

THE ONLINE INFORMATION BULLETIN OF THE GLOBAL FOREST SCIENCE NETWORK

Future Concepts in Uneven-Aged Silviculture for a Changing World

Report from the 9th IUFRO Conference on Uneven-aged Silviculture by Jim Guldin, Southern Research Station, USDA Forest Service, and Gary Kerr, UK Forestry Commission, Coordinator of [IUFRO Research Group 1.05.00](#)

Interest and application in the subject of management of forests using uneven-aged silviculture is gaining importance worldwide. It is now recognized that this approach to management is possible with many species, on a wide range of sites wherever forests exist. The origin of uneven-aged silviculture was what we now regard as the classical examples from central Europe. This type of silviculture has evolved and developed throughout the world and there is now a dazzling array of different methods of application all of which stay true to the basic principle of sustainability. In a politically, economically and climatically changing world, uneven-aged silviculture is now confronted with new challenges and questions.

This was the background to the [9th IUFRO International Conference on Uneven-aged Silviculture](#) held on 17-19 June, 2014, at the Swiss Federal Institute for Forest, Snow, and Landscape Research WSL in Birmensdorf, Switzerland. The conference was superbly organized by Andreas Zingg and his research team at WSL and featured 18 hours of presentations, an interactive poster session and a 12-hour field trip. Rather than take a narrative approach to summarize the meeting we have tried to distill the conference into five key issues.

Discussion of the European concept of "Close-to-Nature" management in a global context. The "Close to Nature" philosophy of forest management is in vogue in Europe, and represents an approach that provides an array of ecosystem benefits using silvicultural techniques that resembles natural disturbance events and naturally-occurring ecological patterns of stand development. The iconic silvicultural system by which close-to-nature philosophy is implemented in Europe is the plenter system. Given that the prevailing natural disturbance events in large areas of Europe often create single-tree or small group openings in stands dominated either by mixed conifers or by broadleaved forests, there is a certain degree of logic to this association of the plenter system with close-to-nature principles. However, there is some question about whether the close-to-nature principles translate well in other parts of the world. This is especially the case in North America, where the actions of natural disturbance can be far more varied especially at larger spatial scales.

The role of ProSilva principles in defining and implementing uneven-aged silviculture. Related to the concept of the "Close-to-Nature" is the ProSilva movement, a European federation of foresters who advocate the application of silvicultural practices in ways that optimize the maintenance, conservation, and utilization of forest ecosystems in an ecological and



Uneven-aged silviculture is used to manage 'les forêts de la Montagne de Boudry'. IUFRO delegates inspect a 'marteloso' which is used for training forest managers to implement uneven-aged silviculture. (Photo by Gary Kerr)

socio-economic manner that is profitable and sustainable. The fundamental question is whether the ProSilva principles are set in stone or whether they are flexible enough to allow silviculturists to apply innovative practices in the context of changing climatic conditions or ownership objectives. One example that was mentioned was whether underplanting native species not found on a given site, or perhaps even planting exotic species like Douglas-fir, would be consistent with the ProSilva principles if that planting was done to reduce risks of a changing climate. There was a lively debate about the wisdom of creating situations where a forester's choice of silvicultural practices might be unduly constrained because of pre-existing standards and guides, especially in the context of an uncertain future.

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Salt Lake City, USA
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The role of uneven-aged silviculture in the context of changing climate.

A number of presentations provided excellent insight on the role of uneven-aged systems in the maintenance and enhancement of stand- and landscape-scale heterogeneity in species composition and stand structure, and the values that heterogeneity brings in a period where climatic changes are forecast. Several speakers presented concepts that suggested variations of classic plenter approaches might be useful. Examples included creating larger openings such as group selection to encourage development of species intolerant of shade, enhancing species composition of natural regeneration, using a larger range of varied cutting patterns to promote heterogeneous conditions on the landscape, managing forests to promote mixtures of species and structure, increasing reliance on minor species that are currently not widely represented in forest stands but that might in the future, and the application of non-native seed sources or species provenances if indications are that these might be robust in the climate expected in the future.

Potential of uneven-aged silviculture in light of an expanding disturbance effects upon stands and landscapes.

Several speakers raised an issue that had not been widely raised at the meeting, specifically the question of the threat of disturbance in a changing climate. One speaker raised an issue that has had some attention outside of Europe as well, which is that the likely manifestation of changing climatic conditions will not be by sudden effects from temperature change but rather by an increased occurrence of endogenous or exogenous disturbance events to which foresters will be asked to respond. As a concrete example, another speaker pointed to the increasing pace of insect and disease attacks over the past two decades in Great Britain, amid expectations that the climate of southern Britain in 2080 could resemble that of parts of southern Italy. Silviculturists will have their hands full in efforts to adapt forests in ways that increase resilience to biotic threats and climate change whilst maintaining productivity.



WSL Research Plot 01-051 at Gutschwald, Höhrnen. A stand of European silver fir, Norway spruce and beech managed using 'plentering'; data has been collected since 1983. (Photo by Gary Kerr)

Promoting heterogeneous forest conditions around the world.

Presentations falling under this issue aligned under two different concepts. Some papers described and quantified progress in converting homogeneous even-aged plantations into increasingly heterogeneous structure by establishing new age cohorts and enhanced variation in canopy heterogeneity. Examples included work in northeast China, the island of Hokkaido in Japan, and Sitka spruce plantations in southeast Alaska and in Great Britain. Others studied old-growth conditions, in and of themselves or in comparison with managed stands, to provide insights into quantifiable aspects of stand- and landscape-scale heterogeneity, with examples drawn from the old-growth beech forests in Ukraine, managed and old-growth stands in Bosnia-Herzegovina, angiosperm podocarp forests in New Zealand, and Canadian boreal mixed woods forests.

This was an excellent conference and we are already planning our 10th Meeting in Arkansas, USA in 2016.

Genetics of Five-Needle Pines and Rusts of Forest Trees Research: Challenges and Opportunities

By Richard Sniezko and Anna Schoettle, both US Forest Service, Coordinator/Deputy Coordinator of [IUFRO 2.02.15](#)

The international meeting on "Challenges and Opportunities in (1) Genetics of Five-Needle Pines and (2) Rusts of Forest Trees Research: Conservation, Evolution and Sustainable Management in a Changing Climate" took place from June 15-20, 2014, in Fort Collins, Colorado, USA.

The conference which brought together three groups: [IUFRO 2.02.15](#) (Breeding and Genetic Resources of Five-Needle Pines), [IUFRO 7.02.05](#) (Rusts of Forest Trees) and [Strobosphere](#), was very successful. It featured talks and posters on advances in gene conservation, genomics, rust resistance, impacts of climate change, evolutionary dynamics and other related topics. The 105 participants included a mix of students, professionals,

researchers, and emeritus scientists representing the following countries: Austria; Canada; China; Finland; France; Germany; India; Italy; Korea; Mexico; Portugal; Russia; Saudi Arabia; Sweden; U.S.A.; Vietnam.

Species of 5-needle pines ('white pines') occur or are planted in many countries throughout the world. They are valued for their ecological, aesthetic and commercial value. All species of 5-needle pines are susceptible to white pine blister rust (WPBR), but those occurring in North America are highly susceptible (*Cronartium ribicola*, causative agent of WPBR, is a non-native invasive pathogen in North America). Genomic tools are rapidly developing for use in conifers and the genome of sugar

pine (*P. lambertiana*) is now being sequenced. These factors made it a natural to bring together the three groups for this meeting.

There were some joint sessions as well as concurrent sessions organized by each respective group for topics of interest. Two days of indoor sessions, plus an evening poster session were followed by three days of fieldtrips.

Discussions focused on key issues and latest findings in the field:

- a) Advances in genomics and genomic resources in forest trees and rusts of forest trees
- b) Genetic resistance to white pine blister rust investigations underway in high elevation, non-commercial species
- c) Gene conservation
- d) Climate change impacts on five-needle pines

Until recently, the very large genomes of conifers have precluded use of genomic tools to help decipher the underlying genetic variation in 5-needle pines and other conifers. However, recent advances in technology now make it feasible to use these tools – and the genome of sugar pine (*P. lambertiana*) is now being sequenced; as has the genome for the white pine blister rust pathogen. The long-term programs to develop genetic resistance to white pine blister rust are some of the most advanced in forest trees and the products are being used for restoration and reforestation. Concerns about climate change and invasive pathogens such as blister rust fungus have raised added awareness for the needs for gene conservation.

Proceedings are planned (abstracts, extended abstracts and papers from the oral and poster presentations). Discussions for a special journal issue are also underway. A conference for the 2.02.15 Working Party may be held



Photo provided by Richard Sniezko

in Europe in 2017. IUFRO Working Parties 2.02.15 and 7.02.05 will also be sponsors of the 5th International Workshop on the Genetics of Host-Parasite Interactions in Forestry (2015, Orleans France).

Meeting website: <http://www.westernforestry.org/Events/conference/2014-five-needle-pine-genetics-conference/>

Host organization: USDA Forest Service

Sponsors: USDA Forest Service (Rocky Mountain Research Station; Pacific Northwest Research Station; Western Wildland Environmental Threat Assessment Center; Forest Health Protection; Rocky Mountain Region; Pacific Northwest Region; Southwestern Region); Dorena Genetic Resource Center; USDI Bureau of Land Management (Wyoming Branch); Whitebark Pine Ecosystem Foundation; Sierra Pacific Industries; American Forests.

VI International Poplar Symposium

By Francisco Zamudio. Coordinator of [IUFRO Working Party 2.08.04 Poplar & Willow](#); Poplar Technology Center; Universidad de Talca, Chile

The theme of the [IUFRO Sixth International Poplar Symposium](#) was: "**Domestication of Populus and Salix: how far have we come, and how far do we still have to go?**" The Symposium was held in the Forest Sciences Centre, located in the main campus of the University of British Columbia, in Vancouver, BC, Canada, and it took place from 20-24 July, 2014. A total of 210 delegates from 20 countries attended the symposium. The number of students was 26 and two delegates were sponsored by the SPDC of IUFRO.

The science team was led by Dr. Rob Guy, from UBC, and a group of five collaborators, from UBC, the British Columbia Ministry of Forests, Lands and Natural Resource Operations, and Agriculture and Agri-Food Canada. Other teams were in charge of the post-conference Circle tour, the budget, finance and logistics, sponsoring and funding, and the spouses program. To all of them, we must express our warmest appreciations for their exemplary work in selecting the papers and

posters and for planning and coordinating every detail that made our IPS-VI a remarkable experience.

The program included six sessions of a total of 66 oral presentations, plus an opening and a closing keynote. Sessions covered a broad group of relevant research topics for the poplar and willow research community:

Genetics, breeding and conservation of poplars and willows; Genomics of poplars and willows; Physiology (integrating form & function in the Salicaceae); Pests and pathology of the Salicaceae; Environmental applications of poplars and willows; Management and applications (putting biology into practice).

Report abridged by the editor. For the full report including a report of the business meeting, please visit: <http://www.iufro.org/science/divisions/division-2/2000/20800/20804/activities/>

The Role of Forest Utilization and Ergonomics in Modern Forestry

By Janusz Sowa, Deputy Coordinator of IUFRO Research Group 3.03.00 Forest ergonomics, Conference Chair

An international scientific conference on "The role of forest utilization and ergonomics in modern forestry" took place on June 12-13, 2014. It was organized on the occasion of the 50th Anniversary of the Department of Forest and Wood Utilization, University of Agriculture in Krakow, Poland. The Conference was affiliated with the IUFRO Research Group 3.03.00. The honorary patronage over the Conference was held by Prof. Włodzimierz Sady, Ph.D., D.Sc., Rector of the University of Agriculture in Krakow, and Adam Wasiak, M.Sc., Director-General of the State Forests.

On behalf of the Rector of the UAK, the Conference was opened by Assoc. Prof. Stanislaw Malek, Ph.D., D.Sc., Vice Rector for Research and International Relations. The first speech of the plenary session entitled "Fifty years of scientific and educational activities in the Department of Forest and Wood Utilization at the University of Agriculture in Krakow", was given by Prof. Janusz Sowa, Ph.D., D.Sc. Then, Prof. Yozo Yamada, Ph.D., IUFRO RG 3.03 coordinator, presented his paper on "The roles of ergonomics in the world's forests and forestry", including a proposition of four research topics: Information Networks, Consciousness, Cooperation, and Ethics, for Research Group 3.03.00 from 2014-2019.

(See photo below by Mr. MSc Wojciech Pasiowiec)



Within the two days of the Conference a total number of 38 papers were presented, including nine presentations during two plenary sessions, and 29 presentations displayed in three content-related sections, dedicated to "Logging technology and forestry services", "Non-wood and wood forest products", as well as "Ergonomics and forest higher education". Moreover, three posters were presented.

The Conference was attended by 97 participants in total: 80 persons from Poland, and 17 foreign guests, coming from the following countries: Austria, Czech Republic, Japan, Lebanon, Germany and Slovenia.

2014 IUFRO Forest Tree Breeding Conference

By Milan Lstiburek, Coordinator of IUFRO Working Party 2.04.02 – Breeding theory and progeny testing

The conference held from 25-29 August, in Prague, Czech Republic, brought together 170 participants from 35 countries and was generously hosted by the Department of Forestry and Wood Sciences, Czech University of Life Sciences Prague, Czech Republic. Meeting website: <http://www.iufrobreeding2014.org/>

Breeding theory offers a flexible basis to expanding traditional tree improvement with modern tools, such as the genomics selection, adaptation models to climate change, spatial statistics, marker data combined within the traditional genetic evaluation protocol and a lot more. In this respect, breeding theory remains the fundamental discipline in forest genetics as it integrates all these tools under practically feasible scenarios within the operational forestry, environmental protection, etc. Genomics has brought and will deliver incredible insight into the understanding of the adaptive process in forest tree species, which is the fundamental objective of the forest genetics science.

The conference addressed the following key topics:

- a) Breeding theory and progeny testing, hybridization strategies, deployment populations and scenarios
- b) Population genetics, the role of adaptation in forest tree breeding
- c) Integration of genomics into traditional forest tree breeding programs
- d) Genetic evaluation protocols, statistical tools
- e) Reports on operational tree improvement programs and activities around the globe

Proceedings were published prior to the event and delivered to all participants; they are also available online. A special Issue in *Silvae Genetica* is in preparation. Future meetings will be planned within the next 2 months as there was a change in the composition of the Working Party and the new officeholders will discuss and communicate with IUFRO about the next events and additional activities.

Building a Harmony between Ecology and Economy

Report by Zuomin Wen, Deputy Coordinator of IUFRO Working Party 9.04.03 Ecological Economics

The Global Forum of Ecological Economics in Forestry was held in China twice, of which the first meeting placed emphasis on "Building a Harmonious Future for Human Well-being". The Second Global Forum of Ecological Economics in Forestry, which focused on "Building a Harmony between Ecology and Economy" took place in Nanjing from 16-17 July 2014 and was sponsored by Nanjing Forestry University; Seoul National University and Chinese Society of Forestry Economics. It drew more than 40 participants from China, Korea, USA, Canada and India.

The meeting offered a unique opportunity for scientists to review the current issues and theoretical development in ecological economics in forestry. Among the topics covered in the conference were the following:

Theory and practice in ecological economics
Role of forestry in climate change mitigation
Economics of Forest Ecosystem Management
Sustainable Forest Industries
Technological advances in ecosystems measurement and monitoring
Interaction between ecological economics and forest policy

GFEF 2014 focused on ecological economic theory, low carbon economics, forest ecosystem management, and sustainable forest management, which can contribute to the harmonious development between ecology and economy in forestry. The conference witnessed the importance of theories relevant to practical application that will achieve sustainable development in forestry.

The conference concluded that ecological economics can provide a good guidance to the development of sustainable forestry. In the future the conference



Photo by Mr. Longhua Ma (copyright Second Forum of Ecological Economics in Forestry)

organized by the working party should pay more attention to the role of forest ecosystems management in climate change, biodiversity, water cycle, irreversibility of environmental change and uncertainty of long-term outcomes in forest management and policy. Meeting website: <http://www.gfeef.org>

Publications

New - IUFRO Occasional Paper 27: Potentials to mitigate climate change using biochar – the Austrian perspective

By Viktor J. Bruckman and Michaela Klinglmüller

Carbon emissions due to human activities are constantly rising. Climate change mitigation strategies, such as the transition of energy systems towards renewable sources and new technologies, such as carbon capture and storage (CCS) are essential to secure the future of humanity. Biomass utilization is seen as one out of various promising strategies to reduce additional carbon emissions.

A recent project on potentials of biochar to mitigate climate change (FOREBIOM) goes even a step further towards bioenergy in combination of CCS or "BECS" and tries to assess the current potentials, from sustainable biomass availability to biochar amendment in soils, including the identification of potential disadvantages and existing research needs.

The current report represents an outcome of the 1st FOREBIOM Workshop held in Vienna in April, 2013 and tries to characterize the Austrian perspective of biochar for climate change mitigation.

Reports showing the perspectives of Turkey and South Korea will follow shortly. Read the report at: <http://www.iufro.org/publications/series/occasional-papers/>

New Proceedings from IUFRO Meetings Available in the Proceedings Archive:

<http://www.iufro.org/publications/proceedings/>
 Conference proceedings: Future Directions of Small-Scale and Community-Based Forestry (8-12 September 2013, Fukuoka, Japan)

Forests and Globalization: Challenges and Opportunities for Sustainable Development

Edited by William Nikolakis and John Innes

Series: The Earthscan Forest Library

The overarching contribution of this book is a review and assessment of the current and future impacts of globalization on the world's forests. The work has been developed by the "Resources for the Future" Task Force for the International Union of Forest Research Organizations (IUFRO).

<http://www.routledge.com/books/details/9781138787391/>

To be published 30th September 2014 by Routledge.

IUFRO Congress Spotlight: To manage forests sustainably – think synergy

A comprehensive study of the conditions that assist sustainable forest development will be published at the upcoming IUFRO World Congress this fall in Salt Lake City, USA. The title of the publication, produced by the IUFRO Special Project on World Forests, Society and Environment (IUFRO-WFSE), is **Forests Under Pressure – Local Responses to Global Issues** (to be presented at the IUFRO World Congress in October 2014).

Read at: <http://www.iufro.org/media/iufro-spotlights/spotlight-26/>

IUFRO Spotlight: Mixed species growth predictions made easy – well, easier

A recent study indicates why it is difficult to predict how mixed-species forests or plantations will grow, but makes those predictions easier by discussing the processes that drive changes over space and time in species interactions. Entitled **The spatial and temporal dynamics of species interactions in mixed-species: From pattern to process**, the study is by Dr. David Forrester, Chair of Silviculture, Faculty of Environment and Natural Resources, Freiburg University.

Read at: <http://www.iufro.org/media/iufro-spotlights/spotlight-25/>

Handbook of Forest Resource Economics*Edited by Shashi Kant and Janaki Alavapati*

It is increasingly recognized that the economic value of forests is not merely the production of timber. Written by leaders in the field, this handbook provides a detailed, comprehensive and broad coverage of forest economics, including both traditional forestry as well as the wider environmental role of forests. A definitive reference volume for students! Published by Routledge (2014), 560 pages. <http://www.routledge.com/books/details/9780415623247/>

Report of the 22nd Session of the Committee on Forestry

Available in the six official United Nations languages at the following link:

<http://www.fao.org/forestry/86366/en/>

Announcements

Up to Four Postdoctoral Research Associate Positions in Plant Systems Biology

Oak Ridge National Laboratory, Oak Ridge, TN, USA
Deadline for applications is 23 November 2014.

<http://www.iufro.org/discover/noticeboard/#c14607>

Global Forest Information Service Announces Upgrade

The Global Forest Information Service – www.gfis.net is pleased to announce an upgrade in our service offerings. We have been working to improve the way visitors to our site can view and access the information. Highlights of our upgrades include:

- *Global map of forest information – view information according to what region it is attributable to.*
- *Improved highlighted topics and search results.*
- *Mobile scalability – improved site experience when accessing the website from a handheld device.*
- *Updated style to improve readability*

The vast majority of these improvements is through a new ability to “tag” individual content with keywords. These keywords are then stored in the site index and help with filtering information i.e. according to region, or topic. This new ability means that our partners' information will be found more easily and promises a new era in the way we approach metadata management on a global scale. We invite you to explore the new website and provide us any feedback.

GFIS is an initiative of the Collaborative Partnership on Forests led by IUFRO, and maintained by the Finnish Forest Research Institute with a global network of over 300 forest-related organizations contributing information to the open-access gateway on a regular basis.

We invite you to share your forest-related content on GFIS. If you would like to learn what steps are involved in becoming a partner within the GFIS framework, just send an e-mail to Michael Huck: [huck\(at\)iufro.org](mailto:huck(at)iufro.org)

Obituaries

In memoriam Pierre Schram

Pierre Schram, International Council member of Luxemburg, passed away on Tuesday, 8 April 2014. He was long-time Assistant Director of the Forestry Administration in Luxemburg, and was a passionate collaborator in IUFRO's 4.04.03 SilvaPlan: Forest management planning terminology.

In memoriam Sigurdur Blöndal

Sigurdur Blöndal, forester and former Director of the Iceland Forest Service, passed away on 26 August 2014. He was a great person and a great forester, which most often goes together. He was very instrumental in international cooperation in Forest Research. I shall always be grateful for all what Sigurdur gave me and honor his memory. *Niels Elers Koch, IUFRO President*

IUFRO Meetings

Search our [online calendar](#) for a full list of meetings!
Find non-IUFRO meetings on the IUFRO [Noticeboard](#)!
Also search for forest-related events in GFIS at:
<http://www.gfis.net>



10-12 Sep 2014

Expert Workshop on Ecology and Restoration of Central and Northeast Asian Forests

Ulaanbaatar, Mongolia

IUFRO [1.01.00](#), [1.06.00](#)

Contact: John Stanturf, [drdirt4\(at\)gmail.com](mailto:drdirt4(at)gmail.com)

<http://www.iufro.org/science/divisions/division-1/1000/10600/activities/>

14-16 Oct 2014

2nd Restoring Forests Congress: What Constitutes Success in the 21st Century?

Lafayette, Indiana, United States

IUFRO [1.01.00](#), [1.06.00](#), [2.01.00](#), [3.02.00](#)

Contact: Liz Jackson, [jackson\(at\)purdue.edu](mailto:jackson(at)purdue.edu)

<https://www.purdue.edu/fnr/f/>

3-6 Dec 2014

Fifth International Conference on Plants & Environmental Pollution (ICPEP-5)

Lucknow, India

IUFRO [7.01.04](#)

Contact: Elina Oksanen, [elina.oksanen\(at\)uef.fi](mailto:elina.oksanen(at)uef.fi)

<http://isebindia.com/icpep-5/icpep-5.html>

11-12 Jan 2015

Meeting of IUFRO Working Party 2.04.10 Forest Tree Genomics and Annual 2.04.10 Forest Tree Workshop

San Diego, California, United States

IUFRO [2.04.10](#)

Contact: Lawrence Smart, [lbs33\(at\)cornell.edu](mailto:lbs33(at)cornell.edu)

11-16 May 2015

3rd World Teak Conference 2015: Strengthening Global Teak Resources and Markets for Sustainable Development

Guayaquil, Ecuador

IUFRO [5.06.02](#)

Contact: Roger Meder, roger.meder(at)csiro.au

P. K. Thulasidas, thulasidas(at)kfri.org

<http://asoteca.org.ec/3rd-world-teak-conference-2015-ecuador/>

7-12 June 2015

SWST 2015 International Convention: Renewable materials and the bio-economy

Jackson Lake Lodge, Grand Teton National Park, Wyoming, USA

IUFRO [5.10.00](#)

Contact Eric Hansen, eric.hansen(at)oregonstate.edu

<http://www.swst.org/meetings/AM15/>

8-12 Jun 2015

Tree Biotechnology 2015 Conference

Florence, Italy

IUFRO [2.04.06](#)

Contact: info(at)treebiotech2015.it

<http://www.treebiotech2015.it>

22-26 Jun 2015

Methodology of Forest Insect and Disease Survey in Central Europe: Fluctuation of Insects and Diseases

San Michele all'Adige, Italy

IUFRO [7.03.10](#)

Contact: Milos Knizek, knizek(at)vulhm.cz

<http://www.iufro.org/science/divisions/division-7/70000/70300/70310/activities/>

7-10 Sep 2015

Disease/environment interactions in forest decline "integrated ecosystem approach"

Perth, Australia

IUFRO [7.02.06](#)

Contact: Giles Hardy, G.Hardy(at)murdoch.edu.au

Treena Burgess, tburgess(at)murdoch.edu.au

Thomas L. Cech, Thomas.cech(at)bfw.gv.at

21-24 Oct 2015

Scientific cultivation and green development to enhance the sustainability of eucalypt plantations

Nanning City, Guangxi Province, China

IUFRO [2.08.03](#)

Contact: Shaoxiong CHEN, sxchen01(at)163.com

<http://www.euciufo2015.com/en/>

25-29 Apr 2016

IUFRO All-Division 7 Conference: Global change and forest health – climate change, biological invasions, air pollution, forest pathology, forest entomology, and their interactions

Istanbul, Turkey

IUFRO [7.00.00](#)

Contact: Eckehard Brockerhoff,

eckehard.brockerhoff(at)scionresearch.com

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

Other Meetings

22-24 Oct 2014

Global Challenges: Achieving Sustainability - Sustainability Science Congress

Copenhagen, Denmark

International Alliance of Research Universities (IARU)

<http://sustainability.ku.dk/iarucongress2014/>

18-21 Nov 2014

72nd session of the UNECE Committee on Forests and Forest Industry

Russian Federation in the city of Kazan, Republic of Tatarstan

<http://www.unece.org/forests/kazan2014.html>

26-29 Nov 2014

Second International Congress of Silviculture

Florence, Italy

Italian Academy of Forest Sciences, Italian State Forest Service, the Tuscany Region

<http://silviculturecongress.wordpress.com/>

1-12 Dec 2014

20th session of the Conference of the Parties and the 10th session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (COP 20/CMP 10)

Lima, Peru

http://unfccc.int/meetings/lima_dec_2014/meeting/8141.php

9-12 Mar 2015

3rd International scientific conference on "Combating desertification, land degradation and drought for poverty reduction and sustainable development: the contribution of science, technology, and traditional knowledge and practices"

Cancún, Mexico

UNCCD

<http://3sc.unccd.int>

17-20 Mar 2015

IV Mediterranean Forest Week

Barcelona, Spain

<http://med.forestweek.org/#sthash.ftx4osXr.dpuf>

7-11 Sep 2015

XIV World Forestry Congress

Durban, South Africa

Be part of the World Forestry Congress Programme: Call for abstract and submission of side event proposals to open soon!

<http://www.fao.org/forestry/wfc/en/>

12-16 Oct 2015

6th International Wildland Fire Conference

Gangwon-do Pyeongchang, South Korea

<http://en.wildfire2015.kr/>