15:00 | KG I - 1010 (University Freiburg) Sub-plenary Sessions |
| 2066 | $The \ International\ Journal\ of\ Forest\ Engineering: Future\ Challenges\ and\ Opportunities\ of\ a\ Well-Established$ | | |
| | Journal within the Applied Sciences Blinn C. (United States of America) | SP6 | Forest Operations Engineering and Management – Challenges and Opportunities |
| | oinni C. (ointea states of America) | Organizer 4214 | Moderator: Chung W. (United States of America) "Forest Operations Engineering and Management - Challenges and Opportunities" |
| 08:00 – 10:00 | KG II - Auditorium Maximum (University Freiburg) | 4214 | Chung W. (United States of America) |
| 52 | Theme 3: Forests and Forest-Based Products for a Greener Future T3 - Analyzing the context of energy wood production and use: policy and management | 4215 | Challenges in Forest Operations from Industry Perspective Miller L. (United States of America) |
| Organizer | approaches adopted by selected countries and perspectives of relevant stakeholders. Wirth K. (Germany) | 4216 | "The role of forest engineering research in developing and translating innovations to practice" Lindroos O. (Sweden) |
| Chairs | Ferranti F. (Germany), Zadnik-Stirn L. (Slovenia) | 4217 | New Technologies and Innovations in Forest Harvesting and Transportation |
| 946 | Prospects of energy wood production and use in five European countries | | Rösler D. (Finland) |
| | Leban V. (Slovenia) | 4218 | The Future of Forest Engineering Heinimann H. (Singapore) |
| 1412 | Cross-sectoral perception of the operational environment of forest bioenergy production and use in four European countries | | |
| 212 | Pezdevsek Malovrh S. (Slovenia) | 13:30 – 15:00 | KG II - Auditorium Maximum (University Freiburg) Sub-plenary Sessions |
| 313 | Possibilities to increase energy wood production: a case study on forest policy-practice interface in selected European countries. Ferranti F. (Germany) | SP7 | Changes in Forest Governance across the Globe: Implications for Sustainable Forest Management |
| 429 | The effect of energy wood production and use on other forest ecosystem services – stakeholders' perceptions in five European countries <i>Wirth K. (Germany)</i> | Organizer | Moderator: Kleinschmit D. (Germany) |

| 5:30 – 17:30 | Rolf Böhme Saal (Konzerthaus) All Division 7 (Forest Health) Meeting |
|--------------|--|
| 192 | D7 - Global decline of Fraxinus species caused by invasive pests and pathogens |
| Organizer | Cleary M. (Sweden) |
| Chairs | Woodward S. (United Kingdom) |
| 2707 | Can we predict the evolutionary trajectory of the ash dieback pathogen in Europe based on its biology and ecology? Gross A. (France) |
| 453 | Population genetic analysis of a parasitic mycovirus to infer the invasion history of its fungal host, the ash-dieback pathogen Hymenoscyphus fraxineus Schoebel C. (Switzerland) |
| 804 | Fourier-transform infrared (FT-IR) spectroscopy can rapidly phenotype European ash resistance levels to Hymenoscyphus fraxineus Villari C. (United States of America) |
| 1813 | Emerald ash borer in European part of Russia: 2016 situation update Baranchikov Y. (Russian Federation) |
| 2375 | Factors influencing susceptibility and rate of decline in urban trees attacked by emerald ash borer MacQuarrie C. (Canada) |
| 2044 | Progress and gaps in understanding mechanisms of ash tree resistance to emerald ash borer Bonello P. (United States of America) |
| | W- W |

| 30 – 17:30 | K 1 (Konzerthaus) All Division 4 (Forest Assessment, Modelling and Management) Meeting |
|------------|---|
| 4c | D4 - Open Session |
| Organizer | Peyron J. (France) |
| Chairs | Tomé M. (Portugal) |
| 2456 | Optimizing forest value chains in northern Norway to strengthen regional resource usage and value creation Johansen U. (Norway) |
| 3892 | Innovative non-wood forest products economies explained through their network structure: failure or success? Da Re R. (Italy) |
| 3583 | Climate friendly harvest scheduling in boreal forests of Finland Sievänen R. (Finland) |
| 874 | Market-level implications of regulating forest carbon storage and albedo for climate change mitigation <i>Rautiainen A. (Finland)</i> |
| 2155 | Business analyses comparation of selected forest companies in South East Europe <i>Keca L. (Serbia)</i> |
| 1628 | Convergence and diversity: international comparability of forest accountancy data networks and approaches for assessing the economics of small-scale farm forestry in the DACH-region <i>Sekot W. (Austria)</i> |
| 2269 | Benchmarking based on typical farm data: What forestry may learn from agri benchmark Cash Crop Zimmer Y. (Germany) |

| | 5:30 – 17:30 |
|--|--------------|
| | 60 |
| | Organizer |
| ion rates of total litter and different carbon opical plantations | 1261 |
| stands | 1685 |
| laysia | 2489 |
| oforest in Nigeria: Implications for biodiversity | 1882 |
| nservation at tropical montane rainforests | 1906 |
| forest in Nigeria: Implications for biodive | 1882 |

15:30 – 17:30 K 8 (Konzerthaus) All Division 7 (Forest Health) Meeting

120 D7 - Insect pests and pathogens of tree reproductive structures in a changing world: assessing vulnerability and mitigation strategies

| Organizer | Boivin T. (France) |
|-----------|--|
| 2859 | Pest management in seed orchards based on monitoring Rosenberg O. (Sweden) |
| 942 | The ecology of pre-dispersal seed predation by forest insects <i>Boivin T. (France)</i> |
| 3660 | Cone insect monitoring: pheromone trap height in spruce seed orchards <i>Ylioja T. (Finland)</i> |
| 3053 | Messing with megagagametophyte gene expression allows a seed parasite (Megastigmus spermotrophus) to harness the storage reserves of its host, Douglas-fir. von Aderkas P. (Canada) |
| 880 | Early detection of invasive seed chalcids (Megastigmus spp.) through extensive surveys in major European botanical gardens: the example of rose seed chalcids Auger-Rozenberg M. (France) |
| 2355 | Cone and seed insects-mediated impacts of global change on forest health: observations, predictions, and management options. Candau J. (Canada) |

| 15:30 – 17:30 | K9 (Konzerthaus) |
|----------------------|---|
| 17.50 | Theme 1: Forests for People |
| 20 | T1 - Open Session |
| Organizer | Kleinschmit D. (Germany) |
| Chairs | Stein T. (United States of America) |
| 1855 | Ecological economics paradigm for sustaining forestry and people Tunytsya T. (Ukraine) |
| 3542 | Public acceptability of value-based forest management scenarios Ford R. (Australia) |
| 3183 | Ethnographic Analysis of Participatory Forest Management: the role of state in mangrove management in Kenya and Zanzibar (Tanzania) Mangora M. (Tanzania) |
| 624 | Placing community-based multiple-use forest management at the centre of the forest policy agenda Castro Euler A. (Brazil) |
| 382 | Management and use of Lantana camara as an alien invasive species for improving the livelihood options for farmers Singh A. (India) |
| 90 | Basic research for future eventual Forest Landscape Restoration (FLR) of sandstone plateaus of Voltaian geological unit in West-Africa Folega F. (Togo) |
| 2826 | Highland restoration to maintain ecological services of forest degraded landscape in northern Thailand through the King Bhumibol's initiatives Diloksumpun S. (Thailand) |

| 15:30 – 17:30 | Room "Basel + Mühlhausen" (Novotel Freiburg) |
|---------------|--|
| | Theme 4: Biodiversity, Ecosystem Services and Biological Invasions |

T4 - Open Session Organizer Carnus J. (France) Luque S. (France) 3630 FSC certification - Long-term impact on conservation values in the landscape de Jong J. (Sweden) An isolated outpost of stone pine (Pinus cembra) and its genetic relationships Heinze B. (Austria) Antioxidant variability in the seeds of the core and marginal populations of Lebanon cedar (Cedrus libani A. Rich.) Ayan S. (Turkey) 236 Investigation of genetic resource conservation of various types of seeds using cryopreservation technique Hatami F. (Iran)

| 5:30 – 17:30 | Room "Baden-Baden" (Novotel Freiburg) All Division 4 (Forest Assessment, Modelling and Management) Meeting | | |
|--------------|---|--|--|
| 187 | D4 - Remote Sensing in Carbon Balance Evaluation and Monitoring | | |
| Organizer | Zawila-Niedzwiecki T. (Poland) | | |
| 2193 | Forest-Observation-System.net – a Global in-situ Biomass Data Repository Schepaschenko D. (Austria) | | |
| 1414 | Unravelling uncertainty - Combining forest cover change products and biomass datasets in the context of REDD+ Bos A. (Netherlands) | | |
| 1839 | Uncertainty analysis on the carbon and water balance of Boreal forests using a process-based model driven by satellite images Minunno F. (Finland) | | |
| 3295 | Modeling Carbon Balance in Polish Forests Using Canadian CBM-CFS Software and Remote Sensing. Balazy R. (Poland) | | |
| 3089 | Dynamics of mangrove above ground carbon stocks estimated with Landsat time series and field data in J. N. "Ding" Darling National Wildlife Refuge, Florida. **Peneva-Reed E. (United States of America)** | | |
| 1227 | Above Ground Biomass Estimation using Synthetic Aperture RADAR (SAR) in Mount Makiling Forest Reserve, Philippines Dida J. (Philippines) | | |
| 1866 | Mapping growing stock volume and biomass of larch plantations in Northeast China with L-band ALOS PALSAI backscatter mosaics Gao T. (China) | | |

15:30 – 17:30 Room "Colmar" (Novotel Freiburg)

| 33 | T2 - Open Session | |
|-----------|---|--|
| Organizer | Paoletti E. (Italy) | |
| Chairs | Kettle C. (Switzerland) | |
| 485 | Wind Disturbance in European Forests in a Changing Climate <i>Gardiner B. (France)</i> | |
| 2490 | What role does storage function play in the death of beech trees? Chuste P. (France) | |
| 1315 | Natural regeneration of Picea abies (L.) Karst. after strip cutting in the Swiss Alps: a retrospective study Nikolova P. (Switzerland) | |
| 3093 | Tree range expansion in eastern North America fails to keep pace with climate warming at northern range limits Nock C. (Germany) | |
| 1385 | Capacity of urban ecosystems in Bulgaria to mitigate climatic changes through assessment and mapping of carbon storage at national scale Zhiyanski M. (Bulgaria) | |
| 640 | Evaluating the impact of potential fires on forest carbon sequestration in the western United States <i>Pokharel R. (United States of America)</i> | |

| 1515 | Quantifying forest conservation efforts in REDD+ schemes: The key role of protected areas and indigenous |
|------|--|
| | territories in Panama |
| | Vergara-Asenjo G. (Chile) |
| | |

15:30 – 17:30 KG I - 1009 (University Freiburg) Theme 2: Forests and Climate Change

135 T2 - Linkages between carbon sequestration and nutrient and water use efficiency in forests.

Organizer Lo Y. (Spain)
Chairs Blanco J. (Spain)

Long-term increases in photosynthetic efficiency and water-use efficiency due to CO2 rise did not stimulate diameter growth of tropical trees

Zuidema P. (Netherlands)

Extreme drought events and land-use change impacts carbon and water cycling in Mediterranean evergreen forests

Water, nitrogen and carbon use efficiencies are not related to drought tolerance in trees subjected to precipitation manipulation

Limousin J. (France)

3010 Effect of nitrogen deposition on C-sink potential of deciduous forest ecosystems: a permanent field-scale manipulation experiment in South Tyrol (Italy).

Panzacchi P. (Italy)

2667 Increasing droughts and tree density reduces European beech response to increasing atmospheric CO2 concentration

González de Andrés E. (Spain)

Werner C. (Germany)

651 Linking nutrient response efficiency and carbon storage in forest and agroforestry systems in Germany Schmidt M. (Germany)

1760 Uncertainty about future nitrogen availability dominates boreal forest growth projections Mäkelä A. (Finland)

2540 Interactions in the efficiency of N and P use for forest litter production Fisk M. (United States of America)

15:30 – 17:30 KG I - 1010 (University Freiburg) Theme 2: Forests and Climate Chai

51b T2 - Forest management strategies to enhance the mitigation potential of European forests

Organizer Mohren F. (Netherlands)
Chairs Hasenauer H. (Austria)
2423 A new Dynamic Life Cycle As

23 A new Dynamic Life Cycle Assessment methodology to deal with biogenic carbon fluxes and temporary carbon sequestration

Cardellini G. (Belgium)

3224 Sensitivity analysis on displacement factors for wood products

Vial E. (France)

Levet A. (France)

2320 Harvest and carbon leakages of large harvest reductions in Europe
Solberg B. (Norway)

2372 Economics of forest management for carbon storage and mitigation Rørstad P. (Norway)

Markets of forest products in European countries

1918 FORMIT Integrated evaluation of forest management impact simulations on carbon stocks and socio economic and environmental attributes of European forests

Mues V. (Germany)

15:30 — 17:30 KG I - Aula (University Freiburg) Thoma 3: Forests and Forest-Rased Products for a Greener Futur

75 T3 - The nexus between bioeconomy and forest biomass: Challenges, opportunities and necessary steps in the forthcoming decades

Organizer Bruckman V. (Austria)

Chairs Haruthaithanasan M. (Thailand)

3939 Bioeconomy and the City

Kraxner F. (Austria)

2467 An Overview of Wood-based Energy in North America Vlosky R. (United States of America)

1997 Sustainable Forest Biomass: Promoting Renewable Energy in Forest Sector of Myanmar Sein C. (Myanmar)

2827 Energy from forest biomass in Austria

Bruckman V. (Austria)

Overmature periurban Quercus-Carpinus coppice forests in Austria and Japan: a comparison of carbon stocks, stand characteristics and conversion to high forest Bruckman V. (Austria)

825 Production of bioethanol from residues of coffee wood (Coffea arabica L.) in Viotá, Cundinamarca, Colombia Gómez S. (Colombia)

1707 The influence of harvesting intensities on structural diversity of forests in SW-Germany Storch F. (Germany)

15:30 – 17:30 KG I - 1139 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting

27 D9 - Community forestry/ Co-management as a possible solution for forest governance and livelihood assurance for forest people in light of UN-REDD Program

Organizer van der Zon M. (Netherlands)

2837 The local reality of tenure security in forest communities van der Zon M. (Netherlands)

3473 REDD+: A new layer in the Philippines' Community-Based Forest Management Peras R. (Philippines)

| - 1199 (University Freiburg) |
|---|
| al forestry in Indonesia: two early-moving communities obtaining permits and long-term funding for aging their Village Forest and Customary Forest, securing their forest-dependent livelihoods e J. (United Kingdom) |
| st Tenure Reform Implementation: Perspectives from National and Sub-national Government Officials in tiple Settings wati Hadis T. (Indonesia) |
| C1 |

| 15:30 – 17:30 | KG I - 1199 (University Freiburg) All Division 6 (Social Aspects of Forests and Forestry) Meeting | | |
|---------------|--|--|--|
| 69 | D6 - Urban forestry for quality of life - the impacts of research on everyday practices | | |
| Organizer | Konijnendij k van den Bosch C. (Canada) | | |
| Chairs | Hedblom M. (Sweden) | | |
| 2586 | Urban forest as biodiversity hotspots: dead wood, birds and human perception <i>Hedblom M. (Sweden)</i> | | |
| 386 | Strategic interaction in municipal governments' provision of public green spaces: a dynamic spatial panel data analysis in transitional China <i>Chen W. (Hong Kong)</i> | | |
| 103 | Innovative urban forestry governance in Melbourne?: unpacking the implications of "green place-making" as a Nature-Based Solution <i>Gulsrud N. (Denmark)</i> | | |
| 1140 | Municipal Forestry and Management in the United States: An Urban & Community Forestry Census of the United States Hauer R. (United States of America) | | |
| 1406 | The Role of Urban Forestry in delivering Resilient Urban Futures, with a focus upon the Leeds City Region, UK. Simson A. (United Kingdom) | | |

15:30 – 17:30 KG I - 1224 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting

Urban forestry and human health van den Bosch M. (Canada)

70 D9 - Improved role of forests for people through favourable forest laws and environmental legislation

| Organizer | Sulek R. (Slovakia) |
|-----------|---|
| Chairs | Herbst P. (Austria) |
| 239 | Forestry and the principle of no net loss of biodiversity Pappila M. (Finland) |
| 1910 | Historical root causes for the conflicts between forest and nature protection legislation in Germany Pukall K. (Germany) |
| 2033 | Legal conditions of sustainable public access to forests Sulek R. (Slovakia) |

2059 Liabilities resulting from Public Access to Forests in Austria
 Herbst P. (Austria)

 1723 Local communities in forest legislation of selected South-East European countries
 Avdibegovic M. (Bosnia and Herzegovina)

| 15:30 – 17:30 | KG I - 1228 (University Freiburg) All Division 9 (Forest Policy and Economics) Meeting | |
|---------------|---|--|
| 137 | D9 - How can we contribute to better information and more efficient communication among different fields of science? | |
| Organizer | Beguš J. (Slovenia) | |
| 3291 | Historical and current trends in formal and informal knowledge transfer in the forestry profession Moser W. (United States of America) | |
| 2170 | Accelerating the delivery and adoption of applied science - Addressing Common Communication Challenges from across Continents Upfold S. (South Africa) | |
| 2957 | The future of forest terminology – between tradition and innovation Prüller R. (Austria) | |
| 2035 | Indicators as information tools: From reporting to assessing SFM Linser S. (Austria) | |
| 1030 | The institutional barriers of forest information exchange in the European Union Baycheva-Merger T. (Germany) | |
| 3209 | Information about and for private forest owners Poljanec A. (Slovenia) | |

17:30 –19:00 Rolf Böhme Saal (Konzerthaus Freiburg) LIVE STREAM Special Sessions

CC Closing Ceremony

For more details see page 227

Official Closing of the Congress

The poster exhibition will take place in the University Freiburg in KG II – room HS 2121.

Poster abstracts will be on view on the same day as the corresponding scientific sessions.

On that day, poster presenters will be available during the lunch break to present and discuss their posters with the interested audience. Please note that there will be no special time slot for poster presentations.

| 08:00 – 20:00 | KG II - HS 2121 (University Freiburg) Poster Exhibition Monday |
|---------------|---|
| PS-78 | D3 - Forest Operation and Ergonomics: Challenge and Solutions. |
| 3498 | Automated Time Study of cable yarding using GPS data <i>Kondo M. (Japan)</i> |
| PS-169 | D3 - New comminution technologies and logistics to improve the quality of forest energy feedstock |
| 1287 | Review of efficiencies in comminuting of forest fuels Di Fulvio F. (Austria) |
| PS-31 | D3 - Quality Assessments along the wood supply chain for optimal use of the forest resource |
| 488 | A study of the morphological properties of various wood species Shalaev V. (Russian Federation) |
| PS-101 | D4 - 125 Years of Forest Inventories - Past, Present and Future |
| 283 | State (national) forest inventory in Russia: sampling design, first results, problems and perspectives. Alekseev A. (Russian Federation) |
| 2873 | Modelling Height-Diameter curves for prediction Mehtätalo L. (Finland) |
| 940 | Application of image-based point clouds for forest inventory and management: Study in a mixed conifer broadleaved forest in Northern Japan. Sadeepa J. (Japan) |
| 1870 | The challenge of monitoring strict forest reserves: An introduction to the monitoring method in Baden-Wuerttemberg Zielewska-Büttner K. (Germany) |
| PS-1 | D4 - Advances in the use of lidar data for forest carbon accounting |
| 498 | Using LiDAR data in a double sampling system to improve carbon sequestration yield tables for New Zealand's planted forests. Paul T. (New Zealand) |

PS-128 D4 - Building relevant, harmonised, comprehensive, reliable and up-to-date forest information for bioeconomy outlooks at European level - a joint session and panel discussion of the European National

212 Evolution of the information on fuels in the National Forest Inventories in the Iberian Peninsula Nunes L. (Portugal)

PS-112 D4 - Climate change adaptation in forest management: from applied science to implementation

- 2820 Defining priorities in planning for forest adaptation to climate change: a case study on Pinus nigra J.F. Arnold reforestations in Tuscany, Central Italy Chirici G. (Italy)
- Forest density reduction to minimize the vulnerability of Norway spruce and silver fir to extreme drought a risk assessment Bottero A. (Switzerland)
- 2699 Searching for evidences for shift in tree species distribution due to climate change: experiences from Slovenia Klopcic M. (Slovenia)
- 2024 Forest management planning at small–scale level under different climate change scenarios *Wybostok J. (Slovakia)*

PS-61 D4 - Decision Support Approaches in Adaptive Forest Management

- The DiaLOG tool: a support document for deeper trust in environmental friendly logging operations Cacot E. (France)
- 2972 Allocation of storage yards in native forest stands in the Amazon region using mathematical programming Fernandes da Silva G. (Brazil)
- 1436 Advances in the evaluation of site quality based on remote sensing technology Guo H. (China)
- 37 Maximizing revenue from loblolly pine (Pinus taeda) plantations in the western Gulf region of the US including risk abatement values Holley A. (United States of America)
- 1155 Forest Roads Design and 3D Visualization for Steep Mountains
 Nozawa N. (Japan)
- 320 Sustainable Forest Management Planning with Indigenous Communities in British Columbia Spies J. (Canada)
- 1998 Advances in Risk-Based Decision Support for Wildland Fire Management Thompson M. (United States of America)
- 605 Modelling Consequences of Regional Scale Forest Planning for Adaptive Management Where a Number of Decision Makers Exist Yamada Y. (Japan)

D4 - Managerial Economics and Accounting: Where We have Been & Where We Can Go PS-67 Uniform management problem of forest resources and determination of bottlenecks (example of Turkey) Berker E. (Turkey) D4 - Managing Risk in the Face of Uncertain Change PS-171 Accounting for risk in forest management - what is risk and when is risk management useful? Eyvindson K. (Finland) D4 - Quantifying disturbance effects and post-disturbance dynamics with repeatedly PS-119 measured plots Dynamic of a tropical forest submitted to reduced impact logging in Belterra, Pará, Brazil The impact of forest fire on survival and growth of the survived scots pine trees Donis J. (Latvia) PS-118 D6 - Nature-based tourism and recreation's role in sustaining forests and improving people's quality of life A Research on Recognition and Needs of Mountain Village Residents to Promote Kim J. (South Korea (ROK)) Trampling effects of orienteering on vegetation in protected areas and production forests in Latvia Straupe I. (Latvia) Quantification and regionalisation of recreation values in Germany in the ReWaLe framework Weller P. (Germany) PS-6 D6 - Open Session The community forestry enterprise in the central region of Mexico: a study case of determinants of success González Guillén M. (Mexico) Understanding Public Risk Perceptions of Climate Change Effects Gordon J. (United States of America) Unpacking 'gender' in India's Joint Forest Management Constructing theory on participation in spatial planning-case study from Nature Park Medvednica, Croatia Lovric N. (Finland) Collaborating for forest nature conservation? Administrative perspectives Maier C. (Germany)

Rural realities between policy goals, market forces and natural disasters - a narrative of local forest

Traditional local knowledge and agroecological and biological conservation practices under climate change

management in southern Sweden

uncertainties in the Centre-South regions of Cameroon

Wallin I. (Sweden)

Mala W. (Cameroon)

| 1959 | A 'Citizen's Coolkit' on climate change and urban forestry - Canadian experiments in co-creation and |
|------|--|
| | experiential learning at the neighbourhood block scale |
| | Sheppard S. (Canada) |

PS-8 D6 - The Role of Social Science in Forestry and Forest Management: Fostering a Culture of Disciplinary Inclusion

- 3893 Innovative forest stakeholder mapping: Where vipers and trees do have a stake Baerlocher B. (Switzerland)
- 1048 Forest policy implementation in the Pacific Northwest a street-level perspective Maier C. (Germany)
- 918 Estimation of potential forest-cutting sites for environmental preservation in the subtropical forest of Okinawa Main Island Miyamoto A. (Japan)
- Professional ethics as a necessary means for affective, sufficient and sustainable forestry and its examination in forest engineering

 Türker M. (Turkey)

PS-57 D7 - Invasive Alien Species and International Trade - Detection Prior to Introduction, Measures and Policy for Mitigation

- A Survey of Phytophthora species on Rhododendron plants in Lithuania Burokiene D. (Lithuania)
- 2558 Ceratocystis platani is Responsible for the Death of Plane Trees in Istanbul Dogmus- Lehtijärvi H. (Turkey)
- 1127 Invasive alien species arriving to Siberia with national and international commodities: an overview Kirichenko N. (Russian Federation)
- 1445 A survey for Sirex noctilio and native wood wasps in Alabama Wahl A. (United States of America)

PS-56 D7 - Modern approaches in evaluating ozone impacts on forests

1279 Drought and ozone interactive effects on ectomycorrhizal communities of oak seedlings Straus I. (Slovenia)

PS-300 D7 - Pine pitch canker - strategies for management of Gibberella circinata in greenhouses and forests (Pinestrength)

- The role of primary metabolism and hormone signalling in pine defence responses against Fusarium circinatum Amaral J. (Portugal)
- Molecular characterisation of chromosome 12 from members of the Fusarium fujikuroi complex Wingfield B. (South Africa)
- Gene gain and loss shapes the evolutionary history of the pitch canker fungus, Fusarium circinatum Wingfield B. (South Africa)
- 1198 Susceptibility of coniferous tree-species of Czech provenances to the pathogenic fungus Fusarium circinatum Lukacevicova A. (Czech Republic)

Posters

PS-59 D7 - Responses to the increasing threat of insect pests to sustainable plantation forestry

516 Characterization of the complex wasp community in Leptocybe galls on Eucalyptus Hurley B. (South Africa)

PS-116 D9 - Forest and Natural Resources Policy and Governance in Latin America and the Caribbean

- 3337 Grades of environmental fragility for planning of a watershed soil use Hoeflich V. (Brazil)
- 988 The Compensation of Legal Reserve in Conservation Units: Background, Challenges and Opportunities Saretta C. (Brazil)

PS-179 D9 - Forest policy and governance: research at multiple scales

- 4026 The actor-centred analytical approach (Aurenhammer) in forest policy analysis Aurenhammer P. (Germany)
- 1217 Assessing the Value of Forest Cover on Water Quality: An application to Portugal Faria Lopes A. (Norway)

PS-43 D9 - In the woods of transdisciplinarity: Forest science between 'research for the sector' and a new wave of 'transdisciplinarity'

- 3437 Participatory development of indicators for urban forests' ecosystem services. A German case study Schraml U. (Germany)
- 4168 The experience of Uruguay on forest research innovation. *Scoz R. (Uruguay)*
- 1816 Capacity building to increase wood mobilisation at regional level throughout Europe Vuillermoz M. (France)

PS-17 D9 - Integrating grassroots participation, crowd mobilization and big data analysis in forest restoration policy assessment in the tropics

- 2285 Contribution of community based forest resources management to forest conservation and sustainable resource utilisation in Chimanimani district, Zimbabwe.
 Mujuru L. (Zimbabwe)
- 2608 Comparative assessment of first generation restoration activities in Latin America to support sub-national restoration efforts for generating emissions reductions Romijn E. (Netherlands)

PS-65 D9 - Multifunctional tropical forest landscapes: finding solutions in science and practice

3507 Church forests and home gardens enhance multi-functional role of Ethiopian highland landscapes when augmented with exclosures Abiyu A. (Ethiopia)

PS-145 D9 - The Role of Forest History & Cultural Heritage in Re-constructing Nature - a landscape-level exploration of the need for, of approaches to, and case studies of, the recovery, remediation and re-c

3472 Sustainable production and nutrient management in pine and birch stands in lowlands Novak J. (Czech Republic)

PS-176 T1 - Agroforestry - the future of land use management?

- Soil and plant hydrology of agroforestry systems: Competition for water or positive tree-crops interactions? Gerjets R. (Germany)
- 2875 Biodiversity, Carbon and Chocolate: Towards an Environmentally Friendly Cocoa Production System in Ghana Kwakye Ameyaw L. (United States of America)
- 1363 Above-ground carbon sequestration potential and nutrient distribution of wild cherry in an agroforestry system

 Morhart C. (Germany)
- 2961 SidaTim: Novel Pathways of Biomass Production: Assessing the Potential of Sida hermaphrodita and Valuable Timber Trees Nahm M. (Germany)
- 2517 Agricultural system of the Shipibo Konibo Indians in Amazonia *Righi C. (Brazil)*
- 1794 Investigating sun induced damages on the boles of wild cherry grown within a temperate agroforestry system Sheppard J. (Germany)
- 3356 Developing a smallholder whitewood (Endospermum medullosum) plantation industry in Vanuatu Smith G. (Australia)
 - 302 Livelihood and biodiversity conservation value of traditionally managed agroforests of Meghalaya, India Tiwari B. (India)
- 335 Expanding Sumach (Rhus coriaria L.) in silvo-pastoral systems for empowering local people? Ghanbari S. (Iran)

PS-102 T1 - Bringing carbon to small-scale forest owners - role of buy-in mechanisms for bridging scales and facilitating access to carbon markets

297 Carbon balance calculation system: a step towards sustainability in rural properties Boaventura Bernardes Moura Alves E. (Brazil)

PS-149 T1 - Synergies and Conflicts in the Provision of Ecosystem Services by Small-scale Forest Owners

764 Costs of Sustaining Ecosystem Services by the State Forest Service in Baden-Württemberg, Germany Schmitt J. (Germany)

PS-21 T2 - Dendrochemistry - a tool to asses changes in ecosystem nutrition and forest growth.

Spatial heterogeneity of nutrients within treerings - results from LA-ICP-MS measurement Niederberger J. (Germany) The genetic diversity of species alternatives of the future

Management of Forests

Alba Landa J. (Mexico)

PS-153

Posters

PS-95 T3 - Forestry classic´ for the future

- 351 Crown thinning effects on growth of Pinus taeda stands in southern Brazil Dobner M. (Brazil)
- 765 Long-term effect of whole tree biomass harvesting on ground vegetation in Scots pine stands in Latvia Jansons A. (Latvia)

Breeding of deep frost-tolerant eucalyptus for sustainable biomass production under climate change Harvenat L. (France)

T2 - Genetics and Genomics for Conservation, Climate Adaptation and Sustainable

- 2726 Impacts of selective logging on the genetic diversity of Cryptomeria japonica natural forest, Yanase district in Kochi Prefecture Japan.

 Kimura M. (Japan)
- 571 Landscape genetics and gene flow of wild olive (Olea europaea subsp. cuspidata) in fragmented natural populations of Ethiopia *Konrad H. (Austria)*
- 1756 The small RNAome from Pinus pinaster Ait during drought stress response Perdiguero P. (Portugal)
- 2248 Genetic and silvicultural analyses to determine the region of origin, the growth and quality features of red oak (Quercus rubra) stands in Germany Pettenkofer T. (Germany)
- 2960 Effect of 5-azacytidine and hydroxyurea on seed germination and response of Eucalyptus globulus juvenile plants to water stress

 Paiva J. (Portugal)

PS-113 T2 - What is the potential for CO2 mitigation of forest soils?

- 1547 Consequence of clear-cutting and drought on deep soil CO2 and N2O profile concentrations and surface fluxes in Brazilian eucalypt plantations. Germon A. (Brazil)
- 2641 Effects of forest management practices on carbon stocks and carbon stock changes: Results from Germany's National Forest Soil Inventory Grüneberg E. (Germany)
- 3901 Vulnerability of carbon storage potential with regard to tree species composition Horváth A. (Hungary)
- 3496 Intensive ground vegetation growth mitigates the carbon loss from forest clearings Schindlbacher A. (Austria)
- 1407 Carbon sequestration to above- and below-ground pools in short-rotation hybrid aspen plantations on former crop- and grasslands in hemiboreal conditions *Tullus H. (Estonia)*
- 1397 Quantitative and qualitative features of soil organic matter in mountain treeline ecosystems Zhiyanski M. (Bulgaria)
- 2559 Carbon sequestration in Central European forest soils Combining soil inventory with modelling Ziche D. (Germany)

PS-42 T3 - Open Session

- 1758 Stand structure after thinning in 1-2 m-wide boom-corridors in young dense stands First year results Bergström D. (Sweden)
- 3254 Agroforestry System Combining Deep-Row Applications of Biosolids, Short Rotation Wood Crops, and Reclamation of Mine Spoils Kays J. (United States of America)
- 4011 Are there different growth patterns of Bertholletia excelsa in Amazon region?

 Mattos P. (Brazil)
- 95 Using spatial modeling to understand the role of facilitation in forest regeneration: a case study of degraded mangroves Pranchai A. (Thailand)
- 926 Evaluating site differences on growth and wood properties of radiata pine trees in Chile Trincado G. (Chile)
- Possibilities of using the Integrated Wood Protection in the Conservation of Wooden Artifacts Unger W. (Germany)
- 1373 Evaluation of Essential Oils and Extracts of Different Plant Parts from Zelkova serrata against Phellinus noxius Cheng S. (Taiwan)
- 021 Unsterile soil burial soft rot test of normal and hot water extracted woods to study the influence of wood extractives on soft rot resistance of Malaysian hardwoods Wong A. (Malaysia)

PS-11 T4 - Progress in tropical forest management: Assuring sustainability, avoiding degradation and assisting restoration

- Desiccation tolerance study and fruit maturity stage impact on Opilia amentacea. Roxb. seed germination in Burkina Faso
 Daboue E. (Burkina Faso)
- Overturn of tegumentary dormency of seeds for the forest restoration in Brazilian savanna De Sousa Freitas M. (Brazil)

T5 - Forest floor matters - The pivotal role of a forest compartment in danger of extinction

High soil phosphorus concentration defines ground vegetation cover composition in subarctic forests Matkala L. (Finland)

Close to nature forestry (Ukraine experience)

PS-109

Dejneka A. (Ukraine)

The Linkage of Scales in Remote Sensing Biodiversity Assessment in Forests. Frey J. (Germany)

assessment and restoration of habitat structures in forests

- Effects of ecological restoration to promote structural variability in boreal forests Hekkala A. (Sweden)
- Integrating small-scale timber harvest in the restoration of a Douglas-fir stand in the Gulf Islands in British Columbia, Canada. Hohendorf Q. (Canada)

T4 - Promoting forest biodiversity through structural complexity? New advances in the

- Tree microhabitat structures as indicators of biodiversity in Douglas-fir forests in the Pacific Northwest, USA Michel A. (Germany)
- Quantifying structural complexity as an indicator of biodiversity in heterogeneous forests: Potential of ALS and UAV system. Sadeepa J. (Japan)
- Evaluation and Monitoring of a concept to protect habitat trees and deadwood Schultze J. (Germany)
- In retention forestry, which microhabitats are integral for epiphytic species diversity? Stevenson D. (Germany)
- The diversity of dead wood in unmanaged hemiboreal forests of Southern part of Latvia Straupe I. (Latvia)
- Admixed single trees as structural elements promoting faunal biodiversity Wehnert A. (Germany)
- Functioning of private nurseries and their contribution to the conservation of woody parkland in the province of Kadiogo, Burkina Faso Yameogo J. (Burkina Faso)

T5 - Ecohydrology-based forest management for water provision, carbon sequestration and enhanced climate resilience

- Initial stand density as an influential ecohydrological factor of mixed forests of Pinus sylvestris and Fagus sylvatica. Blanco J. (Spain)
- Responses of soil respiration to forest thinning in semiarid ecosystems González-Sanchis M. (Spain)
- Effects of air pollution and forest on spring water chemistry on the example of the Polish Carpathians Malek S. (Poland)
- The long-term changes in the stand transpiration of Japanese cedar and Japanese cypress plantation after thinning Tateishi M. (Japan)

PS-88 T5 - Natural hazards and disturbance interactions in mountain forests

- Effects of defense structures on soil properties and tree regeneration in avalanche starting zones (Valle d'Aosta Region, NW Italy) Freppaz M. (Italy)
- Extreme runoff and erosion event in a forested alpine catchment Lechner V. (Austria)

| 0 – 20:00 | KG II - HS 2121 (University Freiburg) Poster Exhibition Tuesday | 3454 | Changes in forest structure and forest disturbance patterns in Korea Park P. (South Korea (ROK)) |
|-----------|--|-------|--|
| PS-15 | D4 - Impacts of environmental changes on growth and productivity of managed and unmanaged forests | 2640 | Temporal patterns of OM and nutrient fluxes with soil solution as affected by low-severity fire in beech forests |
| 2659 | The effects of soil characteristics on the growth of Fraxinus rhynchophylla, Zelkova serrata, and Pinus koraiensis seedlings planted under different canopies Park B. (South Korea (ROK)) | | and pastures Potthast K. (Germany) |
| 3806 | Diameter Increment of Silver fir (Abies alba Mill.) dependence on stand and structural characteristics in Fir | PS-82 | T3 - Traditional coppice: ecology, silviculture and socio-economic aspects |
| | forest with hard fern (Blechno-Abietetum Ht. 1950) Postenjak F. (Croatia) | 1920 | Silvicultural coppice management of Quillaja saponaria (quillay or soapbark tree) native forest for industrial uses in central Chile |
| 1457 | Toward modelling the influence of wind on the Maritime pine growth Rajaonalison F. (France) | 2455 | Cruz G. (Chile) Restoration of plant diversity in oak coppices converted to high forests under global environmental threats |
| 1133 | Carbon sequestration potential and biomass accumulation by Sal forests of Doon valley (India) | 2433 | Malis F. (Slovakia) |
| 1155 | Srivastava P. (India) | 3307 | Transformation of Castanea sativa coppice forests by selective stump reduction: chemical, physical and |
| 344 | A multi-decadal analysis of patterns and processes in Venezuelan tropical forests: insights from permanent sample plots | | mechanical methods Pique M. (Spain) |
| | Vilanova E. (United States of America) | 3646 | Silvicultural methods for beech and mixed oak coppice stands managed by the Serbian Forest State Enterprise |
| 645 | Stature change as reflected in height-diameter growth of Erman's birch at the treeline and along an altitudinal gradient on Changbai Mountain, Northeast China | | Trailovic Z. (Austria) |
| 0.407 | Wang X. (China) | PS-45 | T4 - Forest policy and biodiversity strategy: The relevance of forest genetic resources |
| 2187 | ls the pattern of pedunculate oak mortality related to commonly used forestry practices? Mucha J. (Poland) | 1802 | Forest genetic monitoring: laws and obstacles for its implementation in Greece Avramidou E. (Greece) |
| PS-140 | D6 - Forest education - the consequences of interaction: innovation and curricula | 4074 | Ring testing in forest genetic monitoring Bajc M. (Slovenia) |
| 3492 | Machine simulators as pedagogical tools in forest machine operator training: A needs analysis Häggström C. (Sweden) | 1838 | National legislation of forest reproductive material: case of a wide spread Silver fir (Abies alba) and Serbian spruce (Picea omorika) |
| 3532 | Progress tests in Forest Education | | Ballian D. (Bosnia and Herzegovina) |
| 1985 | Rekola M. (Finland) Possibilities of using retention reservoirs in forest the ecological education conducted by polish State Forest | 2255 | Design and implementation of the forest genetic monitoring database Finzgar D. (Slovenia) |
| | Kargul-Plewa D. (Poland) | 200 | Development and implementation of common protocols for forest genetic monitoring <i>Kavaliauskas D. (Germany)</i> |
| PS-305 | D7 - Pine wilt disease: progress in understanding the dynamics and developing control measures | 1341 | Installation of a genetic monitoring network for beech and spruce in Germany to evaluate the genetic adaptability of species to climate change |
| 1779 | Induced resistance in Pinus pinaster against pinewood nematode (Bursaphelenchus xylophilus) | 10.4 | Konnert M. (Germany) |
| | Diaz R. (Spain) | 1864 | Seeds without borders sustain forest diversity Lackner M. (Austria) |
| 3179 | National survey (2010-2016) of the pinewood nematode vectored by the insect Monochamus galloprovincialis in Portugal Bonifacio L. (Portugal) | 2693 | Legal framework and stakeholders' attitudes toward the conservation of forest genetic resources Nedeljkovic J. (Serbia) |
| | | 1370 | Communicating Forest Genetic Resources to Different Target Audiences Rantaša B. (Slovenia) |
| PS-186 | T2 - Changing forest disturbance regimes: Patterns, consequences, and responses | 1657 | The role and place of forest genetic monitoring within existing forest monitoring schemes |
| 2924 | Current Post Fire Reforestation Strategies in Turkey: An Overview Coskuner K. (Turkey) | | Westergren M. (Slovenia) |
| 3799 | Forest Fire regime in Latvia: 1922-2014 | | |

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Jansons A. (Latvia)

| 08:00 – 20:00 | KG II - HS 2121 (University Freiburg) | Poster Exhibition Wednesday | |
|--|--|--|--|
| PS-121 | D3 - Reforestation challenges: planting material, ecophysiology, biodiversity, climate change mitigation and adaptation, and disaster risk reduction | | |
| 4058 | Partial harvesting in boreal mixedwoods: A case for plant prescriptions Achim A. (Canada) | | |
| 1841 | Variation in growth and adaptation among Norway spruce Chmura D. (Poland) | growth and adaptation among Norway spruce provenances Poland) | |
| 2314 | Effects of fruit maturity stage, seed coat, drying and stora germination in Laboratory Daboue E. (Burkina Faso) | ge temperature on Ximenia americana seeds | |
| 2446 | 2446 Afforestation trial with poplar and other tree species in an abandoned agricultural land of Piedmont h (Northern Italy) Facciotto G. (Italy) | | |
| The influence of initial density on survival and growth of Scots pine - results from 32-year-ol experiment Gil W. (Poland) | | Scots pine – results from 32-year-old Nelder | |
| 1338 | Seedling Quality in Serbia – Results from a Three-Year Sur <i>Ivetic V. (Serbia)</i> | vey | |
| 2796 | Survival, growth, and N changes in transplanted ornamer Wei H. (China) | ntal seedlings under weed competition in urban soils | |
| PS-168 | D3 - Sustainable forest operations - A foundati | on of the green economy | |
| 473 | Site level evaluation of traffic and soil disturbance after cu <i>Talbot B. (Norway)</i> | ut-to-length harvesting | |
| PS-90 D4 - Advanced Methods for Measuring, Monitoring and Assessing Forests to Challenges | | ring and Assessing Forests to Meet Societal | |
| 1270 | Structure-based forest management Hui G. (China) | | |
| 2159 | Measuring tree diameters with close-range photogramm Klatt S. (Germany) | etry | |
| 2842 | Data, data everywhere: Detecting spatial patterns in fine-scale forest health data collected across a conference of America. | | |
| 1604 | Optimisation of a Forest Management Field Trial Design U Platycladus orientalis Plantation Field Trial in the Xishan N Zhang G. (China) | | |

| PS-197 | D4 - Ecosystem services and the well-being of forest-dependent communities: enhancing |
|--------|---|
| | social innovation and building resilience to global changes in remote rural areas |

- 3299 Community participation as key component to value ecosystems services: A case study of the protected forest reserve of El Quinini, Colombia Villarraga Flórez L. (Colombia)
- 3718 Forest tenure holders' willingness to participate in forest carbon sink projects: a case in China Zhiying H. (South Korea (ROK))
- 1907 Carbon forestry to enhance social innovation for the well-being of European mountain regions Brnkalakova S. (Slovakia)

PS-29 D4 - Integrating climate change, disturbances and diversity effects into growth models: from understanding ecological processes to predicting forest growth and yield

- 3762 Effect of diversity on forest productivity Dupont-Leduc L. (Canada)
- 760 Applications of transition matrix models in forest dynamics in Amazon rainforest in Brasil *Galiceanu A. (Brazil)*
- 2958 Integrating forest disturbance of nun moth into process-based growth modelling.

 Gutsch M. (Germany)
- 2176 The role of large trees in the biomass production of heterogeneous forest *Liqot G. (Belgium)*
- Unraveling soil effect on overyielding of species mixture in forests of the Netherlands Lu H. (Netherlands)
- 548 Disentangling species mixture effects on individual-tree growth using Swiss National Forest Inventory data Mina M. (Switzerland)
- Integrating disturbance agents into the Tree and Stand Simulator (TASS): a case study of stem rusts on lodgepole pine

 Sattler D. (Canada)
- Inter- and intra-species competition: modelling the effect of natural regeneration ingrowth in a plantation growth and yield simulator

 Schneider R. (Canada)

PS-36 D4 - Interactions of Global Forest Resources and Climate

- 1456 Interactions of global forest resources and climate *Rebane S. (Estonia)*
- 1641 Regional implication of diversified forest management actions on forest carbon stock Reifenberg S. (Germany)

PS-19 D6 - The role of forests in sustainable rural development in developing countries: livelihoods and quality of life

- 735 Forest management significance to local industry based on input-output model for Chrzanow Forest District Jaminska J. (Poland)
- 697 Cutch (Acacia catechu) resin production in Myanmar and its socio-economic benefits Tani Y. (Japan)
- 3338 Local Community Network Empowerment for Prevention and Protection of Coastal Erosion in Laem Fa Pha Sub-District, Samut Prakan Province, Thailand Maneeanakekul S. (Thailand)

PS-146 D7 - Climate change and air pollution impacts on forest health status and productivity

- 1767 Climate response of Norway spruce (Picea abies (L.) H. Karst) and Silver fir (Abies alba Mill.) in virgin forest of Northern Velebit

 Begovic K. (Czech Republic)
- Volatiles released from Chamaecyparis formosensis and Chamaecyparis obtusa var. formosana in response to light intensity and growth temperatures *Chen Y. (Taiwan)*
- 1200 Comparative analyses of growth, gas exchange characteristics, and chlorophyll fluorescence of three dominant boreal tree species during the vegetation season in hemiboreal zone, Lithuania Marozas V. (Lithuania)
- 2015 Changes in phosphorus supply of the spruce stands in the northern mountains of the Czech Republic Novotný R. (Czech Republic)
- 1372 Analysis of adaptive capacity of Croatian Mediterranean forests to climate change by using various indicators of tree and stand vitality

 Ognjenovic M. (Croatia)

PS-177 D7 - Forest Health in a Changing Climate

- 3828 Observed changes of site conditions driven by climatic extremes Bidló A. (Hungary)
- 1970 Advancing Quantitative Understanding of Urban Forest Carbon Sequestration and Climate Mitigation Hubbart J. (United States of America)

PS-188 D7 - Managing pests and diseases in commercial plantations

- 583 Effect of copper and silver nanoparticles on growth of selected species of pathogenic, wood decaying and mycorrhizal fungi in vitro.

 Aleksandrowicz-Trzcinska M. (Poland)
- How do Different Mature Pinus taeda Families Respond to Root-infecting Fungi?

 Eckhardt L. (United States of America)
- 1857 Infection biology of the rust pathogen Uromycladium acaciae Fraser S. (New Zealand)
- 2433 Financial performance of stump treatment against Heterobasidion sp. in Norway spruce dominated forests, the case of Finland Honkaniemi J. (Finland)
- Are yellow sticky traps a good methodology to evaluate the insect pest community associated with an Eucalyptus plantation? Jorge C. (Uruquay)
- 898 Screening for Alnus glutinosa genotypes resistant to Phytophthora × alni Kube M. (Germany)
- Quantifying the impact of wattle rust (Uromycladium acaciae) on black wattle (Acacia mearnsii) growth in South Africa Nxumalo T. (South Africa)
- Bacterial leaf blotch in Uruguay, etiology and management of a new threat for eucalypts plantations Perez C. (Uruguay)
- 378 Molecular characters of endophyte fungi isolated from Paraserianthes Falcataria in Indonesia Prihatini I. (Indonesia)
- 3922 Chemical and biological control of plant pathogen, Fusarium species in forest nurseries Vardhan Pandey V. (India)
- 2689 Can Melastomataceae endophytes be a threat to Eucalyptus plantations in Colombia? Wingfield M. (South Africa)
- 69 Investigation of Fungal Diseases associated with Acacia mangiumin Forest Plantations in Hoa Binh province, Vietnam Nauyen M. (Viet Nam)

PS-191 D7 - Nitrogen deposition: spatial-temporal change and ecological impacts

- 3906 Reduced and oxidized nitrogen and sulfur deposition from Los Angeles smog to urban and wildland areas Fenn M. (United States of America)
- Mapping of areas with potential effects of high loads of nitrogen and surface ozone in Czech forests Hunova I. (Czech Republic)
- 2997 Determining the total nitrogen deposition to forests A spatio-temporal comparison of canopy budget models across Germany

 Schmitz A. (Germany)
- 3682 Total deposition of nitrogen in Swiss forests: comparison of assessment methods and long-term changes Thimonier A. (Switzerland)

PS-174 D9 - Connecting People to Forest Science: Innovative Communication Approaches for Delivering Science

- Public Science, Public Health, and Public Policy: A Case Study of Lessons Learned from Portland Moss and Air Quality Study Communications Sands Y. (United States of America)
- 113 Is anybody listening? Ways to track and analyze your social media impact. Hayes J. (United States of America)

PS-63 D9 - Forests for the Health of the People

3890 How forests impacts human health - media perceptions from Germany Kleinschmit D. (Germany)

PS-26 D9 - Policy learning across governance levels for durable results

The role of education and research organizations in fighting corruption and illegal activities in forestry: example from Serbia

Rogelia T. (Italy)

PS-183 T1 - Forest Education

- 2874 Gunung Walat University Forest : A Unique Transformation From Sufferer to Learner of Global Cimate Change Impact
 - Ikhsan M. (Indonesia)
- 1590 Forest Education System and Human Resource Training for forestry in Japan : the historical change and the present situation

 Inoue M. (Japan)
- 3517 The Global Outlook on Forest Education A Joint IFSA IUFRO Task Force project Lackner M. (Austria)
- 3087 Long-term image and audio monitorings of deep forests: toward environmental education and citizen science Nakamura K. (Japan)
- 3203 We have to learn about forest from the past. Nakashima T. (Japan)
- The development of the study course "Wood culture" Shalaev V. (Russian Federation)
- 766 Implementation status of "Children's Tree Doctor," the introductory forest environmental education program in Japan Sugiura K. (Japan)
- 947 Enhancing youth's capacity towards a more sustainable forestry community Veridiano R. (Germany)

PS-190 T2 - Climate change and forest health: insights from the IUFRO Task Force

- 3756 Development of a DBH–Growth Model Based on Site and Climatic Conditions Piao D. (South Korea (ROK))
- 410 Lead uptake increases drought tolerance of wild type and transgenic poplar (Populus tremula x P. alba) overexpressing gsh 1 Samuilov S. (Germany)
- 3627 Environmental predisposition factors to acute oak decline in England and Wales Vanquelova E. (United Kingdom)
- Ozone sensitivity of urban tree species based on foliar visible injury and physiological characteristics *Xu S. (China)*

PS-108 T2 - Resilience of planted forests under global change : learning from the past preparing next generation

1417 Stability and productive ability of Douglas fir provenances in continental part of Croatia Peric S. (Croatia)

PS-302 T2 - Tropical wetlands for climate change adaptation and mitigation

- O78 Soil methane emission in ombrotrophic and minerotrophic peatland complexes in the Pastaza-Marañon Basin of the Peruvian Amazon.
 - del Aguila Pasquel J. (United States of America)
- 2737 Assessing soil genesis and carbon stocks in a peat in Central Kalimantan, Indonesia Märten K. (Germany)
- 2356 Anthropogenic and climate driven changes in soil CO2 efflux from an Indonesian peatland Swails E. (United States of America)

PS-94 T3 - Ecologically-based silviculture

Sung J. (South Korea (ROK))

- 521 Growth of araucaria under different levels of light in agroforestry systems Danner M. (Brazil)
- 1464 Growth models for natural regeneration of Sitka spruce and other conifer species under continuous cover forest Bianchi S. (United Kingdom)
- 2435 Light availability, growth patterns and species composition in uneven-aged broadleaved temperate forests Brüllhardt M. (Switzerland)
- 2664 Growth patterns of Quillaja saponaria sprouts after 15 years clearing in a sustainable silvicultural coppice system in central Chile Cruz G. (Chile)
- 011 Effects of pre-commercial thinning on growth and stem form of naturally regenerated European beech (Fagus sylvatica) Reventlow D. (Denmark)
- Regional early growth performances of Larix kaempferi trees planted in harvested Larix kaemferi plantations, South Korea
- Study for natural regeneration mechanism of Pinus densiflora in South Korea Sung J. (South Korea (ROK))

Warrier R. (India)

T3 - Research Advances for the Meliaceae

PS-303

Gonzalez-Cascon R. (Spain)

Effect of stand density on nutrient status and foliar mass production in a planted Pinus pinea forest (Olmedo,

T3 - Sustainable co-production of wood and non-wood forest products PS-105

- 3102 The Hidden Potential of Agroforestry Systems in the Chapare Coca production Area, Bolivia Lopez Rosse E. (Bolivia)
- Questionnaire survey on local use of edible wild plants/mushrooms after the Fukushima Daiichi Nuclear Power Plant accident Matsuura T. (Japan)

Conservation of genetic resources of Azadirachta Indica a. Juss. (neem) - an Indian experience

- Pine nuts and timber, sustainably yielded from Mediterranean pine woodlands? Mutke S. (Spain)
- Potentials of the Brazilian Bamboo: A study about its evolution in Brazil. Sanches K. (Brazil)
- Visual perception of adherence of different wood finish products Teles R. (Brazil).

PS-2 T4 - Co-existence of human and wildlife in changing landscapes and climate

- An evaluation of conservation effort based on elephant crop raid distribution in Bia Conservation Area, Ghana Nutsuakor M. (Ghana)
- Determination of the land use conflicts in the gavidia watershed of the National Park Sierra Nevada, Merida, Venezuela Lobo Y. (Venezuela)

T4 - Concepts and assessments of forest ecosystem services and benefits PS-92

- Assessment of provisioning forest ecosystem service potential in Latvia Libiete Z. (Latvia)
- Socioeconomic Impact of the Program of Payment for Environmental Services-Reforestation Modalityin Northwestern Costa Rica Padilla Salas C. (Costa Rica)
- Comparison of Urban Forest with peri-urban Forest Focusing on Air Purification Function Ryu J. (South Korea (ROK))
- Assessing the provisioning potential of ecosystem services in a Scandinavian boreal forest: suitability and tradeoff analyses on grid-based wall-to-wall forest inventory data Vauhkonen J. (Finland)

T4 - IUFRO Task Force on Biological Invasions in Forests

T4 - Growth and Dynamics of Pine in Mixed Forests

PS-24

- Novel Calonectria species from plantation and nursery soils in South-East Asia Barnes I. (South Africa)
- Detecting three different parasitic nematodes on Acacia mangium seedlings in Vietnam Dang N. (Viet Nam)
- Pinus elliottii in riparian zones as a reduction factor in the quality of ecosystem services Magro T. (Brazil)

T4 - Silviculture for non-wood ecosystem services

- Structural indicators as a link between silviculture and ecosystem services Huth F. (Germany)
- Silvicultural measures to optimize both production and recreation services of the urban forest Kacalek D. (Czech Republic)

| :00 – 20:00 | KG II - HS 2121 (University Freiburg) Poster Exhibition Thursday |
|-------------|--|
| PS-151 | D3 - History, Findings, and Future Directions of Forest Landowner Research |
| 3107 | Forest governance on the environmetal protect area of Guaratuba Hoeflich V. (Brazil) |
| 2287 | Differences in forest management approaches between common forest and non-common forest in Japan Matsushita K. (Japan) |
| 2230 | Reaching Small Forest Landowners in the 21st Century Zobrist K. (United States of America) |
| PS-114 | D3 - Transforming low grade logs and residues into higher value products through improved supply chain management |
| 42 | Towards a new model for locating terminals optimally in reference to the resource base and infrastructure Athanassiadis D. (Sweden) |
| 1844 | Comparison of centralized and decentralized mobile pellet plant production systems for logging residues in Northern Sweden De La Fuente T. (Sweden) |
| PS-181 | D4 - Cross-boundary modelling in a changing world |
| 3156 | Hardwood crop tree release: modeling a spatially heterogeneous treatment with a non spatially explicit tree list model Béland M. (Canada) |
| PS-4 | D4 - Open Session |
| 3809 | Can the 3PG model be used to predict the impact of fertilizer applications? Tomé M. (Portugal) |
| PS-14 | D4 - Strategies and challenges for risk resilient forest management |
| 2654 | Economic and environmental challenges of climate change for forests of Eastern European part of Middle Latitude zone Lakyda P. (Ukraine) |
| 4082 | Economic viability of the national forestation program in the Republic of Korea <i>Lee J. (South Korea (ROK))</i> |
| PS-185 | D4 - Towards robust projections of forests under climate change |
| 4124 | Modelling site index of alien tree species in Poland based on biogeoclimatic data Bijak S. (Poland) |
| 3480 | Integrating field data and simulations to investigate stand development of East North American temperate forests Martin-Benito D. (Switzerland) |
| 1405 | Development of a process-based phenology model for Populus Svystun T. (Sweden) |

PS-155 D6 - Cities, Trees, Carbon, and Climate Change Mitigation

- 322 A comparison of two urban forest assessment techniques in Minneapolis, Minnesota, USA Intasen M. (Thailand)
- 2818 The potential of imaging from ultra-light aircraft for urban tree inventories: case study in Kaunas, Lithuania *Mozgeris G. (Lithuania)*

PS-40 D6 - Engaging equality: The construction of gender and forest through processes of gender mainstreaming

- 2497 Equality in examinations

 Jansen-Schulz B. (Germany)
- 3098 Gender inequalities. Situation in Polish State Forests National Forestry Holding Pigan I. (Poland)
- 1884 Gendered change and political space: seeing what/who's future in the Swedish forests? Andersson E. (Sweden)
- 4083 How far has Sweden come in implementing gender equality in the country's forestry education? Bernö H. (Sweden)
- 2341 Knowledge, skills and work: gendered opportunities and structures in Swedish forestry Lidestav G. (Sweden)
- 4080 Women entrepreneurs in the Swedish forestry An identity and a business in transition? Appelstrand M. (Sweden)

PS-30 D6 - Managing recreation: Empirical insights and forest management instruments.

- 2785 Latent Preferences of Tourists towards the Service Quality of the Taichung Calligraphy Greenway, Taiwan Chung C. (Taiwan)
- 992 Assessing recreation and societal demands in urban proximate woodlands using the concept of Ecosystem Services

 Koch M. (Germany)
- 287 Visitor monitoring using trigger camera traps An study at the Grünten Mountain in Bavara Koch M. (Germany)
- 2137 GIS based socio-ecological tools to promote the multiple use of forests *Tarvainen O. (Finland)*
- 723 Managing recreation an overview of guidelines for recreation in municipal forests. A case study of Poznan (Poland).

 Wajchman-Switalska S. (Poland)

208

08:

| PS-133 | D6 - Social dimension of wildlife conservation and management |
|--------|--|
| 1978 | Meat consumption, interaction with hunters and attitude toward hunting. Is there a universal relationship? Krokowska - Paluszak M. (Poland) |
| 3916 | Consequences of the moratorium on moose hunts (Alces alces L.) in Poland Krokowska – Paluszak M. (Poland) |
| 3373 | The community forestry enterprise in the Monarca butterfly region in Mexico: an approach with enterprise vision González-Guillén M. (Mexico) |
| 3995 | Osteometric characteristic of jawbones of living in urban-industrial agglomeration range in central Greater Poland wild boars (Sus scrofa L., 1758) Skorupski M. (Poland) |
| PS-165 | D7 - Dothistroma and other needle diseases of pine |
| 1621 | Distribution and Characterization of Dothistroma Needle Blight Pathogens on Pinus mugo in Slovakia Adamcikova K. (Slovakia) |
| 1419 | Brown Spot Needle Blight (Lecanosticta acicola), a risk for European pine forests – research requirements providing an effective control <i>Cech T. (Austria)</i> |
| 1649 | Dothistroma pini determined on different host species in Slovakia Ondruskova E. (Slovakia) |
| PS-167 | D7 - Ecosystems, climate change and hydrology |
| 3164 | Damage of leafroller insects Tortricidae in young Scots pine stands in Latvia Miezite O. (Latvia) |
| 3169 | Formation dynamics of the organic layer and ground vegetation in the Scots pine plantations with different initial planting density Miezite O. (Latvia) |
| PS-199 | D7 - Effects of global change on Mediterranean forest insects and interactions with pathogens |
| 1054 | Dispersal of three Lepidoptera on Quercus coccifera and its effect in their stability in Tunisia forests ezzine o. (Tunisia) |
| PS-5 | D7 - Open Session |
| 2975 | Modeling tree growth and development under mistletoe infestation Usta Y. (Turkey) |
| 4036 | Unravelling the past to manage Newfoundland's forests for the future Arsenault A. (Canada) |
| 1741 | Kauri dieback in New Zealand: ancient trees meet new pathogen, new pathogen meets genomic interrogation <i>Bradshaw R. (New Zealand)</i> |
| 1197 | Molecular identification of vegetative compatibility types of Cryphonectria parasitica, a causal agent of |

A new non-parametric method to detect insect outbreaks from satellite imagery Estay S. (Chile) Genotype and source population influence net primary productivity but not insect borer or canker damage in a cottonwood-willow common garden Garnas J. (United States of America) 2168 Wood-anatomical characteristics and environmental signals of co-occurring oak (Quercus robur) and ash (Fraxinus excelsior) Hafner P. (Slovenia) 1700 Preferences for spatial structures in the dispersion of lps typographus Hinze J. (Germany) 1111 Fungal communities in soils under a Eucalyptus plantation in Zimbabwe Jimu L. (Zimbabwe) Illumina DNA barcoding reveals fungal communities in Pinus patula (Pinaceae) foliage Jimu L. (Zimbabwe) Biotic forest disturbance induced by the hemiparasitic epiphyte Viscum album on the growth of Pinus sylvestris Kollas C. (Germany) Impacts of E. polonica infection on defence and stem water transport of Norway spruce seedlings Rissanen K. (Finland) Phytophthora induced dieback alters canopy and forest floor solute chemistry in a New Zealand kauri forest Schwendenmann L. (New Zealand) Survey of Phytophthora-species in Åkersvika Nature Reserve in Norway Talgø V. (Norway) 3591 Is the plant pathogen Chondrostereum purpureum a safe biocontrol agent? Abundance of parasitoid Hymenoptera decreases along a gradient of phylogenetic diversity of saproxylic

PS-208 D7 - Social and Economic dimensions of forest health: Contributing to a biosecure future

968 Public perception foresters of invasive ash dieback pathogen arrival in Serbia Keca L. (Serbia)

beetle communities Vogel S. (Germany)

PS-86 D7 - The science of tree health and how we can use it: Multidisciplinary research from the Tree Health and Plant Biosecurity Initiative (THAPBI).

- 3129 PHYTO-THREATS: A multi-disciplinary approach to address global threats from Phytophthora species Green S. (United Kingdom)
- 1678 Natural Plant Oils Against Early Instar Larvae of Pine Processionary Moth Karaca I. (Turkey)

PS-159 D9 - Developing the dialogue about forests and forestry with society - the challenge to tell good stories and the need for Forestpedagogy

3103 Forestpedagogy – unique form of forest communication and active dialogue with public Jaloviarová V. (Slovakia)

chestnut blight

Curkovic-Perica M. (Croatia)

| PS-12 | D9 - Open Session |
|-------|---|
| 1169 | Community based Forestry: the vehicle of establishing local institutions, and building socio-ecological resilience in Nepal <i>Uprety D. (Nepal)</i> |
| 3231 | Mapping the future market potential of small-holder tree planters - Perspectives from Southern Highlands in Tanzania Arvola A. (Finland) |
| 803 | The legitimacy of certification actors in forest climate governance Blum M. (Germany) |
| 690 | Adapted Institutional Environment and Sustainable Resource Access: Evidences for Co-Developing Value Chains of Forest(tree) and Agricultural Products in the Amazon <i>Cunha M. (Germany)</i> |
| 4075 | Forest Potential in the European Climate Policy Framework Ellison D. (Switzerland) |
| 3551 | Public values are incorporated into forest governance in many ways at multiple levels Ford R. (Australia) |
| 1687 | Governing the trade of endangered wild tree species: the case of Prunus africana <i>Ingram V. (Netherlands)</i> |
| 235 | A decade of adaptation to climate change among rural communities in Southern and Eastern Africa: The role of Forest ecosystems Kalaba F. (Zambia) |
| 3910 | Policy Mix for Reducing Deforestation from Palm Oil Production Lan C. (Netherlands) |
| 1240 | Will the DRC community forest model be viable? Lescuyer G. (Indonesia) |
| 86 | Institutional models in forestry and nature conservation and climate change mitigation measures in selected European Union and western Balkan countries Nedeljkovic J. (Serbia) |
| 2815 | The Ecosystem Approach, Ecosystem Services and Established Forestry Policy Approaches in the UK Raum S. (United Kingdom) |
| 2816 | Reasons for Adoption and Advocacy of Ecosystem Services in UK Forestry Raum S. (United Kingdom) |
| 2088 | Changes of private forest ownership and characteristics of the "new forest owners" in Japan Sato N. (Japan) |
| 955 | Simulating wood markets with an agent-based model <i>Thees O. (Switzerland)</i> |
| 1278 | A deadly dance of discourses: Competing forest development narratives for Peru's Eldorado van der Zon M. (Netherlands) |
| 2427 | A question of method: assessment of bioeconomy and its implications Weimar H. (Germany) |
| 768 | Haste Makes Waste? Decentralization Reform Failure and Local Defiance in Pingquan County, China <i>Xu T. (China)</i> |

- 1186 Children's books on forestry as a tool to raise awareness about forests Zeleznik P. (Slovenia)
- The changes of major ecological factors and its control in the condition of nursery production facilities Ri K. (Democratic People's Republic of Korea (North Korea))

PS-54 T1 - Global Forest Technology Sharing Framework

1564 Cyberforest: That is real-time monitoring and archiving a remote forest via Internet for "Sense of Globe" Saito K. (Japan)

PS-166 T2 - Development of Adaptation Strategies for Climate Change using GM Trees

- 678 The Role of Adaptation Mechanisms in improving livelihood of farmers in Bara locality-North Kordofan State, Sudan Hamad m. (Sudan)
- 2925 Variation of non-target wood properties of multi-gene transgenic Poplar (Populus × euramericana 'Guariento') Su X. (China)

PS-68 T2 - Forest Adaptation and Restoration under Global Change

- 4133 Ecotypic variation in response to light spectra in Scots pine (Pinus sylvestris L.) Garcia Gil R. (Sweden)
- Intra-specific plasticity of seasonal dynamics of xylem formation and vessel features in European beech Gricar J. (Slovenia)
- Results of Douglas fir provenance tests in Bavaria (Germany) established 1970 to 1985 Huber G. (Germany)
- 140 Survival strategies of quercus pubescens willd. From Slovenian sub-mediterranean region to different soil water availability
 Lavric M. (Slovenia)
- 3913 Soil preparation method impact on Norway spruce and Scots pine containerised seedling root system development Lazdina D. (Latvia)
- 1012 Population characteristics and seed quality of two distinctive Saxaul (Haloxylon ammodendron C.A. Mey Bunge) stands from Mongolia Nyam-Osor B. (Mongolia)
- 2203 Adaptation of old Scots pine stands to local ecosystems. Research based on genetic markers and seeds characteristics. Przybylski P. (Poland)
- Daily and seasonal activity of Fagus sylvatica and Acer pseudoplatanus according to tree conductivity Rutkowski P. (Poland)
- 3213 Turkish hazel in Bulgaria-an autochthonous and valuable tree species for the climate change Seho M. (Germany)
- Forestry Institutions and their role in reducing vulnerability, and build resilience in the age of climate change in Nepal

 Uprety D. (Nepal)
- 3177 The current distribution and the role of black locust (Robinia pseudoacacia L.) in Poland Wojda T. (Poland)

PS-111 T2 - Today ignored, rediscovered tomorrow: The importance of minor tree species in future.

Growth and gas exchange of seedlings and root sprouts of minor European broadleaved tree species under drought conditions Kunz J. (Germany)

PS-184 T3 - Marketing and Business Practices of the Bioeconomy

194 Importance of the use harvested wood products in objective of neutralization of carbon emissions by residential building construction in Brazil Freitas J. (Brazil)

PS-58 T4 - Managing forests for Biodiversity and Resilience

2580 Composition of vegetation on skid trails with different treatment strategies in the experimental forest area in Merklingen, Germany Jansone L. (Germany)

PS-72 T4 - Oak forests and management for different ecosystem services

- 3301 Silviculture of mixed oak stands can be supported by natural succession processes Bielak K. (Poland)
- 830 Current situation and the key challenge of silviculture on Quercus mongolica in China Cheng Z. (China)
- Stand structure, vegetation, and regeneration of the semi-natural deciduous mixed oak forests in the Western Qinling Mountains, China

 Dai C. (China)
- 991 Stand density assessment in cork oak woodlands a diagnosis of the Portuguese forest systems sustainability Fonseca T. (Portugal)
- Proposals for the improvement of genetic seed quality in approved oak seed stands Hardtke A. (Germany)
- 3445 Shrubs protect oaks against ungulate browsing in temperate broadleaved forests of conservation interest: A long-term experiment Jensen A. (Sweden)
- 2536 Management of oak forests: striking a balance between timber production, biodiversity and cultural services Löf M. (Sweden)
- 1501 Silviculture of sessile oak (Quercus petraea)-dominated stands in Romania: stand or single-tree oriented? Nicolescu V. (Romania)
- 2211 Visual assessment of naturally grown Japanese oak trees for whisky barrels *Owari T. (Japan)*
- 2245 Net primary production of an oak-dominated evergreen broadleaved forest in warm-temperate region of Japan

 Takaai M. (Japan)

PS-206 T4 - Operational methods for monitoring and assessment of forested landscapes

674 Spatial model to detect stingless bees sites Arena M. (Brazil)

PS-84 T4 - Promoting forest resilience, adaptive capacity, and ecosystem services through diverse forest ecosystems

- 3442 Managing boreal forest structural diversity under global change risks: resistance or resilience, or both? Kuuluvainen T. (Finland)
- 905 The influence of nutrient availability on the relationship between tree diversity and aboveground productivity in juvenile tree communities Saito D. (Germany)

PS-123 T5 - Roots and Ecosystem Services

- 468 Fine root production and turnover of Pinus massoniana plantation in Zigui ,China Cheng R. (China)
- 469 Fine root decomposition and nutrient release of Pinus Massoniana in the Three Gorges Reservior Area in China Cheng R. (China)
- Fine root biomass and longevity of trees and understory vegetation in northern Finland Ding Y. (Finland)
- 990 Carbon allocation patterns in Estonian coniferous forests Kriiska K. (Estonia)
- Adjustment of absorptive roots and mycorrhizal fungi to nitrogen and phosphorus additions in a Chinese fir plantation

 Li L. (China)
- 758 A dynamic 3D coarse root architecture model to study anchorage of forest trees Saint Cast C. (France)
- 29 Abies and its mycorrhiza on global scale Unuk T. (Slovenia)

PS-66 T5 - Water Related Ecosystems Services under Risk

758 Assessing stream flow sensitivity to drought on forested catchments in Brazil Ferraz S. (Brazil)

| 08:00 – 20:00 | KG II - HS 2121 (University Freiburg) | Poster Exhibition Friday |
|---------------|---|-------------------------------|
| PS-202 | D3 - Eco-friendly harvesting operations in mountainous terrains | |
| 1313 | Log chutes: simple, economical, and environmental friendly Kaakkurivaara N. (Thailand) | |
| 1057 | Seed germination and early field performance of Quercus robur and Pinus sylves compaction conditions Marchi E. (Italy) | tris seedlings under soil |
| 3078 | Comparison of effect of establishing forest road network using reliability Saito M. (Japan) | |
| 2592 | Tree felling manipulator to address specific conditions of Japanese forestry <i>Shirai Y. (Japan)</i> | |
| PS-3 | D3 - Open Session | |
| 3686 | Harvester performance in thinning operations based on automatically recorded onboard video capturing Holzleitner F. (Austria) | machine data combined with |
| 2950 | The effect of a stand's tree volume variation on harvester productivity Nordfjell T. (Sweden) | |
| 2594 | Transport mechanism that can travel over Japanese forest lands Shirai Y. (Japan) | |
| 2800 | The analysis of accident rate in Polish forestry: the influence of privatization on the Grzywinski W. (Poland) | he status of accident rates |
| 3193 | Forest operations and Habitats Directive: perspectives under the pressure of clin <i>Campagnaro T. (Italy)</i> | nate change |
| PS-187 | D4 - Remote Sensing in Carbon Balance Evaluation and Monitorin | ıg |
| 1575 | Using time series satellite imagery to characterise disturbance in South East Aus <i>Jones S. (Australia)</i> | tralian forests |
| 3397 | On the potential to combine cross-border NFI data in remote sensing driven carb and Lithuanian study <i>Jonikavicius D. (Lithuania)</i> | oon stock assessment: Latvian |
| 2278 | Large-scale mapping of forest standing volume with interferometric X-band SAI May J. (Norway) | R |
| 476 | Forest structure estimation using structure from motion approach with UAV in a Ota T. (Japan) | ı managed coniferous forest |
| 3779 | China typical forest aboveground carbon estimation by fusion of multi-platform Pang Y. (China) | data |

| PS-69 | D6 - Urban forestry for quality of life - the impacts of research on everyday practices |
|-------|---|
|-------|---|

- 41 Urban forest as sanctuary for a threatened indigenous tree species in Southwest Nigeria Babalola F. (Nigeria)
- 3847 ArboCityNet A cross-sectoral and transdisciplinary Swiss Urban Forestry Network Baerlocher B. (Switzerland)
- 496 Valuation of Royal Tombs of Joseon Dynasty as Urban Forest Lee P. (South Korea (ROK))
- 1447 The relation between citizen's wellness and their attendance in urban forests, Lithuania Marozas V. (Lithuania)
- 641 Identification of malpractice in urban forestry and arboriculture in a small town Postenjak F. (Croatia)
- 2413 Spatial-temporal changes of urban forest landscape patterns, woody plants and bird species, and biomass and soil carbon functions in Harbin City, Northeastern China Wang W. (China)

PS-161 D7 - Combined and interactive effects of multiple stressors on forest health

- 2174 Antioxidant capacity in poplar exposed to ozone and/or drought Dusart N. (France)
- The Effect of Soil Moisture Potential on the Pathogenicity of Leptographium terebrantis and Grosmannia huntii on Pinus taeda L.
 - Eckhardt L. (United States of America)
- 1305 Environmental maternal effects on the phenotype and interactions of Eucalyptus seedlings Vivas M. (South Africa)

'S-71 D7 - Early detection and monitoring of invasive forest pests and pathogens with citizen science

- 121 Citizen Science helps to combat invasive Phytophthora diseases in southern Sweden Cleary M. (Sweden)
- 3746 Cape Citizen Science: public engagement to detect and discover Phytophthora species in South Africa. Hulbert J. (South Africa)
- 3149 VigiCasta: a citizen science project dedicated to chestnut ink disease. *Robin C. (France)*
- 795 P-FOR INIA: a new app for the forestry sector in Uruguay Simeto S. (Uruguay)

PS-192 D7 - Global decline of Fraxinus species caused by invasive pests and pathogens Natural infection of Fraxinus angustifolia by Hymenoscyphus fraxineus in Slovakia Adamcikova K. (Slovakia) Assessing the potential invasiveness of Hymenoscyphus fraxineus in the Mediterranean mountains Aglietti C. (Italy) Hymenoscyphus fraxineus at eastern border of its secondary range in Europe Baranchikov Y. (Russian Federation) Hymenoscyphus fraxineus shows population density dependent growth rate Børja I. (Norway) 2171 First experiences in breeding for resistance against ash dieback in southern Germany Enderle R. (Germany) The double invasion of Far Eastern consumers of ash in the collection of Fraxinus species in the Main Botanical Garden of the Russian Academy of Sciences (Moscow) Seraya L. (Russian Federation) Progression of ash dieback in Norway related to tree age, disease history and regional aspects Timmermann V. (Norway) D7 - Understanding viruses in trees - promoting healthy plants in forest and urban PS-170 Detection of Elm mottle virus (EMoV) and a putative novel Carlavirus in the genus Ulmus in northern Germany Büttner C. (Germany) A novel putative Badnavirus associated with the 'birch leaf-roll disease' in Europe Büttner C. (Germany) A novel virus is associated with the ringspot disease in Common oak (Quercus robur) von Bargen S. (Germany) D9 - Community forestry/ Co-management as a possible solution for forest governance PS-27 and livelihood assurance for forest people in light of UN-REDD Program Linking Devolved Tenure Systems and Forest Management Outcomes: Progress and Challenge Yin R. (United States of America) D9 - Forests for sustainable development: shifting discourses and approaches

A Conceptual Banking Model for Forest Biodiversity Productization in North Europe

D9 - Improved role of forests for people through favourable forest laws and environmental legislation

- Impact of new regulations to role of forests for community and the process of obtaining customary forest
 - Damayanti E. (Indonesia)
- Institutions and procedures relevant to conduct activities in the forestry sector in Serbia and the Republic of
 - Keca L. (Serbia)
- How local stakeholders developed a customary forest scheme in Jambi, Indonesia Sakata Y. (Japan)
- Basis for the State Forest Policy in form of the Czech National Forest Inventory Smida Z. (Czech Republic)
- Regulatory framework of forestry and related sectors addressing climate change mitigation in European Union and selected southeast European countries Stanisic M. (Serbia)

PS-25 T1 - Food-trees in forest and farmlands: improving livelihood of communities in tropical regions

- Uses of Bombax costatum (Malvaceae) in the surronding villages the Pendjari Biosphere Reserve Assogba A. (Benin)
- Diploknema butyracea: A viable livelihood option for hill communities of Central Himalayan Region Sehrawat R. (India)
- Promoting Value Chains for three important Non-Timber Forest Products to support Biodiversity Conservation in Benin Vodouhe F. (Benin)

PS-20 T1 - Open Session

- The Role of Forests: Geographical Positions, Context and Self -Perceived Vulnerability Chawawa N. (United Kingdom)
- Do forest conconcessions benefit extractivist communities? The case of the Jumari National Forest Hoeflich V. (Brazil)
- Farmers' motivations to plant and manage on-farm trees in Ghana Oduro K. (Ghana)
- Integrative indicator for optimizing forest policies Hanzu M. (Romania)

PS-203

Toivonen R. (Finland)

PS-51 T2 - Forest management strategies to enhance the mitigation potential of European forests

- 937 Adaptive forest management to account for climate change impacts: review and options for the Netherlands as case-study Bouwman M. (Netherlands)
- Assessing carbon storage potential of black locust in Poland basing on data from National Forest Inventory Bronisz K. (Poland)
- 2733 Developing an atlas of forest management practices in Europe Verkerk H. (Spain)
- 1708 Economic optimization of the rotation age of stands case study of carbon accumulation and timber production Wysocka-Fijorek E. (Poland)

PS-135 T2 - Linkages between carbon sequestration and nutrient and water use efficiency in forests.

- 886 15-year dynamics of Nitrogen Use Efficiency (NUE) in Pinus sylvestris forests in the Southwestern Pyrenees, Spain Lo Y. (Spain)
- Dendroecological approach reveals climatic drivers of carbon sequestration in Mexican forests *Pompa-Garcia M. (Mexico)*

PS-33 T2 - Open Session

- The effects of climate change and species mixture on survival times of forest tree species Brandl S. (Germany)
- 2930 Climate change at upper treeline: How do trees on the edge react to increasing temperatures? Jochner M. (Switzerland)
- 3457 Winter warming: harmful effect of changing snow conditions on tree seedlings in the boreal forest Martz F. (Finland)
- 2011 Bioclimatic modelling and environmental tolerance to global change in strawberry tree *Ribeiro M. (Portugal)*
- 3464 Trade-offs between climate change adaptation and mitigation objectives in Germany Saha S. (Germany)

PS-32 T3 - Perspective of short rotation forestry for sustaining society and environment

- 1936 Establishing Short Rotation Coppice on Marsh-Grassland Burger F. (Germany)
- 3642 Eucalyptus grandis trees growth: Effects of nutrition and water availability and interactions with the environment in a prolonged drought period Chambi-Leaoas R. (Brazil)
- 2512 Growth rate variations of Eucalyptus camaldulensis: a comparison between systems monoculture and silvopastoral system da Silva Ribeiro G. (Brazil)
- 3494 Group planting fosters better growth and superior tree quality compared to conventional row planting: The first study on wild cherry trees (Prunus avium L.) from Germany Saha S. (Germany)

PS-75 T3 - The nexus between bioeconomy and forest biomass: Challenges, opportunities and necessary steps in the forthcoming decades

- 2982 Development of potential new products, processes and markets from secondary metabolites of Uruguayan native forest trees: advances and perspectives

 Bennadji Z. (Uruguay)
- GIS-based approach for land suitability of fast growing tree-energy plantation in degraded land, Thailand Haruthaithanasan M. (Thailand)
- Performance of dry zone Acacia for biomass energy in degraded soil in northeast, Thailand Phudphona T. (Thailand)

PS-47 T4 - Open Session (Part 1)

- 994 Secondary shrublands facilitate the active large scale restoration of fire-disturbed southern bog forests in North-Patagonia Bannister J. (Chile)
- 229 From spruce to beech disturbance and resilience pathways in southern Scandinavian forests? Bolte A. (Germany)
- 3026 Planning for a new wilderness in Germany Opportunities and challenges for forest conservation Brackhane S. (Germany)
- 4182 Achieving a constant browsing level mission impossible? Hagen R. (Germany)
- Impacts of forest management regimes on multiple functions of natural secondary forests in Northeastern China He Y. (China)
- Making space for invasive tree species? Increasing mortality of "Castanea sativa" in southern Switzerland in response to multiple threats

 Hülsmann L. (Switzerland)

Seho M. (Germany)

| 3878 | Landscape-moderated use of forest structures by bats Jonker M. (Germany) |
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| 2739 | eDNA of dead wood samples for assessing saproxylic beetles <i>Keller N. (Germany)</i> |
| 2566 | Stress tolerance in high resolution - on the growth potential of invasive Ailanthus altissima in future climates Knüsel S. (Switzerland) |
| 568 | Adaptation to climate and ungulate browsing: Are both possible? Kupferschmid A. (Switzerland) |
| 2043 | Population structure and density of Pinus Hartwegii in an elevation gradient Marroquín J. (Mexico) |
| 3238 | Modeling natural regeneration potential in agricultural landscapes of Southeastern Brazil: an approach to decrease restoration cost and increase ecosystem services <i>Molin P. (Brazil)</i> |
| 189 | Religious aspects of sacred plants at holy city Allahabad in India <i>Tomar A. (India)</i> |
| 1865 | Initiative 20x20 a Country-led platform to restore 20 million hectares of degraded land in Latin America <i>Zamora-Cristales R. (United States of America)</i> |
| 612 | Genetic diversity of Casuarina Equisetifolia Zhong C. (China) |
| 2185 | Mapping marginal Hellenic fir populations by assessing dieback related to climate change with multi-temporal Landsat images Alizoti P. (Greece) |
| 2331 | Evaluation of the genetic diversity of natural selected Quercus robur L. populations in the Czech Republic using nuclear microsatellites Cvrckova H. (Czech Republic) |
| 2322 | Use of microsatellite markers for clonal identification in wild cherry seed orchards Máchová P. (Czech Republic) |
| 2648 | The Project Of Peat Amusement Park As Preservation Of Peat Forest Based On Local Wisdom In Central Borneo Maulana F. (Indonesia) |
| 1631 | CorCed – Suitability for cultivation of provenances of Cedar and Turkish Hazel in Germany as a result of climate change |

PS-23 T4 - Tree biodiversity at the genetic level: vital to confront environmental and livelihood challenges

733 Pollen and seed gene flow in strawberry tree *Ribeiro M. (Portugal)*

PS-41 T5 - Forest rhizosphere ecology and biogeochemistry across environmental gradients

- Young European beech plants had differently tuned root and shoot growth between dry and less-dry forest plots in summer drought of 2003 and 2011: a study on limestone outcrop in Northern Switzerland *Chakraborty T. (Germany)*
- 2025 Fine root dynamics in the boreal soil fertility gradient Leppälammi-Kujansuu J. (Finland)
- 1737 Nutrient effects on plant carbon allocation the role of mycorrhizal fungi Ven A. (Belgium)
- Distribution of surface-bound phosphatase on mycorrhizal structures of Hebeloma sp. on Quercus Pubescens seedlings Straus I. (Slovenia)

PS-60 T5 - Open Session

- 129 Relations between gas exchanges and variation of foliar temperature of young Tachi-Branco plants (Sclerolobium paniculatum) submitted to water stress Rossi L. (Brazil)
- Rooting space, soil water availability, sapflow and leaf area development regulate climate response of trees on boreal reclamation sites

 Landhäusser S. (Canada)
- 1425 Soil security of a tropical montane rainforest in a changing world Kadir W. (Malaysia)



Welcome Reception

We cordially invite you to the Welcome Reception of the IUFRO 125th Anniversary Congress. This event will be held at the Konzerthaus and is open to all registered participants.

Drinks and snacks will be served for free.

Acting for Sustainability!

The Freiburg Scientific Theatre will entertain you during the Welcome Reception. This culturally diverse group of young and passionate sustainability experts is based in Freiburg, Germany. It combines performance with complex scientific knowledge in a surprising and engaging manner.

Enjoy the award winning Freiburg Scientific Theatre creatively enacting forestry issues!

www.scientific-theatre.org

| | Sunday, 17 September 2017 | |
|----------|---------------------------|--|
| | 18:30 h | |
| Entrance | Included in Congress fee | |



Tree Planting Ceremony and Opening of the Forest History Exhibition

The traditional IUFRO tree planting ceremony creates a lasting souvenir of the 125th Anniversary Congress in Freiburg. A linden (Tilia sp.) will be planted as a long established symbol of the social connection between trees and people. The ceremony will take place under the auspices of Prof. Dr. Daniela Kleinschmit. Forest scientists from all around the globe are invited to share this commemorative moment.

Historically linden or lime trees often served as location for trials and court meetings, and until today they shelter open air dances, beer gardens, resting points, and avenues in Central Europe. Last but not least their heart shaped leaves make them the trees of love, youth, and the future.

Immediately following, the exhibition "Interconnecting Forests, Science and People. IUFRO's activities over the past 125 years" will be formally opened.

| Date | Monday, 18 September 2017 |
|---------------------|---|
| Time | 16:00 h |
| Entrance | Free access |
| Location | University of Freiburg Faculty for Environment and Natural Resources (Herderbau) In front of the building / inner courtyard Tennenbacher Str. 4, D-79106 Freiburg |
| Invited speakers | Lord Mayor of Freiburg, Dr. Dieter Salomon Rector of the University of Freiburg, Prof. Dr. Dr. h.c. Hans-Jochen Schiewer IUFRO President, Prof. Dr. Mike Wingfield Rector of hKDM — University of Arts and Applied Sciences, Prof. Dr. Timo Becker Curator Prof. Dr. Uwe E. Schmidt, University of Freiburg |



Congress Opening Ceremony

The Opening Ceremony of the IUFRO 125th Anniversary Congress is "the" occasion to learn about and acknowledge the global expansion and the scientific achievements of IUFRO and their impact on forest policy. It also serves as the collective starting point for future developments within IUFRO.

The key-note of the IUFRO President will be followed by welcoming words by political representatives of the NFZ.forestnet regions and selected IUFRO stakeholders. It culminates in the launch of the new IUFRO slogan, to be presented by Alexander Buck, IUFRO Executive Director, Vienna (Austria).

Speakers

Michael Wingfield, President of IUFRO, Pretoria (South Africa) Peter Hauk, Minister for Rural Affairs and Consumer Protection Baden-Württemberg, Stuttgart (Germany)

Philippe Richert, President of Grand Est Region, Strasbourg (France) t.b.c

Georg Schirmbeck, President of German Forestry Council, Berlin (Germany)

Marc Palahi, Director of European Forest Institute, Joensuu (Finland)

| Date | Tuesday, 19 September 2017 |
|--------------|-------------------------------------|
| Time | 10:45 to 11:30 h |
| | Entry begins at 8:30 |
| Location | Rolf Böhme Saal |
| | (Konzerthaus Freiburg) |
| Entrance | Included in Congress fee |
| Registration | On site at the registration counter |

Statements by Federal Ministers

Hermann Onko Aeikens, State Secretary, Federal Ministry of Food and Agriculture, Berlin (Germany)

Marc Chardonnens, Director, Federal Office of the Environment, Bern (Switzerland)

Gerhard Mannsberger, Head, Forestry Department, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Vienna (Austria)

Arnaud Brizay, Attaché for Agriculture, French Embassy, Berlin (France/Germany)



Anniversary Gala

The important social event of the Congress! This evening will take you on a short journey through the history of the IUFRO and will have a lot of regional and international surprising acts and food ready for you. Join us for this fun filled international evening — international like the IUFRO is! — with fine food and varied entertainment. There will be plenty of time for networking and having informal talks with other scientists, colleagues & friends during this Anniversary Gala evening!

| Date | Thursday, 21 September 2017 | |
|--------------|--|--|
| Time | 19:30 h | |
| Location | Rolf Böhme Saal (Konzerthaus Freiburg) | |
| Entrance | 54.00 EUR per Person (incl. food and drink) | |
| Registration | On site at the registration counter | |

Closing Ceremony

Main messages from the 125th Anniversary Congress

Presentation of IUFRO Distinguished Service and Special Recognition Awards

Introductory video of Curitiba, Brazil, host of the next IUFRO World Congress in 2019

Official Closing of the Congress

| Date | Friday, 22 September 2017 | |
|--|---------------------------|--|
| Time | 17:30 - 19:00 h | |
| Location | Rolf Böhme Saal | |
| | (Konzerthaus Freiburg) | |
| Entrance | Included in Congress fee | |
| Registration No registration necessary | | |

Business Meetings

International Society of Tropical Foresters Business Meeting

After a five-year hiatus, the International Society of Tropical Foresters (ISTF) is being reactivated. This group aims to connect all who are interested in international tropical forestry, from the forester and conservationist in the field to government, industry, NGOs, and academia. All are invited to attend the business meeting to discuss strategies for forming the new ISTF.

| Date | Monday, 18 September 2017 | Location | KG I - 1139 (University Freiburg) |
|------|---------------------------|-----------|-----------------------------------|
| Time | 12:45 – 13:45 | Organizer | Ward S. (Puerto Rico) |

Tropical Forest Datasets Networking Meeting

For this networking session, we welcome participants who are interested in orphaned tropical forest datasets. We are trying to locate these data sets, which are scattered among different institutions and individuals. Some of the data are available only on paper, some are digitized but in old formats, and some are still undiscovered. These data sets may become lost and with them our ability to assess historical changes that can inform research and policy development for land use change and landscape resilience. If you can help us in locating information on such datasets, or are interested in the topic, please come to the session.

| Date | Monday, 18 September 2017 | Location | KG I - 1015 (University Freiburg) |
|------|---------------------------|-----------|-----------------------------------|
| Time | 20:00 – 21:30 | Organizer | Ward S. (Puerto Rico) |

Division 3 Business Meeting

| Date | Tuesday, 19 September 2017 | Location | KG I - 1098 (University Freiburg) |
|------|----------------------------|-----------|-------------------------------------|
| Time | 20:00 – 21:45 | Organizer | Chung W. (United States of America) |

Division 4 Business Meeting

| Date | Tuesday, 19 September 2017 | Location | KG I - 1228 (University Freiburg) |
|------|----------------------------|-----------|-----------------------------------|
| Time | 20:00 – 21:45 | Organizer | Peyron J. (France) |

Division 6 Business Meeting

| Date | Tuesday, 19 September 2017 | Location | KG I - 1224 (University Freiburg) |
|------|----------------------------|-----------|-----------------------------------|
| Time | 20:00 – 21:45 | Organizer | Sievänen T. (Finland) |

Division 7 Business Meeting

| Date | Tuesday, 19 September 2017 | Location | KG I - 1199 (University Freiburg) |
|------|----------------------------|-----------|-----------------------------------|
| Time | 20:00 – 21:00 | Organizer | Brockerhoff E. (New Zealand) |

Division 9 Business Meeting

| Date | Tuesday, 19 September 2017 | Location | KG I - 1015 (University Freiburg) |
|------|----------------------------|-----------|-----------------------------------|
| Time | 20:00 – 21:45 | Organizer | Kleinschmit D. (Germany) |

Meliaceae Working Party (IUFRO Working Group 1.02.04)

| Date | Tuesday, 19 September 2017 | Location | KG I - 1134 (University Freiburg) |
|------|----------------------------|------------------|-----------------------------------|
| Time | 20:00 – 21:00 | Organizer | Ward S. (Puerto Rico) |

Mountain Forest Management (Working Unit 1.01.05) Business Meeting

| Date | Tuesday, 19 September 2017 | Location | KG I - 1243 (University Freiburg)) |
|------|----------------------------|-----------|------------------------------------|
| Time | 20:00 – 21:00 | Organizer | Park P. S. (South Korea (ROK)) |

Book Launches

A History of IUFRO Congresses, Forest Research and Russia's Participation

After opening remarks, Prof. Victor Teplyakov will present the book. Prof. He will be followed by former IUFRO Presidents, Prof. Em. Don Koo Lee and Prof. Em. Walter Liese, and long-term IUFRO Secretary Dipl. Ing. Heinrich Schmutzenhofer. Dr. Chang Jae Lee and Dr. Ho Sang Kang, in recognition of the support from the Republic of Korea for the English translation of the book, and Dr. John Parrotta, editor, will also say a few words. Former IUFRO presidents and vice-presidents as well as other IUFRO officers, colleagues and friends are expected to come.

| Date | Wednesday, 20 September 2017 | Location | KG I - 1015 (University Freiburg) |
|------|------------------------------|-----------|---|
| Time | 12:45 – 13:30 | Organizer | Teplyakov V. (Russian Federation), Shalaev V. (Russian Federation) |

The Earthscan Reader on Gender and Forests. Edited by Carol J. Pierce Colfer, Marlène Elias, Bimbika Sijapati Basnett and Susan Stevens. Routledge 2017.

After a brief presentation of the book by the editors and contributors, there will be an opportunity for questions and discussion from the participants.

| Date | Thursday, 21 September 2017 | Location | KG I - 1015 (University Freiburg) |
|------|-----------------------------|-----------|--|
| Time | 12:30 – 13:15 | Organizer | Elias M. (Italy), Sijapati Basnett B. (Indonesia), Arora-Jonsson S. (Sweden) |

Interconnecting Forests, Science and People IUFRO's activities over the past 125 years Exhibition

Opening18 September 2017 at 4.45 p.m.DateFrom 19 to 29 September 2017

Opening hours 9 a.m. to 6 p.m. on weekdays

Location University of Freiburg

Faculty for Environment and Natural Resources (Herderbau)

Tennenbacher Str. 4, D-79106 Freiburg



The Exhibition Interconnecting Forests, Science and People is a production of the Faculty of Environment and National Resources, University of Freiburg.

The installation itself was designed and constructed by students from the University of Arts and Applied Sciences in Freiburg.





The Exhibition, "Interconnecting Forests, Science and People", installed in the inner courtyard of the Faculty for Environment and Natural Resources (the Herderbau), concentrates on three interconnecting elements: a Forest Science History Exhibition, an artistic photo exhibition and a connecting lounge space where visitors are invited to relax and contemplate the exhibition.

The Forest Science History Exhibition is inspired by forest history, particularly the activities of the International Union of Forest Research Organizations (IUFRO). The six stations focus on research themes of historical relevance and the activities of various IUFRO Divisions. The photo exhibition, entitled, "Traces in the Forest", offers a spatiotemporal interpretation of the relationship between people and the forest.

From IUFRO Foundation to World War I

Socio-economic changes during the 19th Century had a major impact on forests and their functions. Analogous to the European Industrial Revolution, one could speak of a "Forestry Revolution". Researchers at the practical, problem-based forest experimental stations in Central Europe had been advocating a forum for the exchange of forest knowledge since the 1890s. They perceived the need to compare experimental results. On 17 August 1892, IUFRO was founded in Eberswalde, Germany. The main research goal was the interaction between forest and water. International activities focused on the characteristics and provenances of different indigenous and exotic tree species.

World War I - End World War II

International communication and collaboration among research and experimental stations was impeded severely by the two world wars. In the 1920's, conferences were held, but only became more frequent in the post-war period. IUFRO, whose members until then comprised experimental stations, broadened its research and geographic focus to include universities, forest training centers, and institutions undertaking forest-related research. Furthermore, in African, Asian and southern and northern American countries, IUFRO served as a platform for international forestry and forest research. International seed exchange, analysis of wood properties, site descriptions and forest protection were the main research areas.



Post-war - End 1960s

The period after WW II was characterized by reforestation. Political reforms worldwide increasingly restricted international exchange of knowledge and experience to the western world. These typically materialistic societies were primarily interested in forest utilization. Research into labor and mechanization in forests, forest protection and silviculture aimed to increase forest production. Botany, and growth and yield studies supported this goal. The concept of multi-functional forest goals emerged for the first time.

Economic Growth in a World of Limited Resources

With the advent of post-materialistic values, greater importance was attributed to ecological factors. Following environmental catastrophes and the phenomenon of forest dieback, economic growth and forestry practices were perceived critically. IUFRO research projects reflected the divisive debate. Research focused on forest utilization in Canada and Siberia as well as in tropical forests, and developments in aerial photography and remote sensing combined with new harvesting methods facilitated the identification of solutions. The "ecological turning point" first became evident in IUFRO through investigations of the impact of air pollution on forests in industrial and mining areas.

Globalization and Environmental Issues worldwide

Increasing globalization characterizes the last 25 years. Global environmental research and corresponding development assistance in forestry take socio-economic aspects increasingly into account. In all IUFRO divisions, the environment—forest—people relationships are addressed, leading to greater environmental awareness in defining research questions and participation in international forest political processes. Since the 1990s, IUFRO places a high priority on the sustainability of natural and near-natural tropical forests. IUFRO Special Programs for Forestry Education in developing countries promote sustainable resource use in keeping with ecosystem sustainability. Many IUFRO divisions and working groups address the challenge of predicting the forest-related impacts of climate change.



We greatly appreciate the important role of our key partners in the funding, planning, coordination and organization of the congress through their participation on the Congress Organizing Committee.

You are invited to visit our exhibition. You can find the booths of our partners and sponsors in front of the Rolf Böhme Saal in the Konzerthaus.



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German Federal Ministry of Food and Agriculture (BMEL)



Ministry of Rural Affairs and Consumer Protection Baden-Württemberg (MLR)



State Forest Service Baden-Württemberg (ForstBW)



Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLUFW)



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General Information

Capacity issue

In order to accommodate as many participants as possible, we have acquired extra rooms in a second building.

Thus, additionally to the original congress venue Konzerthaus, there will be several sessions in the buildings of the University of Freiburg, KG I and KG II. These buildings are just a five minute walk away from the university and only a few steps from the Mensa, where lunch will be served.

All social events, plenary sessions and the "Science in Dialogue" sessions will take place in the Konzerthaus, as well as the sponsor exhibition. In the Konzerthaus, there may not be more than 1,500 people at any one time. This is why we are obliged to have a head-count in the Konzerthaus. We will install a livestream to the KG I — Auditorium Maximum in the university during following sessions: Opening Ceremony, Statements by Federal Ministers Session, Science meets Policy Session, every Keynote Plenary Session, Closing Ceremony

Please be prepared that when the maximum capacity in the Konzerthaus is reached, participants will be asked to join the transmission in the Auditorium Maximum!

We ask for your understanding that we need to conform to the safety regulations prescribed by the management of the congress venue and apologize for any inconvenience this may cause.

Communication during the congress

Follow our on site updates on Facebook (facebook.com/iufro2017) and twitter (@iufro_2017). You are tweeting yourself? Get heard using the hashtag #iufro2017!

Live Streaming

We are happy to announce that for the first time in IUFRO history anyone who cannot make it to Freiburg or was not able to register for the IUFRO Anniversary Congress will have the opportunity to watch the Congress via livestream on the Internet.

From Tuesday to Friday we will broadcast selected sessions of the Congress program on three different STAGES online on www.live. iufro2017.com. On our MAIN STAGE, online participants will have the opportunity to ask questions directly into the auditorium, which may actively be put into the discussion onsite.

Online participation is free of charge. To access the livestream you will be requested to enter your name, email address and country.

MAIN STAGE (Tue, Wed, Thu, Fri):
Opening Ceremony, Press Conference, Science in Dialogue
Sessions, Keynote Plenary and Sub-plenary Sessions, Closing
Ceremony

2nd STAGE (Wed, Thu, Fri): Sub-plenary Sessions

3rd STAGE (Thu, Fri): Sub-plenary Sessions

Date

18 – 22 September 2017

Venues

Konzerthaus Konrad-Adenauer-Platz 1 79098 Freiburg

Novotel Hotel Freiburg am Konzerthaus Konrad-Adenauer-Platz 2 79098 Freiburg im Breisgau

University Freiburg KG I(Kollegiengebäude I) Platz der Universität 3 79098 Freiburg

University Freiburg KG II (Kollegiengebäude II) Platz der Alten Synagoge 1 79098 Freiburg im Breisgau

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Badge print on site

Please note that the badges will be printed out on site at the self-service print stations "Print your badge" in the main entrance area of the Konzerthaus Freiburg.

Please make sure to have the BADGE EXPRESS PRINT page of your registration document available upon arrival at the congress venue, indicating the BADGE EXPRESS PRINT CODE in order to use the self-service print stations.

On site Registration (only at the Konzerthaus)

Sunday, 17.09.2017, 16:00 — 18:30 h Monday, 18.09.2017, 07:00 — 19:00 h Tuesday, 19.09.2017, 08:00 — 19:30 h Wednesday, 20.09.2017, 07:00 — 19:30 h Thursday, 21.09.2017, 07:00 — 19:30 h Friday, 22.09.2017, 07:00 — 19:00 h

Media check rooms for speakers

The media check rooms for your presentations are located in the Konzerthaus in the room "Libresso" on the ground floor next to the registration counter or in KG I (University Freiburg) on the ground floor in room HS1019.

Opening hours:

Sunday, 17.09.2017, 16:00 — 18:30 h (only Konzerthaus) Monday, 18.09.2017, 07:00 — 19:30 h Tuesday, 19.09.2017, 07:00 — 19:30 h Wednesday, 20.09.2017, 07:00 — 19:30 h Thursday, 21.09.2017, 07:00 — 19:30 h Friday, 22.09.2017, 07:00 — 17:30 h

Lunch & Coffee Breaks

You will find the coffee breaks in the foyers of the Konzerthaus and in the University in KG $\rm I.$

Please note that the Lunch will be served in the Mensa (adjacent to University KG I).

Mensa Rempartstraße Rempartstraße 18 79098 Freiburg

Taxi service

Taxis are available in front of the main entrance of the Konzert-

To order a taxi please call Freiburg Taxi +49 761 55 55 55 or Markgräfler Taxi +49 761 5932322

INFORMATION

Public Transport

Your congress badge contains the free use of the extensive public transport system in Freiburg and the region from 17-22 September 2017.

Train, bus and tram stations are nearby to Konzerthaus, Novotel and University:

Main station "Hauptbahnhof, Freiburg im Breisgau" Central Bus Terminal "ZOB, Freiburg im Breisgau" Tram station "Stadttheater, Freiburg im Breisgau"

To find a "Journey Planer" and more information on trams and busses please visit the website: www.vaq-freiburg.de

Wardrobe

You will find a wardrobe free of charge in the foyer on the ground floor of the Konzerthaus.

Please note that there are no further wardrobes in the Novotel or in the University.

Cash point (ATM)

In close vicinity to the Konzerthaus you find several cash points. The first one is right around the corner. After leaving the Konzerthaus just turn right in the Bertoldstraße and you will find it in the passage on the right-hand side. Further cashpoints are available in the main station "Freiburg Hauptbahnhof".

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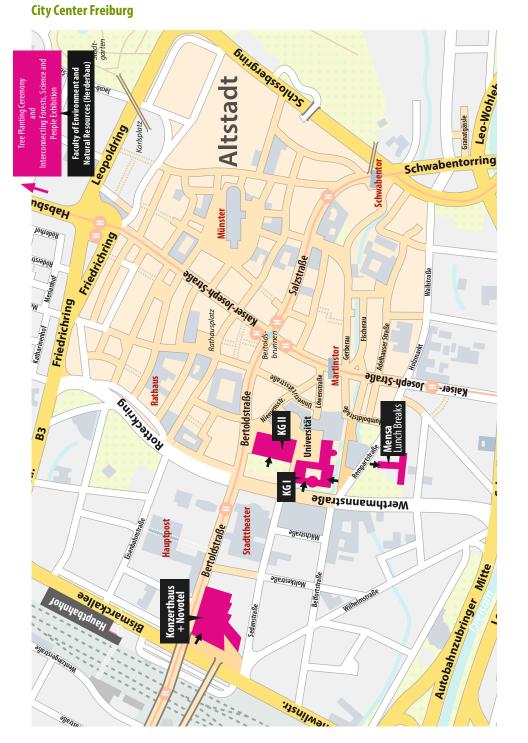
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Please note that photos, videos and audio recording of the attendees are being created at the event. This material will be published in the internet, professional journals and/or other publications during and after the congress. After the event you will find the pictures on the congress website.

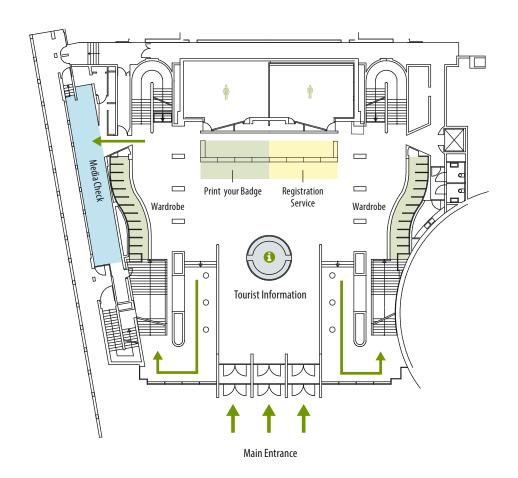
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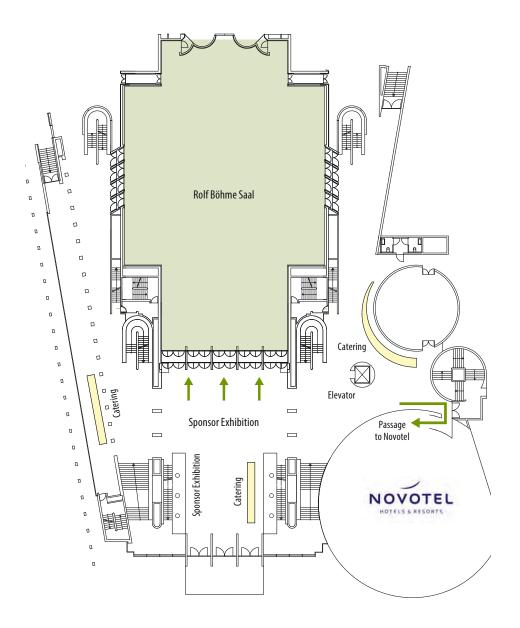




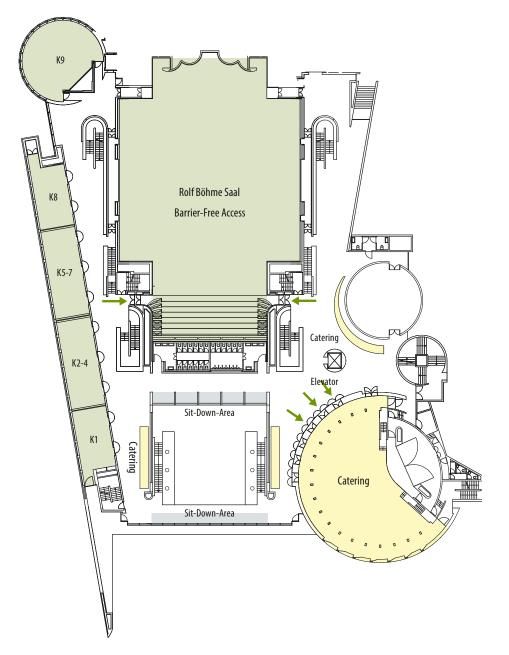
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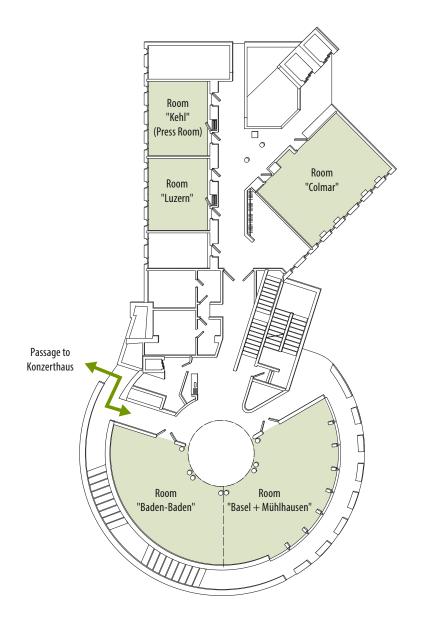
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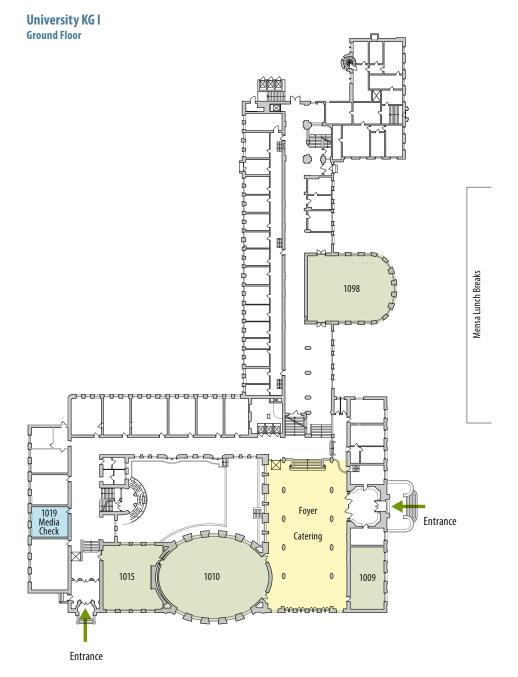


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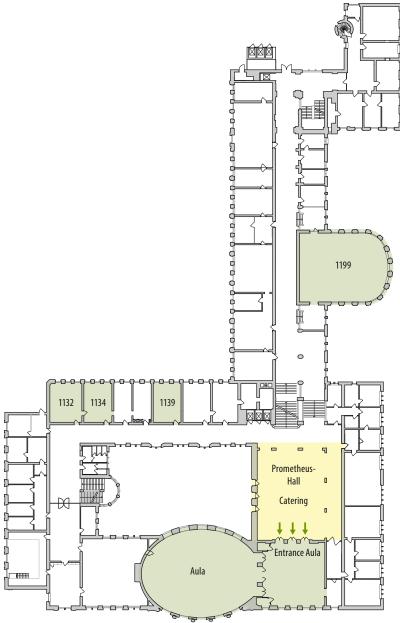


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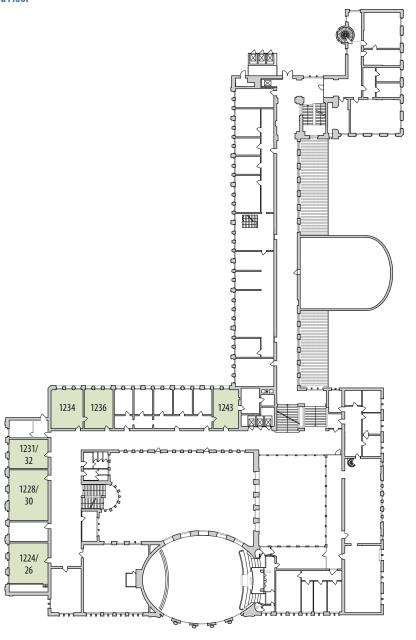




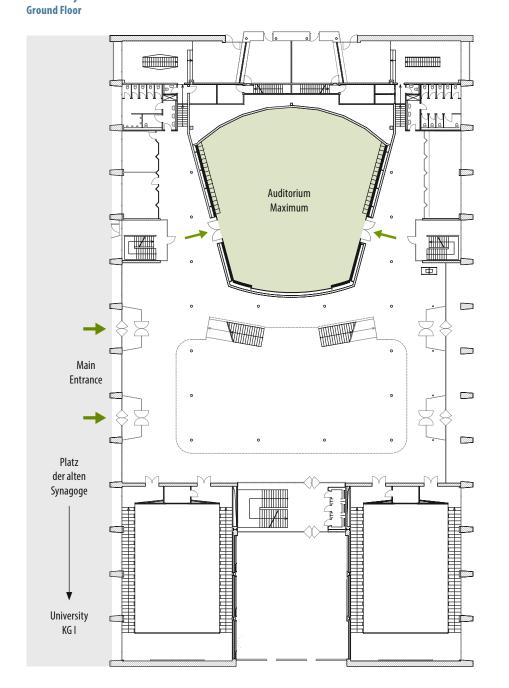
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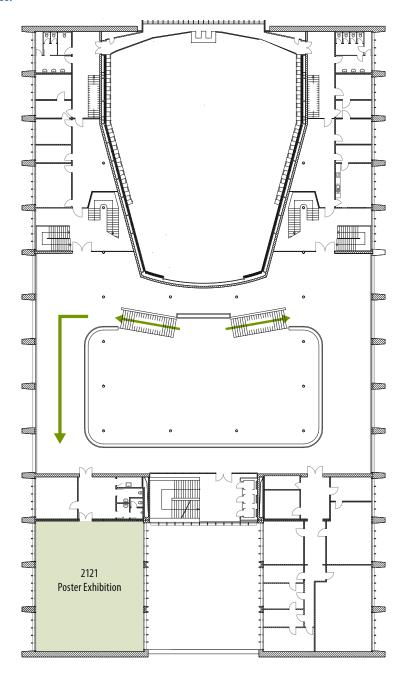
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University KG II



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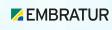
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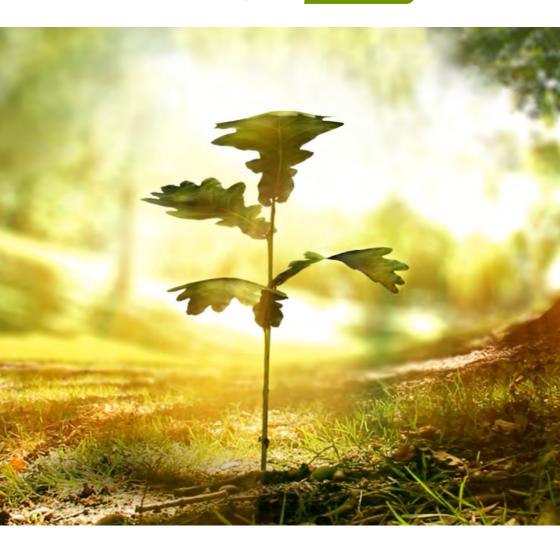


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