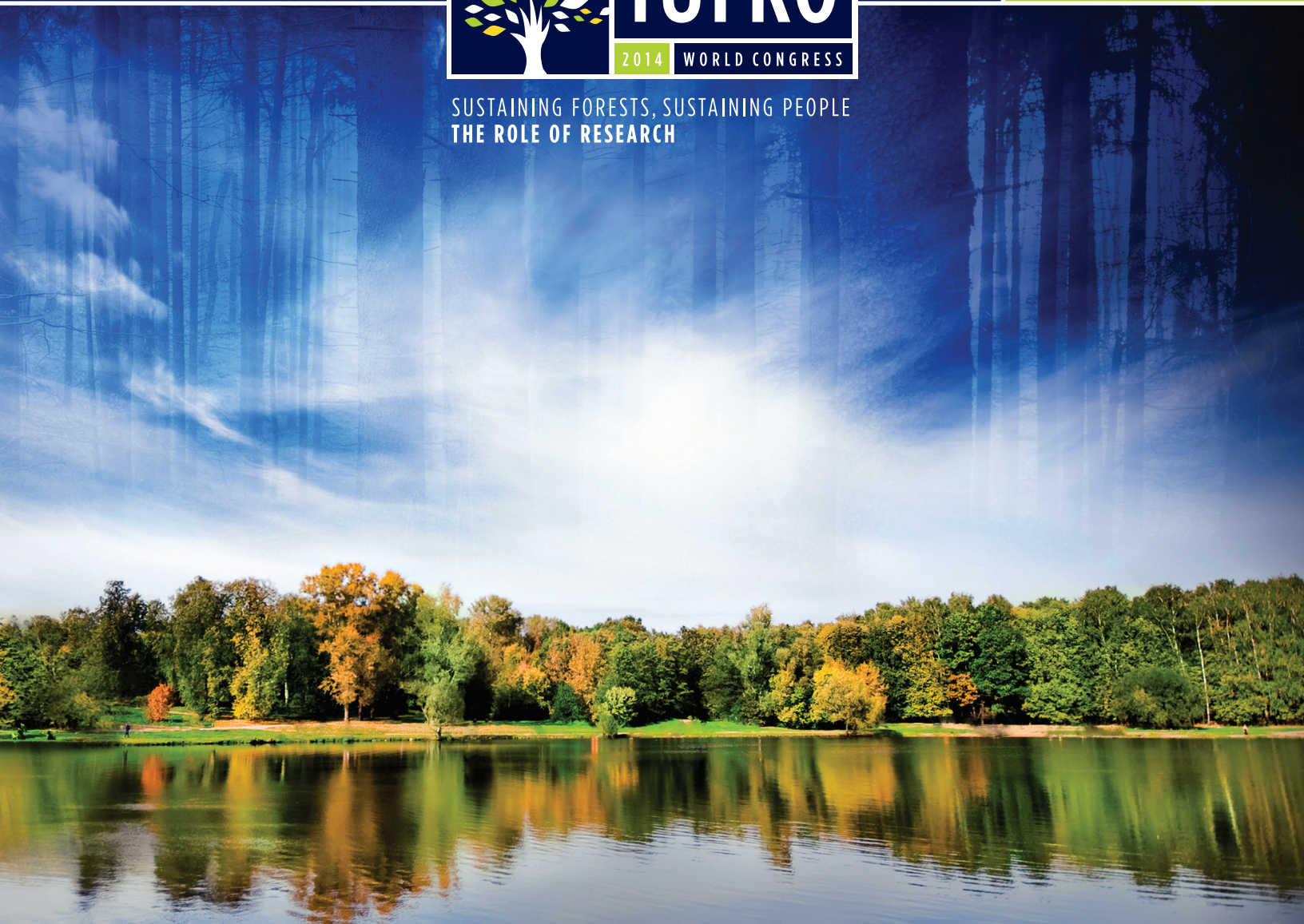


2014



SUSTAINING FORESTS, SUSTAINING PEOPLE  
THE ROLE OF RESEARCH



International Union of Forest Research Organizations

**XXIV WORLD CONGRESS** | **OCT 5-11**  
**2014**   
Salt Lake City, USA

**OFFICIAL  
ANNOUNCEMENT**



[www.iufro2014.com](http://www.iufro2014.com)

## International Host - IUFRO

IUFRO, the International Union of Forest Research Organizations, is a non-profit, non-governmental international network of forest scientists. IUFRO promotes global cooperation in forest-related research and enhances the understanding of the ecological, economic, and social aspects of forests and trees. It disseminates scientific knowledge to stakeholders and decision-makers and contributes to forest policy and on-the-ground forest management.

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### United States Host – U.S. Forest Service

The U.S. Department of Agriculture Forest Service is a federal agency that manages public lands in national forests and grasslands. The U.S. Forest Service is also the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry agencies. The Research and Development arm of the U.S. Forest Service works at the forefront of science to improve the health and use of U.S. forests and grasslands.

### Key Organizing Partners

The **National Association of University Forest Resources Programs** represents many of our nation's most prestigious universities and their respective scientists, educators, and extension specialists to advance the health, productivity, and sustainability of America's forests by providing university-based natural resource education, research, science, extension, and international programs.

The **Society of American Foresters (SAF)** is the national scientific and educational non-profit organization representing the forestry profession in the United States. Founded in 1900 by Gifford Pinchot, it is the largest professional society for foresters in the world. The mission of SAF is to advance the science, education, technology, and practice of forestry; to enhance the competency of its members; to establish professional excellence; and to use the knowledge, skills, and conservation ethic of the profession to ensure the continued health and use of forest ecosystems and the present and future availability of forest resources to benefit society.

### Congress Committees

The **Congress Organizing Committee (COC)**, chaired by Dr. Richard Guldin, U.S. Forest Service, is responsible for the organization of the Congress. Members of this committee include senior staff from universities, non-profits, and state, local, and federal government.

The **Congress Scientific Committee (CSC)**, chaired by Dr. John Parrotta, U.S. Forest Service, is responsible for the development of a high-quality scientific program. Members of this committee include representatives from IUFRO's Divisions and the International Forestry Student Association (IFSA).

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## Invitation from the Hosting Organization

The United States is proud to host the 2014 International Union of Forest Research Organizations (IUFRO) World Congress. I invite you to attend this important event.

The U.S. Forest Service has made valuable research contributions to forest management for over a century, with research as part of our mission since 1909. Forest management issues continue to change and evolve, and science has always led the way. Research expands what we know about forests and people and helps find new solutions for the challenges society faces today and into the future.

IUFRO is a key partner of the U.S. Forest Service. We have been a member of IUFRO for over 60 years. We rely on IUFRO's vast scientific expertise both to learn about others' research results and to share with others our findings. Through our partnership with IUFRO and its global network of 700 members, we provide sound, credible science to inform decisions made by land managers and policymakers around the world.

The National Association of University Forest Resources Programs (NAUFRP) and the Society of American Foresters (SAF) are special partners in co-hosting this event. The NAUFRP member universities – many of them IUFRO members – represent faculty, students, extension foresters, and alumni of universities and colleges across the U.S. They are the largest community of natural resources researchers in the U.S. outside of the U.S. Forest Service. The SAF – also an IUFRO member – is the U.S. professional society for all things forests. The SAF will hold its 2014 National Convention the same week, bringing an additional 1,000+ delegates to Salt Lake City, and joint sessions with the IUFRO Congress over its final three days will highlight recent successes in using the latest science to address complex resource management and policy issues.

The 2014 IUFRO World Congress will bring together scientists from the many disciplines that focus on forests, natural resources, and people. This Congress, titled "Sustaining Forests, Sustaining People: The Role of Research," will be unique and exciting. The scientific program of the Congress is robust, innovative, and diverse. Pre-Congress tours will be offered in other parts of the U.S., showcasing science and forest management while highlighting America's culture and iconic landscapes. Salt Lake City is situated in a unique and spectacular landscape in the American West and the Salt Palace Convention Center is a silver level LEED-certified sustainable facility. The Congress will offer exceptional keynote speakers, over 150 technical sessions for sharing the latest science and expanding your knowledge, a trade exhibition characterized by innovation, and plenty of networking opportunities. As part of the program, delegates will visit field sites that illustrate how managers of National Forests, tribal, federal, state, and private lands are using science to improve resource management.

It is with delight that the U.S. Forest Service and our partners invite you to join us in Salt Lake City, October 5 to 11, 2014. We promise that you will have an enriching and memorable time. We look forward to seeing you there!

*Sincerely,*  
*Chief Tom Tidwell*

## Invitation from the IUFRO President

### Warm Greetings from Copenhagen, Denmark!

On behalf of the International Union of Forest Research Organizations (IUFRO), it is my great pleasure to invite you to attend the XXIV IUFRO World Congress, which will take place at the Salt Palace Convention Center in Salt Lake City, Utah, United States, from 5 to 11 October 2014.

After Gainesville in 1971, the IUFRO World Congress, which is held every 4 to 5 years in various parts of the world, will again be convened in the United States of America. With this Congress, participants from all over the world will congregate at a place which offers both a world-class facility and scenic beauty in its surroundings.

This Congress will draw scientists from all fields of research related to forests and trees and stakeholders from all over the world. Outstanding speakers representing research, policy, and practice will present and discuss the latest research results and innovations on various themes, such as Forests for People, Forest Biodiversity and Ecosystem Services, Forests and Climate Change, Forest and Water Interactions, Forest Biomass and Bioenergy, Forests and Forest Products for a Greener Future, and Forest Health in a Changing World.

The scientific program will include a number of plenary, sub-plenary, technical, and poster sessions under the title "Sustaining Forests, Sustaining People: The Role of Research". Other exciting events and excursions are being organized as well; hence, you are all invited to participate and enjoy the scientific and social parts of this fascinating Congress.

I would like to encourage you to take time to experience the best of what an IUFRO World Congress has to offer.

Looking forward to seeing you in Salt Lake City in October 2014.

*Niels Elers Koch,  
IUFRO President*

## Congress Information

Date: **Sunday, 5 - 11 October, 2014**

Venue: **The Salt Palace Convention Center in Salt Lake City, Utah, USA.**

The 2014 IUFRO World Congress will meet in Salt Lake City, Utah, 5 - 11 October, 2014. The event will be held at the Salt Palace Convention Center. This is a world-class facility located in the heart of Utah's state capital, surrounded by the Great Salt Lake to the northwest and the steep Wasatch mountain range on the eastern borders. It was the media center for the 2002 Olympic Winter Games and has all the physical amenities needed to make attending the Congress a comfortable, enjoyable experience. The encircling mountains around Salt Lake City contain many narrow glacial and stream carved canyons, stunning forest species, most impressive is the aspen tree with its distinctive white bark and shimmering gold leaves. The entire area will be bursting with autumn color when you arrive in October.

In addition to the events of the Congress, there will be tours of the surrounding area, and you will find plenty of things to do in your leisure time. This area is rich in western U.S. history and the geography offers an opportunity to truly experience the vast beauty of the region.

To learn more about Salt Lake City and the Salt Palace Convention Center, please visit [www.visitsaltlake.com](http://www.visitsaltlake.com).

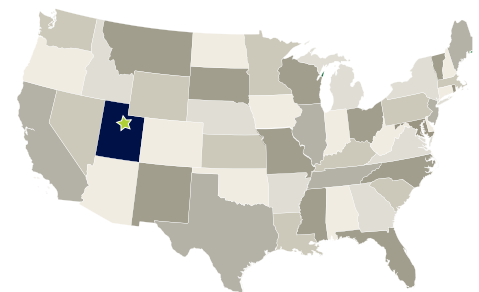
[Salt Lake City International Airport \(SLC\)](#) receives direct flights from many cities in Asia, Canada, Europe, and Latin America. Travel time between the airport and downtown Salt Lake City is about 10 minutes.

### Address & Contact Information

Salt Palace Convention Center Address:  
100 SW Temple, Salt Lake City, UT 84101

Phone: (385) 468-2222

Website: [www.visitsaltlake.com/  
salt-palace-convention-center](http://www.visitsaltlake.com/salt-palace-convention-center)



### Official Language

English is the official language of the Congress.

### Congress Website

Regularly updated information on the XXIV IUFRO World Congress will be available at the Congress website: [www.iufro2014.com](http://www.iufro2014.com).

## Scientific Program

The scientific program for the XXIV IUFRO World Congress will consist of plenary sessions, sub-plenary sessions, technical sessions, and themed poster sessions. In keeping with the spirit of the Congress title – Sustaining Forests, Sustaining People: The Role of Research – the Congress Scientific Committee (CSC) is developing a program to highlight how forest science is helping address significant environmental, social, and economic challenges facing our world. The program will reflect diverse contributions from the forest science community across the full range of natural and social science disciplines.

### The IUFRO 2014 Congress Scientific Committee

John Parrotta (Chair); Jens Peter Skovsgaard (Division 1); Yousry El-Kassaby (Division 2); Hans Heinimann (Division 3); Ronald McRoberts (Division 4); Andrew Wong (Division 5); Tuija Sievänen (Division 6); Tod Ramsfield (Division 7); Robert Jandl (Division 8); James Johnson (Division 9); Lisa Hansen (International Forestry Students Association); Richard Guldin (Congress Organizing Committee Chair); Jennifer Hayes (Congress Organizing Committee Project Manager).

### Call for Technical Session Proposals

The CSC invites the submission of session proposals for the 2014 IUFRO Congress through 30 April 2013. The Congress scientific program will reflect the forest research community's diverse contributions across the full range of natural and social science disciplines, with special emphasis on key issues and research areas identified in IUFRO's 2010-2014 Strategy.

Session proposals will be accepted that address one or more of the following Congress themes:

Forests for People

Forest Biodiversity and Ecosystem Services

Forests and Climate Change

Forest and Water Interactions

Forest Biomass and Bioenergy

Forests and Forest Products for a Greener Future

Forest Health in a Changing World

### Who may submit a proposal?

All who share an interest in the future of forests and forest science are invited to submit session proposals. We encourage proposals that involve collaboration between two or more

## ***Scientific Program (continued)***

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IUFRO Divisions or Task Forces and/or with organizations not formally associated with IUFRO, and from university students at all levels. We strongly recommend IUFRO officeholders and others actively involved in IUFRO Research Groups, Working Parties, and Task Forces communicate with their respective Division representatives on the CSC (or Task Force Coordinators) before submitting proposals – this will greatly facilitate broader involvement of IUFRO Divisions and Task Forces in the scientific program and avoid overlaps among sessions.

Session proposals from non-IUFRO member organizations are encouraged although preference will be given to those that are prepared jointly with IUFRO Divisional units and Task Forces (see <http://www.iufro.org/science/> for more information) – if assistance is needed to identify appropriate partners within IUFRO, please contact the Chair or other members of the CSC.

## **Preparing and submitting a session proposal**

Session proposals may be submitted between 15 January and 30 April, 2013, online at [www.iufro2014.com](http://www.iufro2014.com) using the Session Proposal Form. Proposals will not be accepted after 30 April, 2013.

In addition to providing basic information on session organizer(s), session title, alignment with Congress themes, and a short abstract of the session proposal, those submitting proposals should submit (online) a more complete proposal (as a Word document) that describes the session objectives and content in relation to Congress theme(s), proposed session format (i.e., presentation of individual papers and/or posters, moderated panel discussion, or other forms of presentation) and list of proposed speakers (if known), their organizational affiliations and tentative titles of their presentations. Proposed sessions should be organized to be 2 hours in length. For sessions involving oral presentations, we recommend that each speaker be given a minimum of 15 minutes for his/her presentation.

Please note that the abstract submission process will be open to all, so session organizers may need to include papers or posters that were not originally proposed for their sessions. Please be aware of this possibility and the need for flexibility in designing your session. In the event that the number of accepted abstracts for a particular session exceeds the number that can be accommodated in a single session, organizers may be given an additional session slot in the Congress program.

## **Criteria for selection**

Session proposals will be reviewed and evaluated by members of the CSC with primary consideration given to their scientific quality and relevance to the Congress themes. Other factors that will be considered are: the involvement of two or more IUFRO units (Divisions, Task Forces, Research Groups, and Working Parties) and/or non-IUFRO organizations; diversity of proposed session speakers/presenters; and the involvement of students and young scientists. Proposals will be evaluated as they are received, so we strongly encourage submissions well in



## Scientific Program (continued)

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advance of the 30 April, 2013 deadline. Acceptance decisions will be made no later than 30 June, 2013.

### Responsibilities of session organizers

Session organizers are 1) expected to communicate and coordinate with those who will be presenting papers or posters during their session regarding submission of abstracts, 2) are responsible for moderating sessions (or assigning session moderation responsibilities), 3) and are encouraged to pursue publication options for papers presented in their sessions.

Session organizers should note that all those who are expected to present papers or posters during their sessions will need to submit their abstracts via the Congress website ([www.iufro2014.com](http://www.iufro2014.com)) during the abstract submission period from July through October 2013.

Session organizers may be asked to assist the CSC in the editing of accepted abstracts. As formal Congress proceedings with full papers will not be published, session organizers should explore alternative publication options (books, special issues of journals, etc.) for their sessions. We look forward to hearing from you and to your active participation in the design of the scientific program of what promises to be a very memorable IUFRO Congress in the U.S.

### Call for Abstracts

The CSC invites the submission of abstracts for technical and poster sessions. Authors are asked to submit abstracts under one of the seven Congress themes listed above, selecting the appropriate technical session within each theme. A full list of accepted sessions will be posted on the Congress website in early July 2013, before the open period for abstract submission. An open Call for Abstracts will be issued 15 July 2013, with online abstract submission until 15 October 2013.

Acceptance decisions will be made by 30 November 2013.

While the CSC will accept abstracts in all official IUFRO languages (i.e., English, Spanish, French, and German), we strongly encourage abstract submissions in English to the greatest extent possible. Abstracts should be between 175-225 words in length, and should contain sufficient detail regarding the content of the proposed paper or poster to enable them to be evaluated by session organizers and the CSC. Abstracts should also include the title of the paper and the author's names and affiliations. Detailed submission guidelines and the template for abstract submission will be posted on the Congress website ([www.iufro2014.com](http://www.iufro2014.com)) by June 2013. Abstracts may be submitted via the website from 15 July until 15 October 2013. Authors of accepted abstracts will be informed of the CSC's decision by 30 November 2013.

**Presenting authors of accepted abstracts are required to register for the Congress by 30 April 2014.** Online registration will be open 30 November 2013.

All abstracts accepted by the CSC will be published by the XXIV IUFRO World Congress in a special volume of *The International Forestry Review* immediately prior to the Congress. A

## ***Scientific Program (continued)***

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copy of this volume will be included in the Congress registration package. Submission of an abstract implies consent by the authors to have the abstract published by the Congress. The CSC will review all submitted abstracts in collaboration with session organizers to determine their suitability for oral or poster presentations. Abstracts that fail to meet minimum standards or are not relevant to the Congress themes will not be accepted. Authors may submit multiple abstracts, but usually an individual will not be offered more than one oral presentation.

## **Call for Sponsors and Exhibitors**

### ***Sponsorship***

The IUFRO World Congress is expected to bring more than 3,500 participants from over 100 countries to Salt Lake City, Utah, USA. Field researchers, land managers, and policymakers will attend this premier event designed to facilitate learning and global cooperation among those who conduct research on, protect, manage, and use forests around the world. IUFRO World Congresses are held once every 5 years; this is the first Congress to be held in the United States since 1971.

The World Congress is being held in collaboration with the Society of American Foresters' 94th National Convention. This collaboration is expected to bring an additional 1,000+ forest land managers and decision-makers to the Salt Palace Convention Center. This event is a unique opportunity to promote your organization to a diverse domestic and global audience interested in many dimensions of managing natural resources, sustainability, and research.

By becoming a sponsor, your organization can help make the World Congress a success. Various sponsorship levels will be available. Your donations will help cover meeting costs and support items such as the Scientist Assistance Program, which provides financial assistance to scientists from developing countries to attend.

Through sponsorship, your organization will be promoted to the expected 4,500 participants, opening the door to new customers, collaborators, and supporters. Multiple sponsorship levels will be available, allowing all interested organizations to support this Congress. Benefits for our sponsors include opportunities to attend meetings, space for exhibition booths, and enhanced marketing and promotion. Sponsorship details will be available online this spring.

### ***Trade Exhibition***

A trade and technical exhibition will take place within the framework of the Congress. It offers a tremendous opportunity to showcase your products, services, and achievements in front of a stage of key decision-makers and industry leaders. Increase your visibility and company profile by becoming an exhibitor at this exciting event.

For more information or to become an Exhibitor or Sponsor, please contact Christopher Whited, Sponsorships and Exhibition Coordinator, at [whitedc@safnet.org](mailto:whitedc@safnet.org).

Further details about all of these programs will be available on the website [www.iufro2014.com](http://www.iufro2014.com)

## Special Programs

### Scientist Assistance Program

The Scientist Assistance Program (SAP) is designed to provide delegates from developing countries with financial assistance to participate in the XXIV IUFRO World Congress. Detailed guidelines on the selection criteria and how to apply for SAP support are posted on the Congress website. Applications will be submitted through the registration process, which opens 30 November 2013.

### Special Program for Developing Countries

IUFRO will host a week-long capacity-building training for approximately 100 scientists from developing countries from 30 September to 4 October 2014 in Snowbird, Utah. Training will focus on the science-policy interface, communications, and other skills. Applications for this program will be submitted through the registration process, which opens 30 November 2013.

### Pre-Congress Training Courses

A number of training courses will be organized and offered in the week before the Congress. These training events will focus on topics and skills relevant to scientists for enhancing the quality of research as well as its dissemination for policy and management. A full list of courses and details will be posted on the Congress website.

### Pre- and Post-Congress Tours

The United States is an incredibly diverse country, not only in its geography, climate and culture, but also in its landscapes and ecosystems. A wide variety of pre- and post-Congress tours will be offered to help participants to experience this diversity. Pre-Congress tours, varying in two to five days in length, will originate in a major city (Seattle, Indianapolis, Las Vegas, San Francisco, etc.). These tours will showcase a unique region of the U.S. and its associated geographies, elevational gradients, cultural, social, and biological resources. These tours will demonstrate various research and management approaches to natural resources issues, while taking participants to beautiful landscapes. Post-Congress tours will mostly include sightseeing to some of America's most iconic landscapes, including Yellowstone and the Canyons of Utah (Bryce, Capitol Reef, Arches). The final range of tours in addition to detailed itineraries and costs will be posted on the Congress website.

### Social Events

Exciting social programs such as a Tree Planting Ceremony, Exhibit Hall Opening, and Farewell Gala Event are being developed as part of the Congress. These events will highlight different aspects of America's culture in food and entertainment.

## ***Special Programs (continued)***

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### **In-Congress Tours**

The Congress registration fee includes participation in a full day In-Congress tour. A wide range of tours is being developed. Salt Lake City is located in a beautiful area in the Rocky Mountains of the U.S. and tours will visit surrounding areas and will focus on urban forestry, water, restoration, unique land management challenges, and climate change. Many tours combine several local points of interest to visitors both from the U.S. and abroad.

### **Companion Program**

An exciting Companion Program is planned that will take accompanying persons to a variety of local sites. Wildlife and bird viewing, hiking, historical sites, and shopping tours are planned. A comprehensive Companion Program ticket will be available, as will à la carte daily activity tickets.

### **More Information**

Further details about all of these programs are or will be available on the website at [www.iufro2014.com](http://www.iufro2014.com). You can also like us on Facebook ([www.facebook.com/iufro2014](http://www.facebook.com/iufro2014)) or follow us on Twitter [@iufro2014](https://twitter.com/iufro2014) for the most up-to-date information on the Congress.

## Registration

Registration begins 30 November 2013. All registration will occur online. Final registration fees and detailed payment instructions will be published in the Information Package and posted on the Congress website. Questions may be directed to Jennifer Hayes, [jenniferhayes@fs.fed.us](mailto:jenniferhayes@fs.fed.us).

## Accommodations

The COC is now negotiating with hotels and other accommodation properties to obtain special rates for Congress participants. Different levels of accommodations (from five star hotels to budget accommodation) will be offered. All hotels are within walking distance to the Congress venue. Lodging selection will occur during the registration process, or you can book directly through our website later this year.

### Key Dates for 2013

<b>15 JAN - 30 APR</b>	<b>Call for Technical Session Proposals</b>
<b>15 JUL - 15 OCT</b>	<b>Call for Abstracts</b>
<b>30 NOV</b>	<b>Registration Opens</b>

## General Information

### The United States of America

The United States, bordered by the Pacific and Atlantic Oceans, has an incredibly diverse climate and geography, the world's largest economy, and is a leading economic, political, and cultural force in the world, as well as a leader in scientific research and technological innovation.

### Salt Lake City – Host City

Combining the amenities of a major metropolitan area with the friendliness of a small, western city, Salt Lake City is an ideal location for group travel. A beautiful, safe, and vibrant city, Salt Lake combines unparalleled access to natural recreation, a bustling economy, dynamic nightlife, remarkable history, and warm hospitality.

For more information about Salt Lake City, visit <http://www.visitsaltlake.com/about-salt-lake/>.

### Contact

The 2014 IUFRO World Congress website at [www.iufro2014.com](http://www.iufro2014.com) is the primary and most up-to-date source of information about the program and all practical arrangements. You are also welcome to visit [www.iufro.org](http://www.iufro.org) or contact IUFRO Headquarters at [office@iufro.org](mailto:office@iufro.org).

Please “like” us on Facebook at [www.facebook.com/iufro2014](http://www.facebook.com/iufro2014).

For all inquiries regarding the Congress, please contact the Congress Organizing Committee at [jenniferhayes@fs.fed.us](mailto:jenniferhayes@fs.fed.us).

### Disclaimer

*Information presented above is true at the time of printing and is subject to change without notice. Please check the Congress website for updated information.*

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## Appendix I - Congress Themes

### Forests for People

Forests, woodlands, and agroforests play a vital role in the lives of people in both rural and urban communities, supporting livelihoods, food and energy security, human health and well-being, and culture. This theme, which focuses on social, cultural and economic aspects of the management and use of forest resources, covers a broad set of topics such as nature-based recreation and tourism, landscape planning and management, nature protection, community forest management, forest work, human health and well-being, urban forestry, forest ethics, forest history and culture, gender issues in forestry, rural development, and community well-being. Congress sessions within this theme will explore the linkages between human well-being and quality of life related to the environmental, economic, and social goods and services provided by forests both for urban and rural populations. They will also examine the roles of policy, planning, forest governance, formal and traditional knowledge, communication, education and training in the maintenance, enhancement, valuation, and optimization of benefits derived from forest ecosystems and forest products and services to people at local, regional, and broader spatial scales.

### Forest Biodiversity and Ecosystem Services

The conservation and sustainable use of forest biodiversity (at genetic, species, and ecosystem levels) is fundamental to the maintenance of forest regulating and habitat services responsible for provision of the environmental, economic, social, and cultural goods and services that people in both rural and urban communities depend on. Addressing the threats to forest biodiversity – including deforestation, forest fragmentation and degradation, unsustainable use, alien invasive species, and climate change – requires a more profound scientific understanding of the role of biodiversity in the provision of ecosystem services, and the impacts of biodiversity loss on responses and resilience of forest ecosystems, habitats, and species at different spatial and temporal scales to natural and human-induced disturbances. Sessions within this theme will explore these issues as well as such topics as the impacts and efficacy of different forest management practices on biodiversity in protected areas, community management, and more intensively managed forests for timber, non-timber forest products, and agroforestry systems; landscape-level strategies for forest biodiversity conservation and restoration; and challenges in achieving a balance between biodiversity conservation and sustainable utilization of forest resources.

### Forests and Climate Change

Understanding and anticipating the impacts of climate change on forest ecosystems and the services they provide to people are critical to efforts to develop and implement effective policies and management strategies for climate change mitigation and adaptation. Sessions within this theme will consider climate change effects on forest ecosystem structure and

## **Appendix I - Congress Themes (continued)**

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function; interactions with other natural disturbance and forest management regimes; monitoring and modelling of climate change-related impacts on forest ecosystems, landscapes, and communities; environmental, social, and economic implications of forest-based climate change adaptation strategies and mitigation opportunities (such as REDD+); silvicultural, planning and policy options for managing and restoring natural and planted forests to enhance carbon storage and other ecosystem services, as well as adapting natural and planted forests to climate change; the role of sustainable production and use of wood-based products in climate change mitigation (including wood-based substitutes for less "climate friendly" materials); and the contributions of forest genetics, restoration ecology and landscape ecology in climate change mitigation and adaptation, including incentives and issues of trans-boundary emission trading schemes.

### **Forest and Water Interactions**

Forests and forest cover play a crucial role with regard to sustaining the availability and quality of water critical for human well-being. The linkages between water, wetlands, and forests show the importance of managing ecosystems at watershed or landscape scales in order to protect these vital services. There is an urgent need for improved understanding of the interactions between forests, trees, and water (including riparian and coastal ecosystems) as affected by large-scale natural and human-induced disturbance, including climate change, as well as effects of land-use, land-cover change, and forest management on watershed hydrology and provision of water-related ecosystem services. Sessions within this theme will consider these broad issues as well as more specific questions such as water consumption of growing tree crops compared to other land uses, region-specific interactions of forests and water, water consumption of forest plantations and forest bioenergy systems, and governance and institutional arrangements related to management of forested watersheds.

### **Forest Biomass and Bioenergy**

The rapidly growing use of wood and other types of biomass for bioenergy, biofuels, and bio-based products requires the development of innovative production systems; more efficient use of material from plantations based on end-user, raw material, and processing requirements; and management of competition for biomass from planted and natural forests for energy vs other forest products and environmental services. Sessions within this theme will explore these issues as well as trends in plantation forestry and fibre-farming in relation to other important roles of forests such as biodiversity conservation and provision of other forest ecosystem goods and services such as carbon sequestration and protection of water quality. Additional topics that will be emphasized include breeding and selection of trees to meet changing biomass and bioenergy objectives, environmental and social impacts of forest resource competition, cascades of use and life-cycle analysis, 'eco-efficiency' of forest bioenergy production systems and technologies, and marketing of biomass and its economic impacts.



## ***Appendix I - Congress Themes (continued)***

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### **Forests and Forest Products for a Greener Future**

The future of sustainable forest management in the face of forest loss and ever-increasing demands for food, timber and wood fiber, water, and other ecosystem services, and uncertainties posed by globalization and economic, social, and environmental uncertainty is a fundamental challenge for the forest research community. Innovation in the field of forest products, goods and services, together with sustainable and environmentally responsible wood production systems and forest operations will play an important role in meeting these challenges. Sessions within this theme will explore: trends in demand for traditional and innovative forest products and ecosystem goods and services; increased use of wood in construction; managing conflicting needs of forest stakeholders; changing societal values, institutions, and forest governance structures under different sociocultural conditions and their role in sustainable management and use of forests in the future; development of new forest management approaches and processing techniques for environmentally and socially acceptable products and services; emerging landscape management (i.e., Green Infrastructure) approaches; valuation of benefits derived from non-wood forest products and ecosystem services; and forestry education, research, and training to meet future needs.

### **Forest Health in a Changing World**

Healthy forests are foundational to the delivery of ecological, economic and social benefits associated with forests, yet these benefits are under threat from disparate sources ranging from climate change to the side-effects of globalization. The sessions within this theme will focus on the three components of risk (as defined by the IPCC): hazard, vulnerability and exposure. Session topics will include trends in biotic and abiotic hazard occurrence including responses to climate change, the introduction of alien invasive species, and global trade as a pathway; vulnerability of forests including, tree resistance, shifts in pest and host species relationships, and forest resilience; exposure of society to forest health issues such as hazard tree management and the socioeconomic impacts associated with forest health; mechanisms of risk mitigation such as pest management solutions, alternative forest management strategies, global trade issues including alien species surveillance, forest pest incursion management, and phytosanitary protection risks and mitigation strategies for traded wood and packaging materials (i.e., suitable wood protection strategies).