

IUFRO Annual Report 2015

*International Union of Forest Research Organizations
Union Internationale des Instituts de Recherches Forestières
Internationaler Verband Forstlicher Forschungsanstalten
Unión Internacional de Organizaciones de Investigación Forestal*



www.iufro.org

Foreword

By Mike Wingfield, IUFRO President

A year has passed since our hugely successful 24th IUFRO World Congress and thus also my first year as President of our remarkable organization. It certainly has been a busy year; one in which we have set in place important new strategic initiatives and directions for our organization. These offer numerous new and interesting opportunities for IUFRO scientists to network and share research results, thus increasing the visibility of forest science worldwide. The impressive number of **80 IUFRO co-sponsored meetings** and a strong IUFRO presence in global policy processes and events provide ample evidence of a high level of activity and success in just the first year of the 2014-2019 Board term. My sincere thanks go to the many IUFRO scientists who have contributed to these accomplishments.

The start of a new IUFRO Board term provides a once in five-year opportunity for needed re-orientation and organization for IUFRO in general, and this is also especially the case for all our new officeholders. In 2015, this required, among other things, everyone in IUFRO to take first concrete steps towards achieving the goals set out in our new Strategy 2015-2019 that serves as our “roadmap” leading up to the XXV World Congress that will be held in Curitiba, Brazil. **In this Strategy subtitled “Interconnecting forests, science and people” IUFRO addresses five guiding research themes and three institutional goals.** These provide a framework for us to effectively respond to urgent global issues related to forests.

The first Board Meeting of a new Board term is always held in Vienna where our headquarters are based. Thus, the **54th Meeting of the IUFRO Enlarged Board** in April 2015 provided the first milestone to achieving our new goals. Dr. John Parrotta, Vice-President for Task Forces,



Mike Wingfield at the Bioeconomy Symposium in Vienna.
Photo by Robert Strasser/BMLFUW

Special Programmes, Projects and IUFRO-led Initiatives presented ten proposals for **new IUFRO Task Forces** at the meeting. Eight of these were approved in Vienna, and two additional Task Forces were approved later in the year. The new Task Forces will increase interdisciplinary scientific cooperation enabling us to address pressing challenges as well as to identify new opportunities in our rapidly changing world. The Board also approved the establishment of a **new Special Programme, the IUFRO Directors’ Forum**. This will provide a platform for the exchange of knowledge and experiences regarding the management of forest research at regional and global levels. With regards to the scientific structure of IUFRO, Prof. Björn Hånell, Vice-President for Divisions, presented an updated IUFRO Structure, which represents the scientific backbone of our organization; currently composed of 247 Units and led by 750 Officeholders.

I would like to take this opportunity to share with you some of the other major steps that IUFRO took in 2015 in keeping with our strategic themes and goals:

Prior to our 54th Board meeting, IUFRO was proud to organize a highly successful **International Bio-economy Symposium in Vienna**. This was undertaken in cooperation with the Austrian Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW). At this meeting, scientists emphasized the crucial role of forests and trees as a renewable resource for the production of a multiplicity of bio-products. Speakers also repeatedly stressed the need for cross-sectoral cooperation in research and policy matters. One of the important conclusions from this meeting was that there is an urgent need to maximize the contributions of forests to the global bio-economy, while at the same time ensuring their sustainability. It was widely accepted that IUFRO and its global partners will play an important role in meeting this challenge.

Field trip of IUFRO Board members to the forests and monastery of Klosterneuburg near Vienna.
Photo by Eva Schimpf/IUFRO



Building resilience with forests

Sub-theme dialogue on
“Building resilience with forests”,
World Forestry Congress 2015
Durban, South Africa.
Photo by Morné Booij-Liewes/FABI



were either organized or co-organized by IUFRO or featured IUFRO officeholders in prominent roles. IUFRO activities addressed a very diverse suite of topics ranging from forest and landscape restoration, and forest and water interactions, to forest-related education, and forest research management issues, to name but a few.

As IUFRO President, I had the honor to present a keynote address in the sub-theme dialogue on “Building resilience with forests”, and deliver an opening speech in the “International Forests & Water Dialogue”. The latter event culminated in the launch of a new five-year action plan for forests and water, an initiative of the ‘Forests and Water Agenda’, of which IUFRO is a partner organization. The initiative was initiated to generate new knowledge and evidence on forest-water interactions to be fed into the post-2015 Sustainable Development Agenda.

IUFRO has continued to be very **active in the Collaborative Partnership on Forests**, a partnership of 14 international organizations and secretariats with substantial programs on forests. When the mandate of the CPF was due for renewal in May 2015, IUFRO issued a call to its partners to make even better use of the CPF in order to improve the coherence of international policies and programs addressing issues relating to forests. IUFRO also recommended further strengthening the role of the CPF in providing scientific and technical advice. I am pleased to say IUFRO’s call was well-received by the member states of the United Nations Forum on Forests. This is reflected in the resolution adopted at the 11th session of the United Nations Forum on Forests (UNFF11) that was held in New York in May. In this way, the UNFF also acknowledged IUFRO’s leadership in the CPF Global Forest Expert Panels (GFEP). These panels provide a mechanism by which we are able to respond effectively to the information needs of policy makers and stakeholders at an international level. Against this background, it was most timely that GFEP successfully released a **comprehensive scientific analysis on the relationship among forests, food and nutrition** at UNFF11 and I was delighted to be part of this important occasion. The study appeared in the lead up to the United Nations’ finalization of the Sustainable Development Goals and provided useful insight into how the UN could respond to the “Zero Hunger Challenge” aimed to eliminate global hunger by 2025. I am sure that all will agree that IUFRO has made an important contribution to this crucially important goal - and we will continue to do so.

In September the **XIV World Forestry Congress**, hosted by the Republic of South Africa and organized by the FAO Forestry Department, brought together the global forestry community. This important event provided a forum to review and analyze the key issues related to forests worldwide and to share knowledge and plans to address them. **IUFRO used this opportunity most efficiently to highlight the importance of forest research, capacity building and education** and we were very well represented across the overall Congress program. A total of 18 different events

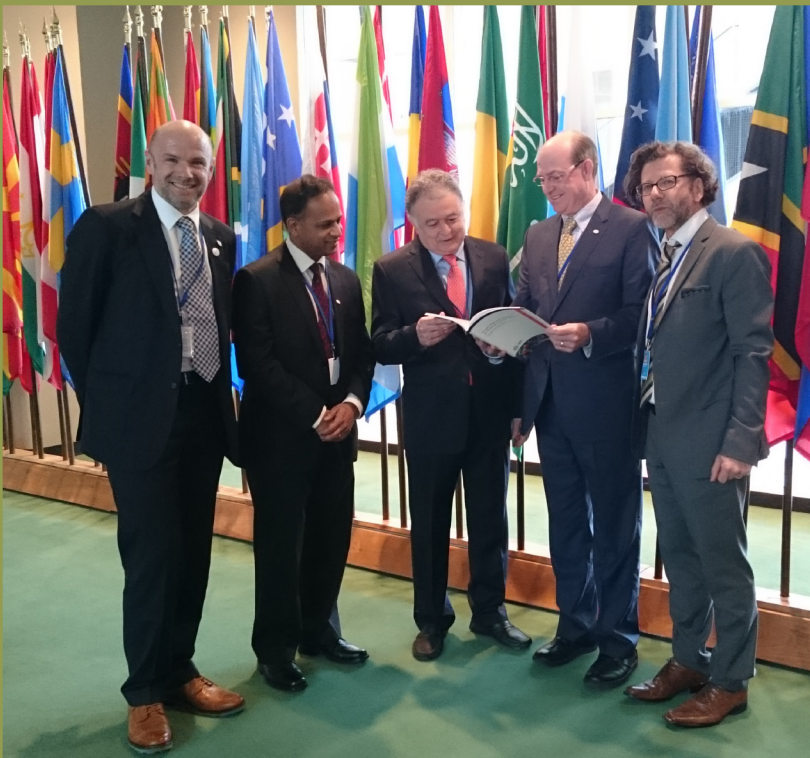
for forests and water, an initiative of the ‘Forests and Water Agenda’, of which IUFRO is a partner organization. The initiative was initiated to generate new knowledge and evidence on forest-water interactions to be fed into the post-2015 Sustainable Development Agenda.

The **2015 Global Landscapes Forum** held on the sidelines of the UNFCCC COP21 Climate Summit in Paris in December brought together some 3000 stakeholders from across sectors, including forestry, agriculture, water, energy, law and finance. IUFRO participated prominently in sessions and also in a thematic pavilion, where we launched the latest volume in IUFRO’s World Series entitled **“Forest Landscape Restoration as a Key Component of Climate Change Mitigation and Adaptation”**. This publication identifies and provides detailed descriptions of the many different ways in which forest landscape restoration contributes to both mitigating climate effects as well as providing guidance on how ecosystems and society can adapt to adverse effects of a changing climate.

I have outlined just a few of IUFRO’s achievements during 2015. What is important to say is that these have all resulted from valuable contributions and hard work on the part of many members of our extensive global network. I feel proud to lead such an amazing group of committed forest scientists and am deeply indebted to you all for contributing directly to IUFRO’s core objectives. But, in terms of the ‘bigger picture’ **I am especially grateful for the positive difference that you make to the future of forests and forestry.** I eagerly look forward to working with you during the coming year and as we move forward towards our meeting in Curitiba in 2019.

But in the interim, I look forward to meeting with many of you at our IUFRO Regional Congress for Asia and Oceania in October 2016 in Beijing, China! And then not much later in 2017 when we celebrate the great milestone of our 125th Anniversary.

With best regards
Mike Wingfield



11th Session of United Nations Forum on Forests, New York, USA: Handing over a signed copy of GFEP assessment report on forests and food security to UNFF Director Manoel Sobral Filho (centre). See page 25! Photo by Gerda Wolfrum/IUFRO



World Forestry Congress, Durban, South Africa: Side Event of IUFRO and the International Forestry Students' Association (IFSA) on Enhancing Forestry Education in Africa. Photo by Morné Booij-Liewes/FABI

Table of Contents

Foreword

By Mike Wingfield, IUFRO President 1

Outlook

By Björn Hånell and John Parrotta, IUFRO Vice-Presidents 4

IUFRO Divisions

Division 1 - Silviculture	5
Division 2 - Physiology and Genetics	7
Division 3 - Forest Operations Engineering and Management	9
Division 4 - Forest Assessment, Modelling and Management	10
Division 5 - Forest Products	12
Division 6 - Social Aspects of Forests and Forestry	13
Division 7 - Forest Health	15
Division 8 - Forest Environment	16
Division 9 - Forest Policy and Economics	18

Organizational Information

New Members in 2015	20
IUFRO Represented in the Regions	20

Task Forces

TF Forest Adaptation and Restoration under Global Change	21
TF Sustainable Forest Biomass Network	21
TF Sustainable Planted Forests for a Greener Future	23

Programmes, Projects, Initiatives

Special Programme for Development of Capacities (IUFRO-SPDC)	23
Global Forest Information Service (GFIS)	25
Global Forest Expert Panels (GFEP)	25
World Forests, Society and Environment (IUFRO-WFSE)	27

Finances

Sponsorships (Grants and In-kind Contributions to IUFRO in 2015)	29
--	----

IUFRO Board Members	30
IUFRO Headquarters (Vienna Office)	30
IUFRO Honours and Awards	30
IUFRO Headquarters Publications 2015	30
Editorial	30

Note:

All texts in this Annual Report have either been provided by IUFRO officeholders or have been taken from IUFRO conference information web sites and reports or IUFRO News.

Please note that in the IUFRO context the term "to sponsor/co-sponsor" a meeting does not imply any financial assistance. It means that IUFRO officeholders are prominently involved in the meeting and that IUFRO supports the promotion of the event through its media.

Outlook

By Björn Hånell and John Parrotta,
IUFRO Vice-Presidents

The immediate observation from our outlook tower is that the need for IUFRO's services to society never has been greater. Global population growth, the inevitable transition from our current fossil fuel-based to renewable energy-driven economies, and the need for more food, goods and services (from land areas that are not expanding) – these are all forest-related challenges! The historic climate agreement reached at the Paris Climate Conference in December 2015 presents challenges – and opportunities – for forest scientists to work together, and with our colleagues in numerous other fields as well as with decision-makers. Together we can develop viable and socially acceptable approaches that will help us reach our collective goal of a more sustainable future.

Beyond the climate challenge, the forest science community has much to contribute towards finding and helping to implement solutions to other pressing global concerns, such as biodiversity loss and degradation of the capacity of forests to provide the environmental, economic, social, cultural, spiritual and health benefits that sustain rural and urban societies worldwide. Solutions to these concerns are critically important, particularly for those who rely most directly on forests and trees outside of forests for their daily livelihoods needs – for food, clean water, energy, and incomes. With its global coverage and thematic breadth, IUFRO is well prepared to face these challenges. **Collectively, we expect our efforts in 2016 to build on the significant progress already made towards realizing the goals laid out in the IUFRO Strategy 2015-2019: *Interconnecting Forests, Science and People.***



Washington landscape. Photo by tpsdave

of events! The largest of these is the **IUFRO Regional Congress for Asia and Oceania 2016 to be held in Beijing, China, in late October.** With its broad theme "*Forests for Sustainable Development: The Role of Research*" it aims at reaching a common understanding about the status and trends of forests and the consequent research needs towards sustainable forestry development in the region. After all, Asia and Oceania is home to more than one-half of the world's population. While some countries have almost no forests, others have more than two-thirds of their land covered by forest vegetation, and the region includes some of the world's leading importers and exporters of forest products. Within the Regional Congress program, IUFRO Division 8 Forest Environment will hold its All-Division conference.

Congress website: <http://www.iufro-ao2016.org/en/>



IUFRO Regional Congress for Asia and Oceania 2016

Forests for Sustainable Development: The Role of Research

📍 Beijing, China 🕒 October 24 - 27, 2016



Much of what we do involves providing venues throughout the world for presentation and discussion of scientific research in conferences, symposia, seminars and workshops. The most comprehensive of those, with participation and input from all or most of the Working Parties and Research Groups in a Division, are the all-Division Conferences. Each of our nine Divisions will organize one such conference during the current 5-year term, often as part of a major IUFRO gathering.

In 2016, there are already more than 50 international meetings scheduled and announced in IUFRO's Calendar

Looking ahead, another great opportunity for experiencing the IUFRO atmosphere of friendship, collaboration and achievements is our **125th Anniversary, to be celebrated in September 2017 with a major conference in Freiburg, Germany.** Several Divisions will organize their all-Division Conferences there!

Work is well underway in preparation for this milestone celebration and for IUFRO's premier event – the **XXV IUFRO World Congress** - that is scheduled to take place in October **2019 in Curitiba, Brazil.** This will be the first IUFRO World Congress ever to be held in Latin America!

IUFRO is constantly striving to broaden and deepen the pool of scientific expertise actively involved in our work. Opportunities exist to become more involved in IUFRO's Special Projects, Programmes and IUFRO-led Initiatives, and to develop new Task Forces to expand our inter-disciplinary efforts aimed at addressing emerging issues in forest science and informing forest-related policy debates.

Although our Divisions are a strong force they can be made even stronger. **We welcome the establishment of new Working Parties or Research Groups on emerging topics**, and seek to refresh our team of Officeholders when vacancies arise in existing teams with committed colleagues, with a special emphasis on improving geographical representation and gender diversity among Officeholders. There are still opportunities for scientists who are willing to step in and serve as an Officeholder in the current term, especially as Deputy Coordinators in Working Parties (WP) – contacting the WP Coordinator is a good start!

2015 was a great year for IUFRO. We are confident that 2016 will provide many opportunities for us to build on this momentum, to strengthen IUFRO's global network, foster expanded international research collaboration within and beyond our disciplinary boundaries, and enhance communications with decision-makers and society at large for a greener and more harmonious future.



**Interconnecting Forests,
Science and People**

**125th Anniversary
Congress 2017**

<http://www.iufro2017.com>

Silviculture - Division 1

Coordinator: Jens Peter Skovsgaard, Sweden

Deputy Coordinators:

Kevin L. O'Hara, USA

Khosro Sagheb-Talebi, Iran

Pil Sun Park, Korea (Rep)

Major achievements in 2015

The overarching theme of the activities in [IUFRO's Division 1 Silviculture](#) during 2015 was adaptive forestry practices, focusing on climate change issues as more immediate environmental and social change processes.

We hosted and participated in a wide range of events and published on several of these. The publications on forest and land-scape restoration stand out as a special achievement.

During COP21 in Paris IUFRO hosted a very successful and well-attended side-event, organized together with CIRAD and CIFOR under the umbrella of the Global Landscapes Forum GLF (see box on page 6). The theme was *Restoring and Managing Natural Tropical Forests*. A video of the session is available at <http://www.landscapes.org/managing-restoring-natural-tropical-forests-glf-2015/>. Furthermore, at the GLF Volume 34 of the IUFRO World Series publications was successfully launched: *Forest Landscape Restoration as a Key Component of Climate Change Mitigation and Adaptation*. John Stanturf, Coordinator of Research Group 1.06.00 *Restoration of degraded sites*, is the lead author of this book. (Download the report here: <http://www.iufro.org/publications/series/>. Read more on page 24 of this Annual Report.)

Division 1 units also organized a side event on *Uneven-aged Silviculture* at the FAO World Forestry Congress in Durban, South Africa.

IUFRO 1.01.07 Field tour in the beech forests of Zunguldag, Turkey. Photo by Khosro Sagheb-Talebi



Forest and Landscape Restoration

Forest and landscape restoration has catapulted into international prominence with major undertakings and promises of significant restoration activity (i.e., the Bonn Challenge, New York Declaration on Forests, Aichi Biodiversity Targets, Net Degradation Neutrality).

Restoration was a prominent discussion topic at the Global Landscapes Forum in December 2015, a side event of the UNFCCC Climate Summit in Paris. Yet for all the discussion and press releases about hectares pledged and finances promised, the reality of what must be done in practice to restore forest and landscapes functions receives less attention. In particular, the time needed for improvement to be apparent seems little understood by policy makers.

The practitioner community, while basking in all the high-level attention, has yet to come to grips with the changes in expectations and practices that altered climate will necessitate. Division 1 has contributed to the high-level as well as practitioner and academic discussions, in collaboration with SPDC and other IUFRO units, through workshops, conferences, and publications.

Throughout 2015, the activities in Division 1 addressed many important issues relating to the main topics of IUFRO's Strategy 2015-19. In addition to forest restoration and uneven-aged forestry, these included pure and mixed forest topics, dryland forests, browsing, mountain forestry and agroforestry.

Some units have been very active in developing transnational research and management tools for silviculture, for example our Working Parties on pine and oak. Additionally, our unit for long-term ecological research has been very active discussing and promoting the importance of field-based research facilities as a basis for the development of sustainable management practices in forestry.

Meetings in 2015

16-20 March, Stellenbosch, South Africa
Silviculture and Management of Dryland Forests
IUFRO Working Party 1.02.05

26-28 March, Kathmandu, Nepal
Agroforestry Workshop
IUFRO Research Group 1.04.00

6-9 May, Sofia, Bulgaria
Forestry: Bridge to the Future
IUFRO Divisions 1.00.00, 4.00.00

24-29 May, Rovaniemi, Finland
17th IBFRA Conference
IUFRO Working Parties 1.01.01, 8.01.06

26-29 May, Tervuren, Belgium
XYLAREDD: Wood Science Underpinning Tropical Forest Ecology and Management
IUFRO Research Group 1.02.00

28-29 May, Arezzo, Italy
Silviculture of Mixed Forests in Europe
IUFRO Working Parties 1.01.06, 4.02.06, COST

3-6 June, Belgrade, Serbia
Reforestation Challenges
IUFRO Working Party 1.01.03, Division 2.00.00,
Research Group, 3.02.00

8-12 June, Astana, Kazakhstan
Rehabilitation and Restoration of Degraded Forests
IUFRO Research Group 1.06.00

7-9 July, Smokovce, Slovakia
Mountain Forest Management in a Changing World
IUFRO Working Parties 1.01.05, 4.03.03

11-13 August, Edmonton, Canada
SPRUCE 2015: Ecology, silviculture and management of spruce species in mixed forests
IUFRO Working Party 1.01.08, Division 8.00.00

1-6 September, Kastamonu, Turkey
10th IUFRO Beech Conference
IUFRO Working Party 1.01.07, Research Group 1.01.00

7-11 September, Durban, South Africa
Uneven-aged silviculture in tropical forests
IUFRO Research Groups 1.05.00, 1.02.00

14-16 October, Birmensdorf, Switzerland
Effects of ungulate browsing on forest regeneration and silviculture; IUFRO Working Parties 1.01.09, 1.01.12

19-22 October, Bishkek, Kyrgyzstan
Ecology and Conservation of Central Asian Mountain Forests
IUFRO Research Groups 1.06.00, 1.05.00, Task Force on Forest Adaptation and Restoration under Global Change

26-29 October, Yanji, China
Long-term Ecological Research and Sustainable Forest Management in Northeast Asia, IUFRO Working Party 1.01.13

16-17 November, Kathmandu, Nepal
Multi-stakeholder Consultation on Scaling up Modern Bioenergy Production and Use through Sustainable Agroforestry Systems, IUFRO Research Group 1.04.00

Physiology and Genetics - Division 2

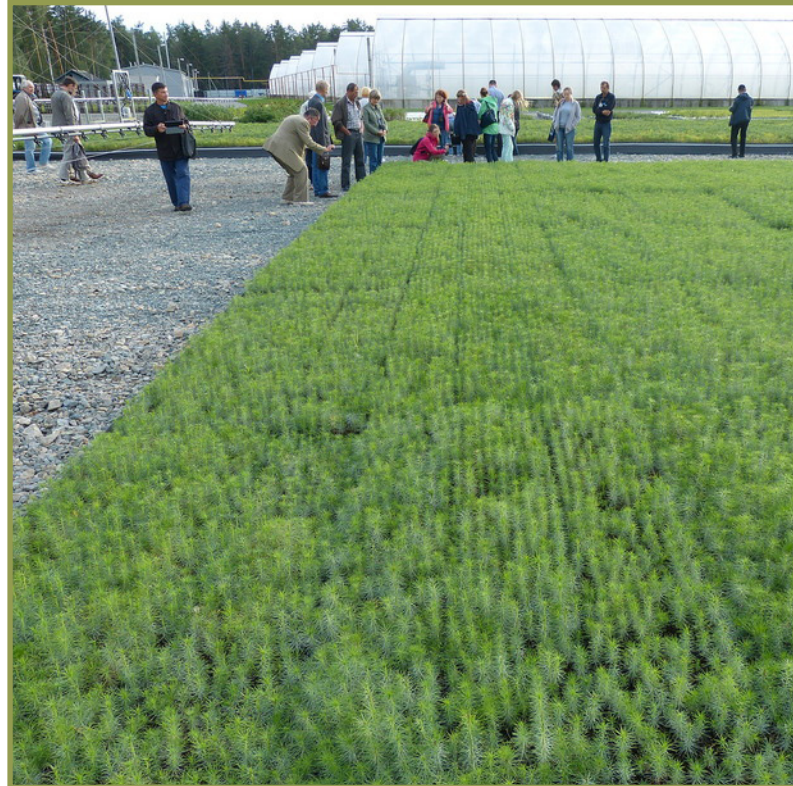
Coordinator: Yousry A. El-Kassaby, Canada
Deputy Coordinators: Janice Cook, Canada
Santiago C. Gonzalez-Martinez, France
Dario Grattapaglia, Brazil

IUFRO Division 2 includes research on physiology and genetics of forest tree populations. The physiology group encompasses units specialized in xylem physiology, shoot growth physiology, canopy processes, root physiology and symbiosis, cold and drought hardiness, and whole plant physiology. The genetics group is divided into conifer and hardwood breeding and conservation, population and quantitative genetics, genomics and biotechnology, and tree seed and propagation.

Division 2 has 5 Research Groups and 27 Working Parties with a total number of 92 Officeholders. We were successful in recruiting a new Division Deputy, Janice Cooke, Faculty of Science, Department of Biological Sciences, University of Alberta, Canada for the physiology component and our effort in rejuvenation with new Officers is on-going.

The Division had a very active 2015, hosting ten meetings spanning four continents (Africa, Asia, Europe and North America) with additional 6 meetings planned for 2016. An All Division 2 meeting is also planned in Prague, Czech Republic during 2018 (contact Milan Lstiburek, Coordinator 2.04.02 – Breeding theory and progeny testing). Most of these meetings were either intra-Division or inter-Divisions collaborative efforts, thus fostering a fertile environment for greater intellectual exchange within IUFRO.

June 8-12, 2015, Florence, Italy
Tree Biotechnology 2015 Conference
Forest: the importance to the planet and society
IUFRO Working Party 2.04.06



*Trip to the regional Altai Forest Seed Breeding Center “Altailes”.
Photo provided by Konstantin Krutovsky*

The 2015 IUFRO Tree Biotechnology Conference – “Forests: The importance to the planet and society” showcased current and emerging applications in forest biotechnology that are aimed at addressing the growing need for sustainable, renewable sources of biomass, in the face of climate change. The conference comprised four thematic areas, including:

1. Tree genomics and climate change,
2. Tree ecosystems, biodiversity, conservation and environmental interactions,
3. Tree biotechnology: molecular understandings of tree growth and development and applications for tree improvement, and
4. Biosafety: environmental risk assessment, monitoring and management, and socio-economic implications.

The scientific presentations at the conference highlighted cutting-edge advancements in many facets of forest biotechnology research, including tree physiology, stress response, molecular breeding, wood development, and an update on the status of the releases of the conifer genomes. In addition, the social, economic, and societal impacts of genetically modified (GM) trees were vigorously discussed as 2015 marked the first deregulation of GM-Eucalyptus in Brazil.

*Tree Biotechnology 2015
Conference. Photo:
www.treebiotech2015.it*



August 24-29, 2015, Barnaul, Russia

The Fourth International Conference on Conservation of Forest Genetic Resources in Siberia

IUFRO Research Group 2.02.00, IUFRO Working Party 2.02.15

The conference mainly aimed at developing an efficient scientific strategy for the protection and sustainable use of forest genetic resources in Siberia, the Ural Mountains and the Far East. 76 participants from 11 countries representing 65 research organizations attended; 68 oral presentations were made and 110 abstracts were published in Russian and English.

The conference was timely and important due to the huge biospheric role that Siberian boreal forest plays in global climate regulation and biogeochemical cycles. Despite this significant role there is still insufficient knowledge about the population genetic structure of the Siberian boreal forest and how it is affected by wildfires, anthropogenic effects (pollution, logging, etc.) and global climate change.

Conference participants concluded that new approaches based on the synthesis of traditional and modern molecular genetics and genomics methods are needed to develop efficient conservation and sustainable management programs, to protect and monitor the forest genetic potential and at the same time to increase forest productivity and resilience, including in plantation forests.

October 21-24, 2015, Zhanjiang City, China
Scientific cultivation and green development to enhance the sustainability of eucalypt plantations
IUFRO Working Party 2.08.03

The conference was hosted by the Chinese Society of Forestry and Chinese Academy of Forestry and covered the following topics:

- 1) Ecological and social sustainability of eucalypt plantations
- 2) Genetics and breeding
- 3) Silviculture and management
- 4) Forest health and nutrition, and
- 5) Wood technology and utilization

The meeting had 415 participants from 24 countries involving 204 institutions. Besides several keynote presentations, the meeting encompassed 56 oral presentations and 41 posters. The conference proceedings will be published in a special issue of the journal *Australian Forestry*.



*1st International Conference on Reforestation Challenges.
Photo by Simon Place*

More Meetings in 2015

3-6 June, Belgrade, Serbia and Montenegro
1st International Conference on Reforestation Challenges
IUFRO Working Party 1.01.03, Division 2.00.00, Research Group 3.02.00

17-20 August, Fredericton, New Brunswick, Canada
Forest Genetics 2015: Integrating Tree Breeding, Silviculture, and Growth and Yield
IUFRO Working Parties 2.09.01, 2.04.01

23-28 August, Orléans, France
5th International Workshop on the Genetics of Tree-Parasite Interactions
IUFRO Working Parties 2.02.15, 2.02.20, 7.02.05, 7.03.11

25-27 August, Montpellier, France
18th International Meeting on Frankia and Actinorhizal Plants - ACTINO 2015
IUFRO Working Party 2.08.02

4 September, Durban, South Africa
Research Symposium: Underpinning sustainable tree plantations in Southern Africa
IUFRO All Divisions

6-11 September, Honne, Norway
12th International Christmas Tree Research and Extension Conference
IUFRO Working Party 2.02.09

23-24 October, Penn State University, Pennsylvania, USA
Integrating Genomics Tools in American Chestnut Restoration
IUFRO Division 2.00.00

Forest Operations Engineering and Management - Division 3

Coordinator: Woodam Chung, USA

Deputy Coordinators: Jean-François Gingras, Canada, and Ola Lindroos, Sweden

[IUFRO Division 3](#) made a great start to the new IUFRO term (2014-2019) with forty-five global leaders in their respective fields committed to serve as IUFRO Office-holders for the Division's eight Research Groups and five Working Parties. In 2015, we continued to take the lead and coordinated efforts to achieve the aims of Division 3, including:

1. Understand the fundamental principles of forest operations systems.
2. Develop concepts, methods and tools to support the design, control, implementation and management of the systems.
3. Disseminate knowledge across the globe in a timely manner.

In addition to these aims, we also set out three strategies to enhance our research visibility, and strengthen our research and education capacities across the globe. These strategies include:

1. Improve communication within and beyond Division 3.
2. Promote collaboration across disciplines.
3. Support education to foster the next generation of research scientists in our fields.

New harvester attracted the attention of participants of the tour of the AUSTROFOMA Expo, which was part of the 48th International Symposium on Forestry Mechanization (FORMEC) held in Linz, Austria, October 6-8, 2015. Photo by Woodam Chung



Communication

The **Division 3 Podcast Series** was launched to share research outcomes and practical experiences among research scientists, forest practitioners and students. Global leaders share their perspectives on emerging research trends, on-going challenges and potential solutions in their fields of research and practice. We hope these podcasts help improve communication within Division 3, as well as enhance our visibility among larger forest science and professional communities. A free subscription for listening to the IUFRO Division 3 Podcast Series is available at the IUFRO website (<http://www.iufro.org/science/divisions/division-3/30000/podcasts>), iTunes and Google Play Store.

Meetings 2015

Division 3 organized and sponsored a total of eight international conferences in 2015, covering a wide variety of topics from broad forest engineering to reforestation and mechanized silviculture.

18-20 March, Zagreb, Croatia
CROJFE 2015 International Scientific Conference on Forest Engineering
IUFRO Division 3.00.00

19 May, Rome, Italy
Symposium on Mobilization of Woody Biomass for Energy and Industrial Use – Smart Logistics for Forest Residues, Pruning and Dedicated Plantations
IUFRO Research Group 3.04.00

3-6 June, Belgrade, Serbia
1st International Conference on Reforestation Challenges
IUFRO Research Group 3.02.00

19-22 July, Lexington, USA
38th Council on Forest Engineering
IUFRO Division 3.00.00

19-21 August, Uppsala, Sweden
16th Symposium for Systems Analysis in Forest Resources (SSAFR)
IUFRO Research Group 3.04.00

4-8 October, Linz, Austria
48th International Symposium on Forestry Mechanization (FORMEC)
IUFRO Division 3.00.00

11-15 October,
Sunshine Coast, Australia
International Conference on Small-Scale and Community Forestry and the Changing Nature of Forest Landscapes
IUFRO Research Group 3.08.00

25-26 November,
Suonenjoki, Finland
OSCAR Workshop – Mechanized and Efficient Silviculture
IUFRO Research Group 3.02.00

Publications

Ivetić, V. and D. Stanković (Eds.) 2015. Proceedings: International Conference on Reforestation Challenges, 3-6 June 2015, Belgrade, Serbia. *Reforesta*. 301 pp. ISBN 978-86-918861-1-0, DOI: 10.5281/zenodo.31739.

Kanzian, C., M. Kühmaier and G. Erber (Eds.) 2015. *Forest Engineering: “Making a positive contribution”*. Abstracts and Proceedings of the 48th Symposium on Forest Mechanization. Linz, Austria 2015. 512 pp.

Contreras, M. (Ed.) 2015. *Engineering Solutions for Non-industrial Private Forest Operations*. Proceedings of the 38th Annual Meeting of the Council on Forest Engineering. July 19-22, 2015, Lexington, Kentucky, USA. 376 pp.



2015 OSCAR Workshop participants, Natural Resources Institute Finland (Luke). The objective of the workshop was to present and discuss state-of-the-art research on mechanized silviculture. Photo by Ville Kankaanhuhta

Meadows, J., S. Harrison, and J. Herbohn (Eds.) 2016. *Small-scale and Community Forestry and the Changing Nature of Forest Landscapes*, Proceedings from the IUFRO Research Group 3.08 Small-scale Forestry Conference held on the Sunshine Coast, Queensland, Australia, 11 – 15 October, 2015, 214 pp.

Forest Assessment, Modelling and Management - Division 4

Coordinator: Jean-Luc Peyron, France

Deputy Coordinators:

Ronald E. McRoberts, United States

Jerry Vanclay, Australia

Lidija Zadnik-Stirn, Slovenia

[IUFRO Division 4](#) includes: studies of growth and yield (including mensuration); forest resource inventory (collection and analysis of resource data); forest management planning and managerial economics; remote sensing; management sciences of forest enterprises; statistical methods, mathematics and computer technology.

October 11-14, 2015, Blacksburg, Virginia, USA

2015 Southern Mensurationists Annual Meeting and Fourth International Conference on Forest Measurements and Quantitative Methods and Management

IUFRO Division 4

Although much progress has been made in modelling forest trees and stands, there are still significant gaps to

be filled with regard to forest responses to management practices and environmental influences. Advances in statistical sciences and computing technology continue to have profound effects on forest modelling and inventory techniques. Quantifying forest biomass at multiple scales is an important and challenging problem for forest mensurationists.

This conference was co-sponsored by the Southern Mensurationists, a regional group in the US that is dedicated to promoting quantitative applications in forestry, and Division 4 of IUFRO. Joint meetings are organized periodically to enhance the breadth of mensurational topics and methods discussed. The 2015 conference was the fourth time that the Southern Mensurationists and IUFRO have co-sponsored a meeting in the USA.

19-21 August, 2015, Uppsala, Sweden

16th Symposium for Systems Analysis in Forest Resources (SSAFR)

IUFRO Division 4, Research Groups 3.04.00 and 9.02.00, and Working Party 4.04.04.

The conference was an excellent meeting place for experts on operations analysis in a broad sense. It brought together researchers at very different stages of their careers, from PhD students to professors taking part in the very beginning of the SSAFR series, and from different continents, this time a blend of primarily American and European researchers.

The meeting was organized by the Forestry Research Institute of Sweden (SKogForsk) and the Swedish University of Agricultural Sciences.

6-9 May, 2015, Sofia, Bulgaria
Forestry: Bridge to the Future
IUFRO Divisions 4 and 1

The main focus of this international conference was on climate change and the need to find adequate ways to adapt forests and natural ecosystems to it. For this purpose it is necessary to continue with activities as a careful analysis of meteorological information; development of appropriate silvicultural systems; genetic research and breeding focused to establishing and use resistant and tolerant genotypes; improving methods for limitation of abiotic and biotic damage; development of systems to mitigate the impact of climate change; monitoring and prevention activities in forest ecosystems.

The conference was dedicated to the 90th anniversary of higher forestry education in Bulgaria. One of the conference sessions was the 7th Annual Meeting of the Conference of Deans and Directors of European Forestry Faculties and Schools (ConDDEFFS).

More Meetings in 2015

17-20 March, Barcelona, Spain
Fourth Mediterranean Forest Week (IV MFW)
IUFRO Working Party 4.04.04

13-15 April, Łagów, Poland
Decision Support Systems for Forestry Purposes
IUFRO Working Party 4.02.05



Forestry: Bridge to the Future, Sofia 2015: Group picture.
Photo by John Kolev/copyright University of Forestry, Sofia

4-6 May, Sarajevo, Bosnia and Herzegovina
International Symposium on Cross-sectoral Policy Impacts on Managerial Economics and Accounting in Forestry
IUFRO Research Group 4.05.00, Working Party 9.05.03

28-29 May, Arezzo, Italy
COST Action EUMIXFOR Workshop: Silviculture of Mixed Forests in Europe
IUFRO Working Parties 4.02.06, 1.01.06

7-9 July, Smokovce, High Tatra Mountains, Slovakia
Mountain Forest Management in a Changing World
IUFRO Working Parties 4.03.03, 1.01.05

9 September, Durban, South Africa
Integrative approaches to improve sustainable forest management under climate change - Side event at the XIV World Forestry Congress
IUFRO Working Party 4.04.08

28-30 September, La Grande Motte, France
SilviLaser 2015
IUFRO Division 4, Working Party 8.01.02



Participants in the field excursion to the Reynolds Homestead in the Piedmont region of Virginia visiting research studies aimed at an improved management of pines and hardwood species.
Photo by Arne Pommerening

Forest Products - Division 5

Coordinator: Pekka Saranpää, Finland

Deputy Coordinators:

Jamie Barbour, United States

Roger Meder, Australia

Andrew Wong, Malaysia

IUFRO Division 5 has ten Research Groups and altogether 23 Working Parties including all aspects from wood raw material properties and processing to marketing and sustainability. The Division has a total number of almost 100 Officeholders. Its main focus is on wood based products but we also share interest in non-timber forest products.

A new Working Party 5.02.12 “Protection with natural products” was formed. This WP was conceived as part of a quest in wood protection research to develop low environmental/mammalian toxicity wood protection chemicals as opposed to relatively hazardous industrial biocides. Natural products (extractives) from trees and plants have shown to confer biological resistance of wood in laboratory and/or field studies, hence there could be future commercial use of natural products in wood protection. Philippe Gerardin from the Université de Lorraine, France, is the Working Party coordinator.

21 March 2015,
Eskisehir, Turkey

Wood is Good - World Wood Day

IUFRO Division 5 and Working Party 5.10.01

Endorsed by IUFRO Division 5 and WP 5.10.01 “Wood culture”, World Wood Day 2015 celebrations included an international, collaborative project with 23 artisans from 17 countries, who designed and constructed a timber “bridge” (arch) and erected it in the town square, a few blocks from the venue of the meeting. The events of World Wood Day are focused on wood culture, which encompasses the human use of wood: the value and the way people use wood in society. The technical symposium with 31 speakers was held under the heading of *Wood and Humanity: An Interdisciplinary Approach to Sustainable Development*.



Howard Rosen and Andrew Wong representing IUFRO Division 5 at the World Wood Day celebrations

11-15 May 2015, Guayaquil, Ecuador

3rd World Teak Conference 2015

IUFRO Working Party 5.06.02

The conference “Strengthening Global Teak Resources and Markets for Sustainable Development” was jointly organized by the Asociación Ecuatoriana de Productores de Teca y Maderas Tropicales (ASOTECA), the Food and Agriculture Organization of the United Nations (FAO), International Teak Information Network (TEAKNET), the IUFRO WP 5.06.02 and the event organizer Soluciones Ambientales Totales (SAMBITO). The WTC 2015 focused mainly on economic, social, technical and environmental issues that have an impact on the production, marketing and trade of teakwood. It facilitated the transfer of knowledge and technology among teak growing countries.

11-15 May 2015, Viña del Mar, Chile

46th Annual Meeting of the International Research Group on Wood Protection (IRG)

IUFRO Research Group 5.03.00

Officeholders of IUFRO Research Group 5.03.00 attended also as members of IRG and presented their findings on wood durability and wood protection. The event attracted well over 150 delegates from many regions, from academia and industry, who also enjoyed a memorable in-conference vineyard tour apart from gaining insights into wood protection and termite threats encountered in Chile and other regions.

More Meetings in 2015

12 June, Jackson Lake Lodge, Wyoming, United States

Research Group Meeting Forest Products and Communities at the 58th International Convention of the Society of Wood Science & Technology

IUFRO Research Group 5.10.00

17-22 September, Damyang, South Korea

10th World Bamboo Congress: Bamboo for a Greener Future

IUFRO Division 5.00.00, Working Party 5.11.05

5-7 November, Brasov, Romania

10th International “Conference Wood Science and Engineering in the Third Millennium” - ICWSE 2015

IUFRO Research Groups 5.04.00, 5.05.00

5-7 November, Yundola, Bulgaria

8th Scientific Conference: Innovations in Forest Industry and Engineering Design

IUFRO Division 5.00.00, Research Group 5.04.00

Social Aspects of Forests and Forestry - Division 6

Coordinator: Tuija Sievänen, Finland

Deputy Coordinators:

Cecil C. Konijnendijk van den Bosch, Sweden

Teresa Cristina Magro, Brazil

Taylor Stein, United States

Beside timber production and timber-based products, other ecosystem services are becoming increasingly important. Forests play a remarkable role in solving problems related to climate change and other environmental problems. All those problems have an impact on human life, on communities and individuals. Cultural and social ecosystem services are important particularly to urban populations, which are not connected to forests via their jobs, livelihoods or everyday life.

Forest is seen as the environment of leisure time and a destination of visit or travel by many people. Wellbeing and health benefits are increasingly among the key topics that societies now consider as key outputs of forest resources, particularly in developed, highly urbanized countries. Work conducted by scientists in Division 6 contributes greatly to these topics.

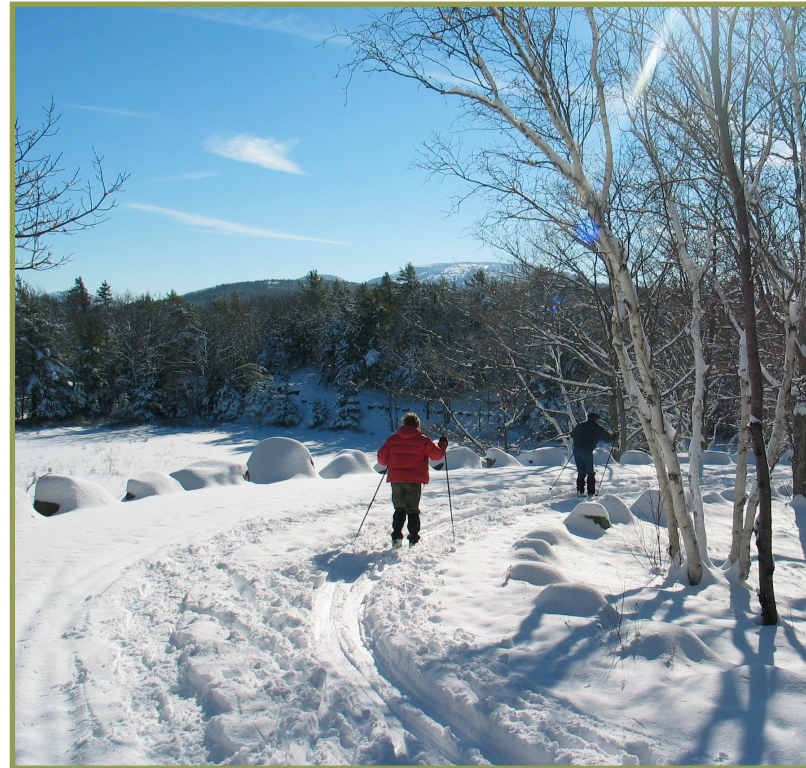
Interest in and importance of research focusing on the social aspects of forestry is increasing all over the world. Gender issues in forestry, rural development and urban forestry are strong topics in [Division 6](#). Monitoring sustainable forest management and a need for good social indicators continues to be of interest particularly in Europe.

There is a continuous research interest in topics related to forests and human health, which nowadays are studied in good partnership between forest scientists, social scientists, and scientists from the medical and food sectors. The studies concern multiple aspects: physical and mental health benefits as well as new pharmacological, cosmetic and food products.

Events and Other Activities

Research Group 6.01.00 Forest Recreation

In spring 2015 a group of Division 6 scientists provided an expert report on evaluation of Forest Europe indicator 6.10 'Forest recreation' in order to improve social indicators for the Forest Europe process. The EU Horizon 2020 project 'Diabolo' started work in 2015. RG 6.01 scientists contribute to the development of methodology of how to include the recreational use of forest resources into the process of National Forest Inventories. The project will continue until 2018.



Recreation in the forest: Cross country skiing in Acadia National Park, USA. Photo by tpsdave

Research Group 6.04.00 Nature Conservation and Protected Areas

The unit was actively involved in the VIII Brazilian Congress of Conservation Units (CBUC) and the IV International Symposium on Nature Conservation (September 21-25, 2015). During the CBUC a Technical Meeting was organized (September 24) in order to discuss two themes: 'Visitor experience in protected areas in the XXI century - what changes?' and 'IUFRO World Congress in 2019'. The following topics were discussed: "What has been done that may help devising the future of public and private areas designated for recreation", and the "Use of technology in pristine areas".

Research Group 6.07.00 Urban Forestry

The group organized an EFUF (European Forum on Urban Forestry) conference 'Connecting the Street Tree to the Forest – Strengthening Nature for Urban Living' on 9 – 13 June 2015 in Brussels, Belgium, the European i-Tree Conference (2 March 2015) in Alnarp, Sweden, and an Australia – New Zealand Forestry Conference (13-15 April 2015) in Creswick, Victoria, Australia.

The Urban Forestry RG has maintained an interactive website where members can search for other members by geographic location or area or expertise. This website facilitates interaction and transfer of knowledge among members and others in the scientific community. To date 320 members from 26 countries have registered for the directory (<http://www.itreetools.org/iufro/index.php>).

Research Group 6.08.00 Gender and Forestry

RG 6.08 has been active in several conferences organizing sessions and other events. The major activity was the *International Conference on Competence for the Future: Challenging gendered notions of learning forest and forestry* organized by the Department of Forest Utilization, Faculty of Forestry, Warsaw University of Life Sciences and IUFRO Working Party 6.08.02 – Education, gender and forestry. The conference took place on 27-30 August 2015 at the Faculty of Forestry, Forest Experimental Station Rogów near Łódź, Poland. It was included as one of the elements in the celebration of the 200 years of agricultural and forestry education.

A number of regional and national activities in support of the overall mission – to increase attention, knowledge and engagement in gender and forestry as a field of research – has also been initiated, organized or coordinated by RG 6.08.00 Officeholders. A workshop “For opening forestry doors by female power” was held on 6 December, 2015 in Itoshima City, Fukuoka, Japan. In Japan, 17 forestry women’s groups (“Forestry Girls”) have been established by prefectures (<http://forestrygirls.wix.com/portal>). Furthermore, a symposium on “Decentralization, Power and Tenure Rights of Forest Dependent People” was held in India with 23 participants from 10 countries.



Forestry Girls Japan. Photo <http://forestrygirls.wix.com/portal>

A XIV World Forestry Congress Side Event was organized on the “Art of communication and building capacity for forest tenure, governance and society diversity” on September 9 in Durban, South Africa.

In Sweden, several follow-up studies/evaluations and activities have been carried out in relation to the implementation of “The National Strategy for Gender Equality in the Forestry Sector”, and the Swedish Government’s vision of the forest sector as the “The Forest Kingdom – with values for the world”.

Research Group 6.09.00 Forest Education

RG 6.09 focused on getting the IUFRO Task Force on Education in Forestry started together with IFSA. The group was involved in organizing the SILVA Network annual conference 2015 in Vienna, Austria on 16-18 April, 2015.

Research Group 6.10.00 Rural Development

RG 6.10 has been active in co-organizing and providing input to conferences in Asia. The *2nd International Conference on Tropical Biology: Ecological Restoration in Southeast Asia: Challenges, Gains and Future Directions*

on 12-13 October 2015 in Bogor, Indonesia, was co-organized with Biotrop (Southeast Asian Regional Centre for Tropical Biology). Input was given to two important conferences: *Linking Ecosystem Service to Livelihood of Rural Communities* (Seoul National University, South Korea, 12-16 October) and the *8th International Conference on Traditional Forest Knowledge and Culture in Asia* (Nanjing, China, 7-9 November).

A Selection of Reports from Division 6

Andersson, E. Johansson, M., Lidestav, G. and Lindberg, M. Language and practices of gender equality: processes of governance and change in the Swedish forestry sector

Kleinschmit, D., B. Sijapati Basnett, A. Martin, N. D. Rai, and C. Smith-Hall. 2015. Drivers of forests and tree-based systems for food security and nutrition, in B. Vira, Wildburger, C. and Mansourian, S. (eds) „Forests, Trees and Landscapes for Food Security and Nutrition: A Global Assessment Report“ IUFRO World Series Volume 33, CPF and IUFRO

Sievänen, T., Arnberger, A., Dehez, J., Edwards, D., Fredman, P., Hunziker, M. & Jensen S., F. Development of Forest Europe Indicator 6.10. MS 49 p. (publishing in process).

Forest Health - Division 7

Coordinator:

Eckehard Brockerhoff, New Zealand

Deputy Coordinators:

Elena Paoletti, Italy

Jolanda Roux, South Africa

Andrew Liebhold, USA



Poster session during the conference “Population dynamics and integrated control of forest defoliating and other insects” (Working Parties 7.03.07, 7.03.06 and 7.03.13) in Sopot, Poland. Photo provided by Lidia Sukovata

In 2015 the [Forest Health Division of IUFRO](#) maintained its usual high level of activity among the three Research Groups (RG) and most Working Parties (WP). There were nine conferences and meetings of Division 7 Working Parties and Research Groups; six of these took place in Europe, two in Asia, and one in South America.

Research Group 7.01.00, “Impacts of Air Pollution and Climate Change on Forest Ecosystems”, held its biennial conference in Nice, France, in June 2015. The conference was attended by 122 delegates from 38 countries. Topics covered experimental, monitoring, and modelling studies documenting air pollution and climate change impacts on forests worldwide. Conference proceedings are in press in two peer-reviewed journals, *Environmental Pollution* and *iForest*. At the conference it was agreed to merge WP 7.01.02 and WP 7.01.04 in order to facilitate concurrent application of physiological, genetic and molecular approaches. The merged WP will continue as WP 7.01.02 “Genetic, biochemical and physiological processes”.

RG 7.01.00 was involved in a number of interdisciplinary activities including two IUFRO Task Forces. The new Task Force on ‘Climate Change and Forest Health’ includes a large membership from many organizations and is coordinated by Elena Paoletti. Research Group members also contribute to the new Task Force ‘Sustainable Forest Biomass Network’ which is coordinated by Viktor Bruckman, who is also a Deputy Coordinator of WP 7.01.03.

Within **Research Group 7.02.00**, “Pathology”, three meetings were organized last year. A joint meeting of WP 7.02.02 (Foliage, shoot and stem diseases of forest trees) and WP 7.03.04 (Diseases and insects in forest nurseries) took place in Uppsala, Sweden. WP 7.02.04 (Phytoplasmas and virus diseases of forest trees) organized a workshop as a satellite meeting to the XVIII International Plant Protection Congress in Berlin, Germany. WP 7.02.01 (Root and stem rot of forest trees) met in Antalya, Turkey. Collectively, there were 173 participants at these three meetings, from up to 22 countries. In addition, there was a jointly organized meeting with WP 7.03.11.

A new Working Party in RG 7.02 was founded on “Forest health in southern hemisphere commercial plantations” (WP 7.02.13), coordinated by Rebecca Ganley (New Zealand), Rodrigo Ahumada (Chile), Angus Carnegie (Australia) and Carlos Perez (Uruguay). The first meeting of the new Working Party will take place as a session at the upcoming Division 7 conference in Istanbul. Judging by the interest in this session and the number of abstracts that were submitted, the new Working Party is enjoying considerable interest from the forest health community.

In **Research Group 7.03.00**, “Entomology”, there were three Working Party conferences last year, as well as an interdisciplinary “International Workshop on the Genetics of Tree-Parasite Interactions” (in Orléans, France) that was a joint activity of 7.03.11 (Resistance to insects), 7.02.05 (Rusts of forest trees), and two RG 2.02 (Conifer breeding and genetic resources) Working Parties (2.02.15 and 2.02.20). WP 7.03.10 (Methodology of forest insect and disease survey in Central Europe) met in San Michele all’Adige, Italy, with 54 delegates from 17 countries, primarily from Europe.

A conference on “Population Dynamics and Integrated Control of Forest Defoliating and Other Insects” was held in Sopot, Poland, as a joint meeting of three working parties (7.03.07 “Population Dynamics of Forest Insects”, 7.03.06 “Ecology and Management of Forest Defoliating Insects”, and 7.03.13 “Biological Control of Forest Insects and Pathogens”), with 75 delegates from 23 countries.

Finally, a conference on “A Global Perspective on the Ecology and Management of Bark and Wood Boring Insects”, was held in Bariloche, Argentina (as a joint meeting of WP 7.03.05 “Ecology and Management of Bark and Wood Boring Insects” and WP 7.03.12 “Alien Invasive Species and Global Trade”). There were 68 delegates from 23 countries, with 60% of attendees coming from South America. We are pleased to see the increased activity in Latin America as this is a region where traditionally IUFRO has not had that much participation.



has been in the making since the IUFRO World Congress in 2014 will appear in 2016 as a special issue of the journal 'Forestry – An International Journal of Forest Research'. The special issue is themed 'Forest health in a changing world: Effects of globalisation and climate change on forest insect and pathogen impacts' and was coordinated by Tod Ramsfield, Barbara Bentz, Massimo Faccoli, Hervé Jactel, and Eckehard Brockerhoff. Another highlight was the publication of a paper entitled 'Planted forest health: The need for a global strategy' by Mike and Brenda Wingfield, Eckehard Brockerhoff and Bernard Slippers in the journal 'Science'.

Working Party 7.03.10 "Methodology of forest insect and disease survey in Central Europe" meeting in San Michele All'adige, Italy. Photo provided by IUFRO WP 7.03.10

A new Working Party 7.03.15, "Social dimensions of forest health" started and is led by Mariella Marzano together with Robert Haight, Tom Holmes and Carina Keskitalo as deputies. We welcome the addition of social dimensions activities to our Division and we look forward to interactions across all Research Groups and Working Parties.

Publications and Mailing Lists

A number of publications were prepared in conjunction with Division 7 conferences. One publication project that

Division 7 and our Research Groups produce newsletters on a regular basis, usually one or two per year. These can be found on the IUFRO website at the respective Research Group pages under "Publications & References". The three mailing lists of the Division 7 Research Groups (ForClimAir, ForPath, and ForEnt) continue to enjoy much support from the community. Collectively there are about 1200 subscribers, across the 3 lists (e.g., <http://lists.iufro.org/mailman/listinfo/rg70300-forent>). In addition there is a Division 7 mailing list.

Forest Environment - Division 8

Coordinator:

Jean-Michel Carnus, France

Deputy Coordinators:

Sandra Luque, France

Shirong Liu, China

Alex Mosseler, Canada

[IUFRO Division 8](#) concerns the study of forest ecosystems and landscapes, forest biodiversity, watershed hydrology, natural hazards and risk management. Currently, Division 8 includes 3 Research Groups and 21 Working Parties with a total number of 56 Officeholders.

In 2015, many units of the Division contributed actively to the preparation and development of 4 new IUFRO Task Forces (Forests, Soil and Water Interactions; Forest Adaptation and Restoration under Global Change; Contribution of Biodiversity to Ecosystem Services in Managed Forests; Sustainable Planted Forests for a Greener Future) and their subsequent contributions to major international events such as the World Forestry Congress in Dur-

ban (September 2015) and the pre-COP21 scientific conference "Our Common Future under Global Change" in Paris (July 2015). During the year, Division 8 organized or co-sponsored 8 meetings, among them 3 main international conferences in North America (*Forest and Water in a Changing Environment*), Europe (*Sustaining Ecosystem Services in Forest Landscapes*) and Asia (*Symposium on Forest Soils*) in collaboration with the International Union of Soil Sciences to celebrate the International Year of Soils - IYS 2015).

Some major global research results, challenges and future trends relevant for Division 8 were addressed and discussed during the year:

Forest soils: As emphasized through IYS events, healthy soils are crucial for sustainable forests in changing climates and are the foundations of many forest ecosystem services. Innovative technologies and novel approaches for characterisation of soil biodiversity and measurement of soil quality are increasingly used to simulate and monitor the effects of local forest management and climate change, and to untangle the linkages between soil processes and forest ecosystem functioning and services.

Forest and water interactions play a vital role in regulating hydrological cycles and sustaining ecosystem servi-

ces. The forest and water relationship varies with temporal and spatial scales and is influenced by climate, topography, soil, and forest dynamics and management. A comprehensive understanding of forest-water interactions under climate change, land use and land cover change, and forest management regime, is a critical need, particularly in large watersheds. New knowledge and innovative tools for optimizing the trade-offs between water use, water yield, and a wide range of water-related ecosystem services provided by forests, need to be developed and integrated into watershed and landscape management.



Participants at the biannual IUFRO Working Party 8.01.02 Forest Landscape Ecology Conference, 23-30 August 2015, Tartu Estonia. Photo by Sandra Luque

Forest landscapes: A key emerging theme is the necessity to broaden the scope of the planning horizon from forest plots to landscape scale. Even though this approach is complex and involves important policy and socio-economic implications, landscape scale appears to offer the best opportunity for sustained provision of ecosystem services. Also, it was broadly recognized that collecting and managing information, education, knowledge transfer, conflict resolution, and adaptive management are important elements to the success of sustaining ecosystem services in forest landscapes around the world.

Meetings in 2015

24-28 October, Fuzhou, China
4th International Symposium on Forest Soils "Linking soil processes to forest productivity and water protection under global change". IUFRO Working Party 8.01.03

18-20 October, Guangzhou, China
Symposium "Effects of forest carbon mitigation on soil and water". IUFRO Working Party 8.01.07 and Task Force Forests, Soil and Water Interactions

28-30 September, La Grande Motte, France
SilviLaser 2015, 14th conference on "Lidar applications for assessing and managing forest ecosystems". IUFRO Working Party 8.01.02 and Division 4.00.00

23-30 August, Tartu, Estonia
Sustaining ecosystem services in forest landscapes – concepts, research and applications. IUFRO Working Party 8.01.02

11-13 August, Edmonton, Alberta, Canada
Ecology, silviculture and management of spruce species in mixed forests. IUFRO Division 8.00.00, Working Party 1.01.08

6-9 July, Kelowna, British Columbia, Canada
4th IUFRO International Conference on "Forests and water in a changing environment". IUFRO Working Party 8.01.07 and Task Force Forests, Soil and Water Interactions

24-29 May, Rovaniemi, Finland
17th International Boreal Forest Research Association Conference. IUFRO Working Party 8.01.04

9-11 April, Brno, Czech Republic
International conference "Coppice forests: past, present and future". IUFRO Research Group 8.02.00

Other events:

7-10 July 2015, UNESCO, Paris, France: 'Our Common Future under Climate Change' Scientific conference in preparation to COP21, hosted by France in December 2015. Co-organization of 2 sessions (IUFRO Research Group 8.01.00, Working Party 8.01.02)

- Tropical forest degradation in the context of climate change: Improving predictions of tropical forests responses to global change: the new generation of remote sensing data and exploration methods
- Climate smart forestry - Integrating mitigation and adaptation into sustainable development

Publications

Azevedo, J.C., A.H. Perera & M.A. Pinto (Eds.). 2015. *Forest landscapes and global change: challenges for research and management*. Springer. 262pp.

Book of Abstracts 2015, *Forest Landscape Ecology: Sustaining Ecosystem Services in Forest Landscapes*, Tartu, Estonia, 23-30 August 2015, IUFRO 8.01.02., 236 p.

Contribution to the IALE Bulletin, Vol.33(3): 17-20 October 2015 ISSN 1570-6524

Masamichi Takahashi, George Shaw, Frederic Coppin, 2015. *Radioactive contamination in forest ecosystems and safe uses of forest products*, Special issue of Journal of Environmental Radioactivity. (proceedings of session B-20 of IUFROWC 2014)

Proceedings of SilviLaser 2015

Contribution to FAO 2015 "Forest and Water Five Year Action Plan".

Contribution to the Outcome Statement of the conference "Our common future under climate change" (CFCC) to the negotiators of the Paris COP21 (with particular emphasis on transitional forests & state of the art forest monitoring from space).

Forest Policy and Economics - Division 9

Coordinator:

Daniela Kleinschmit, Germany

Deputy Coordinators:

Mercy Afua Adutwumwaa Derkyi, Ghana
Jurij Begus, Slovenia

Division 9 includes units dealing with information services and knowledge organization; management of forest research; forest and woodland history; forest sector analysis; social and economic aspects of forestry; forest policy and governance; forest law and environmental legislation.

Among the highlights of 2015 were the “Extension & Knowledge Exchange Conference” in Ireland and the conference on “Cross-sectoral Policy Impacts on Managerial Economics and Accounting in Forestry” in Bosnia-Herzegovina. In addition, Division 9 Coordinator Daniela Kleinschmit participated, among other things, as a panelist in the IUFRO “Bio-economy Symposium: Sowing Innovation – Reaping Sustainability; Forests’ Crucial Role in a Green Economy” organized in cooperation with the Austrian Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW), prior to the IUFRO Enlarged Board meeting 2015 in Vienna, Austria.

Meetings in 2015

4-6 May, Sarajevo, Bosnia-Herzegovina

Cross-sectoral Policy Impacts on Managerial Economics and Accounting in Forestry

IUFRO Research Group 4.05.00, Working Party 9.05.03

With the aim to capture a broad analysis of the issues related to sustainable forest management in the context of cross-sectoral policy impacts on economic returns to forest management as well as to assess how forest mana-

gerial economics and accounting can provide information for policy deliberations, the international IUFRO Symposium “Cross-sectoral policy impacts on managerial economics and accounting in forestry” was jointly organized by two IUFRO units (Working Party 9.05.03 – Cross-sectoral Policy Impacts on Forests and Environment and Research Group 4.05.00 – Managerial Economics and Accounting) in Sarajevo, Bosnia-Herzegovina, on 4-6 May 2015.

This international IUFRO symposium intended to capture a broad analysis of the issues related to sustainable forest management in the context of cross-sectoral policy impacts on economic returns to forest management as well as to assess how forest managerial economics and accounting can provide information for policy deliberations.

28 September - 2 October, Galway, Ireland

Extension & Knowledge Exchange Conference

IUFRO Working Party 9.01.03

Ireland and the current efforts to rebuild its forest industry and encourage traditional farmers to include planting and tending trees as part of their farming activities, provided the perfect backdrop for exploring issues of the human dimensions of changing landscapes.

Extension and knowledge exchange does not exist only in the world of natural resource management: extension has a responsibility to help individuals and communities adapt to changing environmental conditions. This is the challenge facing Ireland and it provided the foundation for this conference. The conference focus was on the evolution of extension and knowledge exchange within the context of a rapidly changing world. Changes in environmental conditions brought about by climate change, governmental policies, etc., sparked lively discussions regarding the role of extension and knowledge exchange in addressing these and other issues.



Lidija Zadnik Stirn addressing the audience.
Photo provided by Bruno Maric.



Participants of the Extension and Knowledge Exchange meeting during a field tour learning about spruce thinning in Galway, Ireland.
Photo by Susan Moore

19-21 August, Uppsala, Sweden

16th Symposium for Systems Analysis in Forest Resources (SSAFR)

IUFRO Research Group 3.04.00, Division 4.00.00, Working Party 4.04.04, Research Group 9.02.00

The 16th Symposium of System Analysis in Forest Resources brought together researchers and practitioners that develop and apply methods of optimization, simulation, management science, and systems analysis to forestry problems. It reported the state-of-the art on the development and use of operations research and system analysis to enhance forest management planning and forest policy analysis (also see under Division 4).

9 September, Durban, South Africa

Traditional Values, Practices and Forest Policy: Transforming Local Challenges into Renewed Partnership

Side event at the XIV World Forestry Congress
IUFRO Working Parties 9.03.00, 9.05.06

The side event aimed to explore how to achieve a viable symbiosis between interests and objectives that dominate mainstream forest and forest landscape policy making and management planning, and the views and preferences of the multiple stakeholders who operate based on entirely different resource and exchange ethics and values as well as knowledge.

14-16 October, Helsinki, Finland

International Workshop on Forest Science Publishing

IUFRO Working Party 9.01.06

The International Workshop on Forest Science Publishing, the first activity of the new IUFRO Working Party on forest science publishing, took place on 15-16 October 2015 in Helsinki, Finland. The event, which was hosted by the Finnish Society of Forest Science, focused on the changing scientific publication environment and the resulting challenges for forest science journals. The workshop gathered editors of forest science journals and scientists interested in publishing from Europe, North America, and Australia. Editors of scientific journals - especially those published by learned societies and other small publishers - rarely get a chance to discuss about their editorial challenges.

Thus, the workshop participants welcomed the opportunity opened by the new IUFRO Working Party.

20-22 May, Barcelona, Spain

IUFRO WP Communication and Public Relations Meeting
IUFRO Working Party 9.01.02

20-22 May, Brasov, Romania

16th International Symposium on Legal Aspects of European Forest Sustainable Development
IUFRO Research Group 9.06.00

19-23 August, Beijing, China

New Frontiers of Forest Economics (neFFE): Forest Economics beyond the Perfectly Competitive Commodity Markets
IUFRO Research Group 9.04.00

9-11 September, Sheffield, UK

3-day Conference/Symposium: Wilder By Design? - Managing Landscape Change and Future Ecologies
IUFRO Research Group 9.03.00, Working Party 9.03.01

12-16 October, Seoul, Korea

Linking Ecosystem Services to Livelihood of Rural Communities
IUFRO Working Party 9.04.03

7-9 November, Nanjing, China

8th International Conference on Traditional Forest Knowledge and Culture in Asia: Linking Biological and Cultural Diversity with Landscape Management
IUFRO Working Parties 9.03.04, 9.03.05

8-12 December, Ubon Ratchathani, Thailand

3rd ACMECS Bioenergy Workshop: Future Development of ACMECS Bioenergy: Regional Plan and Standardization
IUFRO Task Force Sustainable Forest Biomass Network, Research Group 1.03.00, Working Parties 7.01.03, 9.04.02

Publications

The Rise and Fall of Countryside Management. A Historical Account

This new publication by Ian D. Rotherham, coordinator of IUFRO Research Group 9.03.00, provides a critical overview of the history and importance of countryside management, detailing the achievements of a largely forgotten sector and highlighting its pivotal yet often underappreciated role in the wellbeing of people and communities. It serves as a challenge to students, planners, politicians, conservationists, environmentalists, and land managers, in a diversity of disciplines that work with or have interests in countryside, leisure and tourism, community issues, education, and nature conservation.

Defining and assessing forest governance. Definitions of forest governance from a research perspective. Lukas Giessen and Gerard Buttoud. February 2015.



Keynote talk by Professor Mikko Mönkkönen, University of Jyväskylä, Finland, on the challenges and innovative solutions to scientific peer-review. Photo by Pekka Nygren

New Members in 2015

Member Organizations

BENIN 1009.00.00

Amis de l'Afrique Francophone-Bénin
(AMAF-BENIN)
02 BP
1962 Cotonou

INDIA 0730.00.00 (reinstatement)

Kerala Agriculture University
College of Forestry
Thrissur, Kerala 680656

ITALY 1007.00.00

Società Italiana di Selvicoltura ed Ecologia Forestale (SISEF)
c/o DIBAF - University of Tuscia
Via San Camillo de Lellis
01100 Viterbo

KENYA 1010.00.00

African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE)
PO Box 30677-00100
Nairobi

MALAYSIA 1008.00.00

Pulau Banding Foundation
Unit 3A-3, 4th Floor, Perdana The Place
Jalan PJU 8/5G, Damansara Perdana
47820 Petaling Jaya, Selangor Darul Ehsan

UNITED KINGDOM 1011.00.00

University of Birmingham
Birmingham Institute of Forest Research (BIFoR)
Earth Sciences Bldg.
Birmingham B15 2TT

UNITED STATES 1006.00.00

The Ohio State University
School of Environment and Natural Resources
2021 Coffey Road
Columbus, Ohio 44691

Associated Members

CHILE 836

Estay Sergio
Universidad Austral de Chile
Instituto de Ciencias Ambientales y Evolutivas
Campus Isla Teja s/n
Valdivia

IRAN 833

Hormoz Sohrabi
Tarbiat Modares
University
Faculty of Natural
Resources and Marine
Sciences
PO Box 14115-335
Noor, Mazandaran

JAPAN 831

Kohsaka Ryo
Kanazawa University
Graduate School of
Human and Socio-Environmental Studies
1 Kakuma, Kanazawa
Ishikawa 920-1192

MALAWI 835

Munthali Maggie
Ministry of Natural Resources, Energy
and Mining
Regional Forestry Office
Department of Forestry
PO Box 65
Lilongwe

PHILIPPINES 834

Dano Maria Noelyn
22D One Pacific Place, dela Costa St.
Makati City 1220

PORTUGAL 838

Azevedo Joao
Centro de Investigacao de Montanha
(CIMO)
Instituto Pliotécnico de Bragança
Campus de Santa Apolónia / Apartado
172
5300-253 Braganca



*Growing walnuts.
(Petr Kratochvil, all-free-download)*

SOUTH AFRICA 837

Gebreslasie Michael
University of KwaZulu-Natal
School of Agriculture, Earth and Environmental
Sciences
University Road, Westville / Private Bag
X 54001
Durban 4000

SWITZERLAND 832

Mansourian-Stephenson Stephanie
Consultant - Environment and Development
36 Mont d'Eau du Milieu
1276 Gingins

UNITED KINGDOM 830

Sayyed Imam
Maelor Forest Nurseries Ltd.
Fields Farm, Bronington
Whitchurch, Shropshire SY13 3HZ

IUFRO Represented in the Regions

IUFRO Officeholders (OF), Member Organizations (MO); and Meetings (MT) per Region

Region:	OF	MO	MT
Europe:	292	221	46
Northern America:	163	124	9
Latin America:	48	58	5
Africa:	34	61	8
Asia:	112	137	11
Oceania:	30	25	1
Total:	679	626	80

IUFRO Task Force on Forest Adaptation and Restoration under Global Change

Coordinator: Andreas Bolte, Germany

Deputy Coordinators:

Mercy Afua Adutwumwaa Derkyi, Ghana

Palle Madsen, Denmark

John Stanturf, USA

In the face of climate and global change forest adaptation and restoration is a key issue for securing forest integrity, vitality and productivity (cf. theme 2 of the IUFRO 2015-2019 strategy). The new [Task Force](#) is dedicated to globally compile and improve knowledge of how to achieve an optimal adaptation status of forest and forests landscapes. We are introducing the Adaptive Measure (AM) approach by (1) considering all actions that increase adaptive capacity of forests and forest land, (2) combining Adaptive Forest Management (AFM) concepts on stand-scale with Forest Landscape Restoration (FLR) concepts on landscape scale, (3) linking national and trans-national policies, as well as trans-disciplinary expertise in various fields, and (4) integrating experts and working activities among various IUFRO sections. The TF conceptual pathway is following three aims: identifying knowledge gaps, comparing existing activities and techniques, and elaborating best practice approaches.

One focus of the TF work in the first months was to complete the expertise and the regional scope of the TF group with experts e.g. from Africa and Asia and to plan regional workshops in 2016 to compile local/regional knowledge on forest adaptation and forest landscape restoration. Moreover, we established a collaboration with the ongoing WRI (World Resources Institute)-IUFRO-Forest and Landscape Restoration Project by planning joint workshops (Africa, Latin America) and using the project group expertise for a grant application within the Evidence-Based Forestry Initiative (EBFI) of CIFOR addressing a systematic review of current approaches for restoring degraded ecosystems in developing countries in Africa, Asia and Latin America.



Field trip during the expert workshop on Restoration and Adaptation of Mountain Forests in Central and Northeast Asia, held from 19 to 22 October 2015 in Bishkek, Kyrgyz Republic.

Photo by John Stanturf

Activities in 2015

Seminars, Sessions and Events

Expert Workshop on Restoration and Adaptation of Mountain Forests in Central and Northeast Asia held from 19 to 22 October 2015 in Bishkek, Kyrgyz Republic (supporters IUFRO, KFRI, organizers Forest Research Institute of the Academy of Sciences of the Kyrgyz Republic and the U.S. Forest Service)

Publications

Jacobs, D.F., Oliet, J.A., Aronson, J., Bolte, A., Bullock, J.M., Donoso, P.J. Landhäusser, S.M., Madsen, P., Peng, S., Rey-Benayas, J.M., Weber, J.C. 2015. **Restoring forests: What constitutes success in the twenty-first century?** *New Forests* 46(5), pp 601-614. doi: 10.1007/s11056-015-9513-5

Bolte, A., Stanturf, J. 2015. IUFRO-TF Forest Adaptation and Restoration under Global Change – a start of a global network. **Book of Abstracts of the Expert Workshop “Restoration and Adaptation of Mountain Forests in Central and Northeast Asia”, 19-22 October 2015, Bishkek, Kyrgyzstan**

Spathelf, P., Bolte, A., Van der Maaten, E. 2015. **Is Close-to-Nature Silviculture (CNS) an adequate concept to adapt forests to climate change?** *Landbauforsch. Appl. Agric. Forestry Res.* 65 (3/4), pp. 161-170. doi: 10.3220/LBF1452526188000

IUFRO Task Force Sustainable Forest Biomass Network (SFBN)

Coordinator:

Viktor J. Bruckman, Austria

Deputy Coordinator:

Maliwan Haruthaithanasan, Thailand

Biomass for energy and as a feedstock for industrial raw materials is seen as a key element towards a green future. The IUFRO Strategy 2015 – 2019 lists five research themes that are all to a certain extent linked to this Task Force, confirming its interdisciplinary character.

The aim of the [SFBN Task Force](#) is to establish a network of international experts in the field of sustainable biomass from forests, including plantations, and to address three key issues:

1) To support the establishment of a regional biomass network in Southeast Asia among the ACMECS countries Cambodia, Laos, Myanmar, Vietnam and Thailand.

2) To strengthen the institutional link between IUFRO and the European Geosciences Union (EGU) via an existing MoU.

3) To review existing biomass harvesting guidelines and to harmonize them based on recent efforts among the OECD countries. The outcome should be a harmonized approach towards the development of harvesting guidelines for other countries.

The activities in 2015 were focused on key issues 1 and 2, starting with **organizing a session on sustainable biomass for raw materials, energy and GHG mitigation** at the 2015 General Assembly of the European Geosciences Union (EGU). The session was co-organized with the IUFRO Working Party 7.01.03, Impacts of air pollution and climate change on forest ecosystems – Atmospheric deposition, soils and nutrient cycles, and the Division Energy, Resources and the Environment (ERE) of the EGU. This Division is explicitly mentioned in the existing MoU between IUFRO and EGU. The subsequent activity was a **contribution to the session “Biomass Mobilization for Energy Use”** during the 23rd European Biomass Conference and Exhibition (EUBCE 2015) in Vienna, Austria.

The key event in 2015 was the organization of the **3rd ACMECS Bioenergy Workshop** in December, as well as focus group meetings in each ACMECS member country (Cambodia, Laos, Myanmar, Thailand and Vietnam), where the national bioenergy development plans were drafted during July 2015, based on discussions between stakeholders from governmental organizations, NGO’s, research institutions and private companies. The SFBN Task Force key issue 1 is related to the establishment of this regional biomass network, which was initiated in 2013. The role of the TF in the establishment of the regional network is the scientific guidance of the process, through contributions from international experts and experience in various aspects of forest biomass production and utilization. The participation of two participants from Africa (Kenya and Ethiopia) was fully supported by IUFRO’s Special Programme for Development of Capacities. The national bioenergy development plans were discussed in view of sustainability and a detailed roadmap was developed for further progress in the coming years.

16 April 2015, Vienna, Austria
Session “Sustainable biomass for raw materials, energy and GHG mitigation” (6 oral presentations, 10 posters) at the EGU-General Assembly 2015. In



Biomass plantations on degraded land are seen as a potential source for additional biomass production. The picture shows a plantation trial of Acacia mangium and Casuarina junghuhnia in Northern Thailand at the age of 1.5 years. Photo by Raymond Miller, MSU

cooperation with the Divisions Energy Resources and the Environment (ERE) and Soil System Sciences (SSS) of the European Geosciences Union (EGU); IUFRO WG 7.01.03

2 June 2015, Vienna, Austria

Contribution to “A Multinational Approach to Reveal the Potentials of Biochar for Climate Change Mitigation - a Regional Supply Chain Approach” at the EUBCE 2015

July 2015, Cambodia, Laos, Myanmar, Thailand, Vietnam

Focus group meetings in all ACMECS countries to draft national bioenergy development plans. In cooperation with involved ministries, NGOs, Research institutions and private enterprises

8-11 December 2015, Ubon Ratchathani, Thailand

3rd ACMECS Bioenergy Workshop: Future plan and standardization. Visit <http://kubiomass.kapi.ku.ac.th/index.php/en/> for a report, proceedings and presentation slides. The workshop was organized in cooperation with Kasetsart University, Thailand International Cooperation Agency (TICA), National Science Technology and Innovation Policy Office, Thailand.

Participants of the 3rd ACMECS bioenergy workshop on the shore of the Mekong River, connecting all ACMECS member countries. Photo by KAPI, Kasetsart University



Task Force on Sustainable Planted Forests for a Greener Future

Coordinator: Christophe Orazio, France

Deputy Coordinators:

Peter Freer-Smith, United Kingdom

Tim Payn, New Zealand

Margarida Tomé, Portugal

Planted forest areas are increasing continuously and will be playing a key role in the bioeconomy development. To reflect this growing pressure on forest resources, the newly established Task Force will focus in its first term of 2 years on some key issues related to the intensification of planted forest management in order to meet the increasing need for forest products from a growing population and doing this sustainably to reflect the changing global environment (Sustainable Intensification).

Thus, it is the main aim of this [Task Force](#) to set up a transdisciplinary forum on all the issues related to planted forests such as interaction with other land uses, risks and vulnerability, climate change and socio-economic impacts. At first the Task Force focused on an update of the actual status of planted forest in the world and the potential for intensification and contribution to climate change attenuation.

In 2015 the Task Force achieved most of the objectives expected for the first year:

The main publication of the group was finished on time to be announced during the FAO World Forestry Congress: *Tim Payn, Jean-Michel Carnus, Peter Freer-Smith, Mark Kimberley, Walter Kollert, Shirong Liu, Christophe Orazio,*

Luiz Rodriguez, Luis Neves Silva, and Michael J. Wingfield. Changes in Planted Forests and Future Global Implications. Forest Ecology and Management 352 (September 2015): 57-67. doi:10.1016/j.foreco.2015.06.021.

Meetings 2015

15-19 June, Zhejiang Province, China

Community Bamboo Plantations, Session on Sustainable Intensification during WWF New Generation Plantation study tour

6-9 July, Paris, France

COP21 scientific conference "Our Common Future under Climate Change", organization of Session 2216:

Climate Smart Forestry: Integrating adaptation and mitigation into sustainable development

8 September, World Forestry Congress, Durban, South Africa
Contribution to side event "**Plantations for sustainable productive landscapes**"

2-6 November, Argentina-Uruguay

Plantations in Grasslands

<http://newgenerationplantations.org/en/events/6>

Organisation of session during study tour

Three more events and one major publication are expected in 2016. More information and details can be found on the Task Force website: <http://www.iufro.org/science/task-forces/planted-forests/>.

Contributors and new partners are always welcome!

IUFRO Special Programme for Development of Capacities (IUFRO-SPDC)

Coordinator: Michael Kleine, Austria

Regional Coordinator for Latin America and the Caribbean: Bas Louman, Costa Rica

Regional Coordinator for Asia Pacific: Sim Heok-Choh, Malaysia

Training Workshops

[IUFRO-SPDC](#) completed the 35-year span since the decision of its establishment in 1981 with a whole range of activities. Geared towards forest scientists from economically disadvantaged countries, IUFRO-SPDC was able to support a total of 80 scientists in 2015, with a major focus on the World Forestry Congress in Durban in September. Within its framework IUFRO-SPDC held a training workshop on **Science-Policy Interactions: Making Science Work for Forest and Landscape Restoration** and funded the participation of 16 early-career scientists from 10 different countries not only in the workshop, but also in the

Congress, enabling them to also draw on the numerous valuable experiences when taking part in an event of this scale.

2015 saw the first implementation of a new subject within the IUFRO-SPDC training programme with the **Training Workshop on Systematic Review in Forest Science**, conducted in collaboration with Oxford University and the Asia-Pacific Association of Forest Research Institutions (APAFRI) in Kepong, Malaysia, in November, with the fully-funded participation of 24 scientists.



Participants of the Systematic Review in Forest Science Training Workshop in November 2015 at FRIM. Photo by Hu Yanjie

Scientist Assistance Programme

For a Global Teak Support Programme on Sustainable Management and Genetic Conservation of Planted Teak Resources, organized and held by IUFRO-SPDC in cooperation with TEAKNET and FAO in Guayaquil, Ecuador, in May, 13 scientists from Africa and Latin America could be brought together thanks to SPDC's travel support.

Additional 25 scientists could attend scientific conferences and meetings under the IUFRO-SPDC scientist assistance scheme, thus supporting a number of Working Parties of the various Divisions of IUFRO. Among them was a meeting in Bishkek, Kyrgyzstan, on Restoration and Adaptation of Mountain Forests in Central and Northeast Asia. In this case 10 scientists could be granted travel sponsorship. Another one was the Meeting on Traditional Forest Knowledge, in Nanjing, China.

Also for the first time travel funding for the participation of members of IUFRO Task Forces in their Task Force Meetings could be granted – the first was the Task Force on Sustainable Forest Biomass Network in Ubon Ratchathani, Thailand, with two sponsorships.

Projects and Publications

In 2015 IUFRO-SPDC's part in the EcoAdapt Project, a joint undertaking by four research and five civil society organizations from Europe and Latin America, could be finalized. Its outcome and findings were published as an Occasional Paper: *IUFRO Occasional Paper 30 - Creating and Sharing New Knowledge Through Joint Learning on Water Governance and Climate Change Adaptation in Three Latin American Model Forests: The EcoAdapt Case.*

Additionally, under cooperation between IUFRO and the World Resources Institute, IUFRO scientists developed a framework to demonstrate how forest landscape restoration (FLR) can contribute to climate change mitigation and adaptation. One of the major results of this study was the identification and detailed description of the many different ways in which FLR contributes to both mitigating climate effects and helping ecosystems and society to adapt to adverse effects of a changing climate, published in a new volume of the IUFRO World Series: *World Series Vol. 34 - Forest Landscape Restoration as a Key Component of Climate Change Mitigation and Adaptation.*

All this would not have been feasible without the generous contributions of IUFRO-SPDC's major donors (in alphabetical order): the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW), the European Commission, the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) through the World Resources Institute, the Ministry of Foreign Affairs of Finland, the Republic of Korea's National Institute of Forest Science (NIFoS) (formerly Korea Forest Research Institute), as well as the US Forest Service.

We gratefully acknowledge their support!



Participants of the Workshop on Science-Policy Interactions: Making Science Work for Forest and Landscape Restoration, held in Durban, South Africa, prior to the World Forestry Congress. Photo by Gerda Wolfrum/IUFRO

Global Forest Information Service (GFIS)

Coordinator: Eero Mikkola, Finland

The Global Forest Information Service is an open-access online gateway - www.gfis.net - that collects and displays forest-related content from a global network of over 350 organizations.

The year 2015 was another positive year for the GFIS initiative. In addition to adding more feeds from existing partners, the CPF (Collaborative Partnership on Forests) joint initiative led by IUFRO attracted 24 new partner organizations focused on forests, who chose to disseminate their information via the gateway. The GFIS initiative now has over 350 partner organizations actively contributing information to the gateway.

In addition to an increase in active partners, GFIS saw an increase in social media network growth, and consistent traffic throughout the year. The social media outlets of GFIS continued to grow with a 4900-follower milestone

on twitter and over 860 subscribers to the monthly newsletter. In addition, the number of organizations/individuals utilizing GFIS as an information source when developing their newsletters, and web-based papers increased.

GFIS participated in the XIV World Forestry Congress in Durban, South Africa and gained new regional information providers as well as significant promotion, noting increase in traffic and newsletter subscriptions from Africa following the event.

2016 plans include the development of forest-education content on the gateway in the form of a global database of forest programs, as well as increased information related to scholarships, research opportunities, conferences, etc. Furthermore, an updated version of GFIS utilizing newer adaptive software will be released that will help to manage and filter the increasing amount of content aggregated on the gateway.

GFIS is thankful to all its partner organizations and sponsors. The Global Forest Information Service was sponsored in 2015 by the United States Forest Service, Korea Forest Service and the Austrian Ministry of Life.

Global Forest Expert Panels (GFEP)

Coordinator: Christoph Wildburger, Austria

The [IUFRO-led Global Forest Expert Panel Initiative \(GFEP\)](#) of the Collaborative Partnership on Forests (CPF) provides comprehensive scientific knowledge as a basis for responsible decision-making on forests. Rather than conducting new research, GFEP consolidates available state-of-the-art information on key issues and produces extensive assessment reports. To this end, GFEP invites scientific experts of international renown who prepare and peer-review these synthesis reports thoroughly.

GFEP has successfully completed four major assessments (adaptation of forests to climate change, the international forest regime, biodiversity and REDD+, the role of forests for food security and nutrition) so far. GFEP outcomes have served as background information for discussions, briefing documents for negotiators as well as guidance for strategic policy development. GFEP publications are used by scientists and communicators as comprehensive, interdisciplinary and scientifically sound information source.

Activities in the year 2015 focused on the assessment about the contribution of forests and trees to food security and nutrition, which had been initiated in 2014. In early 2015, the Global Forest Expert Panel on this topic, chaired by Dr Bhaskar Vira, University of Cambridge, accomplished its task within the given timeline and submitted its draft report. Following the final editing process the full report was printed in April 2015. At the same time a “policy brief”, a summary for policy makers, was developed on the basis of the assessment’s outcome, aiming at informing decision-makers and stakeholders in a short and focused way about the key messages of the report.

*IUFRO President Mike Wingfield (centre) with GFEP Coordinator Christoph Wildburger (left) and Forest and Food Security Panel Chair Bhaskar Vira signing copies of the assessment report at the UNFF meeting in New York.
Photo by Gerda Wolfrum/IUFRO*



About 60 renowned scientists from around the world collaborated on the peer-reviewed publication “Forests, Trees and Landscapes for Food Security and Nutrition. A Global Assessment Report”. This assessment report, together with the policy brief, was formally presented in New York at a side event in the 11th session of the United Nations Forum on Forests (UNFF 11) in May 2015. It is the most comprehensive scientific analysis to date of the relationship between forests, food and nutrition. The publications aimed at informing relevant policy processes, especially the discussions on the post-2015 development agenda and the Sustainable Development Goals.



A child’s daily requirement for vitamin A can be met by around 25 g of a deep orange-fleshed mango variety. Photo by Terry Sunderland/CIFOR

The study came at a crucial point in time as in September 2015 in New York the United Nations finalized a set of Sustainable Development Goals as the core element of the UN post-2015 development agenda overall aiming at poverty reduction. The GFEP report gives important insights into how to respond to the “Zero Hunger Challenge”. About one in nine people globally still suffer from hunger. The GFEP report confirms the vital role of forests in building food security. It suggests that intensifying conventional agriculture will not be sufficient to improve the dire situation of the 805 million undernourished people in the world and that forests should also play a key role in alleviating hunger and improving nutrition. “The report makes a convincing case for multi-functional and integrated landscape approaches and calls for community level engagement to re-imagine forestry and agriculture systems”, as Thomas Gass, Assistant Secretary-General for Policy of the UN Department of Economic and Social Affairs, put it.

IUFRO communicated the publications widely to all target audiences (science, stakeholders and policy makers in land-use sectors and development cooperation, broader public for awareness raising). The GFEP report was very well received and attracted high media attention worldwide. The GFEP Panel on Forests and Food Security also triggered multi-disciplinary approaches involving a broad range of scientists from various disciplines in IUFRO’s work and increased collaborations with non-forest sectors. Its outcomes are now used as a basis for the work of the High Level Panel of Experts on Food Security and Nutrition, which serves as the science-policy interface of the UN Committee on World Food Security.

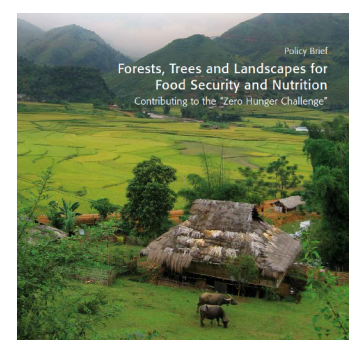
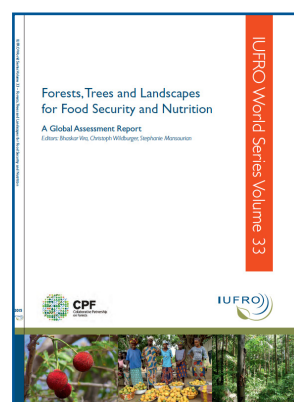
The results of the GFEP study were again presented at the Expo 2015 in Milan (“Feeding the Planet”) in cooperation with the Austrian government in June 2015; at a side event on the contribution of forests and trees to food security in drylands at the meeting of the UN Convention on Combatting Desertification in October 2015 and at the Council of Scientific Society Presidents (CSSP) by IUFRO Vice President John Parrotta in December 2015. The GFEP

report was also published as digitally enhanced book by Open Book Publishers Cambridge (“Forests and Food, Addressing Hunger and Nutrition Across Sustainable Landscapes”) and launched at the Global Landscapes Forum in the framework of the Climate Conference (UNFCCC COP 21) in December 2015 in Paris. There the outcomes were discussed in the context of climate change response activities.

Following the launch and dissemination of the new publications GFEP activities focused on initiating new thematic scientific assessments. In consultations with policy makers, donors, scientists and stakeholders, GFEP discussed potential new themes of high global concern. Based on IUFRO’s proposal, the CPF approved “illegal timber trade” and “forests and water” as the next GFEP topics in December 2015.

In 2016, GFEP will carry out a global “rapid response” assessment on illegal timber trade. The Scoping Meeting will take place in May 2016 in Nairobi, hosted by UNEP. The launch of the final report is planned to take place at the meeting of the Convention on Biological Diversity (CBD COP 13) in December 2016 in Cancun, Mexico.

GFEP information, documents and publications for download are available at: <http://www.iufro.org/science/gfep>



Special Project World Forests, Society and Environment (IUFRO-WFSE)

Coordinator: Pia Katila, Finland

WFSE is an open, global network of scientists and experts. It is steered by ten international research organizations and coordinated at the Natural Resources Institute Finland (Luke). WFSE supports sustainable forest-related development, livelihoods and inclusive growth as well as related policy processes by producing science-based, future oriented, policy-relevant information. It publishes scientific publications and policy and information briefs.

The WFSE partner organizations are: CATIE (Tropical Agricultural Research and Higher Education Center), CIAS (Centre for Integrated Area Studies, Kyoto University), CIFOR (Center for International Forestry Research), CIRAD (Centre de coopération internationale en recherche agronomique pour le développement), EFI (European Forest Institute), FAO (Food and Agriculture Organization of the United Nations), Luke (Natural Resources Institute Finland), Thünen Institute of International Forestry and Forest Economics, University of Florida, VITRI (Viikki Tropical Resources Institute, University of Helsinki).

Activities

In 2015 WFSE initiated the work on a new major theme *Shifting global development discourses: Implications for forests and livelihoods*. About twenty articles on this theme are being developed for a Special Issue to be published in the *International Forestry Review*. They aim at increasing the understanding of the scope and horizon of the new development discourses and how they may influence forestry and forest-related livelihoods. The guest editors for this Special Issue are Pia Katila, Wil de Jong, Glenn Galloway and Pablo Pacheco.

Authors from the WFSE network have also been developing a *Special Issue for Forests* with the title *Incentives and Constraints of Community and Small-holder Forestry*. This Special Issue brings together case studies of communities that have been subjected to specific efforts for promoting community forestry, or communities that have adapted to new opportunities for transforming forest management activities as a strategy for improving livelihoods. The guest editors for this Special Issue are Wil de Jong, Pia Katila, Glenn Galloway and Pablo Pacheco. For more information and to read already published papers visit: http://www.mdpi.com/journal/forests/special_issues/community_smallholder

WFSE events

At the 11th Session of the United Nations Forum on Forests (UNFF) in New York on 4 May 2015 WFSE organized the Side Event *Enhancing forest-related development: Community and smallholder forestry in the nexus of markets, policy, and implementation*. This event consisted of



Speakers at the WFSE side event at UNFF11, New York (from the left): John Parrotta, Pia Katila, Glenn Galloway, Peter Holmgren, Wil de Jong. Photo by Alexander Buck/IUFRO

an introduction, four thematic presentations and a moderated discussion. Presentations are available at: <http://www.iufro.org/science/special/wfse/wfse-news/#c23199>

At the XIV World Forestry Congress in Durban WFSE organized the Side Event *Opportunities and challenges for harnessing local forest management to improve rural livelihoods in Africa* on 7 September 2015. This event consisted of six presentations and a discussion.

Presentations: <http://www.iufro.org/science/special/wfse/wfse-news/#c23199>

The IUFRO WFSE Steering Committee meeting of 2015 convened in Durban South Africa on 8 September in connection with the World Forestry Congress. José J. Campos (CATIE), Glenn Galloway (University of Florida), Sven Günter (vTI), Pia Katila (IUFRO-WFSE Coordinator, Luke), Michael Kleine (IUFRO), Robert Nasi (CIFOR), Plinio Sist (CIRAD) and Eshetu Yirdaw (Vitri) participated in this meeting to discuss the activities and finances of the project in 2014 and the first half of 2015, as well as the activities planned for 2016 and the thematic focus of WFSE in the future.

Publications

Issue Brief 1/2015: *Management of natural tropical forests for the future* by Plinio Sist, Pablo Pacheco, Robert Nasi and Jürgen Blaser. <http://www.iufro.org/download/file/18908/133/wfse-issue-brief-natural-tropical-forests.pdf/>

Newsletters

In 2015 WFSE produced two Newsletters for sharing information about the special project's activities with IUFRO Officeholders, member organizations, WFSE partners, donors and members of the WFSE-network from research organizations and universities around the world.

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

Finances

Note: The figures given below are the final figures before auditing.

IUFRO Balance - as per 31 December 2015 in Euro

ASSETS		TOTAL	EQUITY and LIABILITIES		TOTAL
A.	Fixed Assets		A.	Equity	
I.	Intangible property	16,340	I.	Capital as per 31/12/2014	745,536
II.	Tangible assets	13,639	II.	Loss 2015	-61,275
III.	Financial assets	322,097			
	Total	352,076		Total	684,260
B.	Current Assets		B.	Accruals	111,340
I.	Accounts receivable	44,956	C.	Liabilities	34,936
II.	Other receivables	135,266	D.	Liabilities from contributions not yet used	335,941
III.	Cash on hand and in banks	634,518	E.	Deferred income and credits	1,500
	Total	814,740			
C.	Prepaid Expenses	1,161			
	TOTAL ASSETS	1,167,977		TOTAL LIABILITIES and EQUITY	1,167,977

IUFRO International Union of Forest Research Organizations - UNION Profit and Loss - Overview 31 December 2015 in Euro

Capital 31 Dec 2014	745,536
INCOME 2015:	
Membership Fees (received)	251,090
Publications	173
Donations for budget year 2015	1,136,549
Other income / refunds	16,412
Interest/profit from financial result (bank)	21,881
TOTAL INCOME	1,426,105
EXPENDITURE 2015:	
Salaries and contracts	-825,569
Contributions for third organizations	-4,619
Office equipment and maintenance	-35,970
Printing, postage and PR activities	-117,006
Travel	-61,220
Organization of meetings, travel support, SAP	-332,765
Legal expenses, accounting	-59,755
Equipment (depreciation), operating costs, insurances	-33,676
Bank charges, currency differences	19,916
Others	-36,718
TOTAL EXPENDITURE	-1,487,380
Loss for the year 2015	-61,275
Capital 31 Dec 2015	684,260




Please note that the donations include the rest balances of the year 2014, but exclude the accruals of revenue into the year 2016.

Sponsorships

Grants and
in-kind contributions
to IUFRO in 2015

**IUFRO is most grateful to all our donors for
their generous contributions!**

Sponsor categories:

Gold:	more than EUR 100,000	
Silver:	from EUR 50,000 to 100,000	
Bronze:	from EUR 25,000 to 49,999	

*Note: All figures in the table below are given in Euro.
These are the final figures before auditing.*



Bamboo in Japan. Photo by Alexander Buck/IUFRO

Sponsorships actually received in 2015 in the various cost centers in Euro (Grants and in-kind contributions)

GRANTORS/CONTRIBUTORS	In-kind contributions ¹	TOTAL
Austrian Ministry & Austrian Research Centre for Forests (BFW)	154.864	591.324
Finnish Forest Research Institute (LUKE)	236.716	236.716
U.S. Forest Service	0	195.984
Korea Forest Research Institute (KFRI/NIFoS)	0	162.623
Society of American Foresters (SAF) ²	0	153.864
Contribution World Resources Institute (WRI)	0	52.214
Contribution International Tropical Timber Organization (ITTO)	0	22.625
Contribution Forestry and Agricultural Biotechnology Institute, South Africa (FABI)	0	11.134

1 These are non-cash contributions such as staff time and office facilities
2 Income from IUFRO World Congress 2014

IUFRO Board

IUFRO Senior Officeholders:

President: Mike Wingfield, South Africa
Vice-President Divisions: Björn Hånell, Sweden
Vice-President Task Forces, Special Programmes, Projects and IUFRO-led Initiatives: John Parrotta, USA
Immediate Past President:
Niels Elers Koch, Denmark

Division Coordinators:

Division 1: Jens Peter Skovsgaard, Sweden
Division 2: Yousry El-Kassaby, Canada
Division 3: Woodam Chung, USA
Division 4: Jean-Luc Peyron, France
Division 5: Pekka Saranpää, Finland
Division 6: Tuija Sievänä, Finland
Division 7: Eckehard Brockerhoff, New Zealand
Division 8: Jean-Michel Carnus, France
Division 9: Daniela Kleinschmit, Germany

President's Nominees:

Shirong Liu, China
John Innes, Canada
Ben Chikamai, Kenya
Jung-Hwan Park, Republic of Korea
Manuel Guariguata, Venezuela/Peru

IUFRO Executive Director:

Alexander Buck, Austria

IUFRO Headquarters Host Country Representative:

Gerhard Mannsberger, Austria

Task Force (TF) Coordinators

TF Forests, Soil and Water Interactions:
Richard Harper, Australia
TF Foresight for Forest Sector Planning:
Jerry Vanclay, Australia
TF Sustainable Forest Biomass Network:
Viktor Bruckman, Austria
TF Resources for the Future: Transformation in Forest Use:
John Innes, Canada
TF Contribution of Biodiversity to Ecosystem Services in Managed Forests: Hervé Jactel, France
TF Sustainable Planted Forests for a Greener Future:
Christophe Orazio, France
TF Forest Adaptation and Restoration under Global Change:
Andreas Bolte, Germany
TF Climate Change and Forest Health: Elena Paoletti, Italy
TF Forests and Biological Invasions: Andrew Liebhold, USA
Joint IUFRO-IFSA Task Force on Forest Education:
Magdalena Lackner/IFSA, Austria
Sandra Rodríguez-Pineros/IUFRO, Mexico

Special Programmes, Projects and IUFRO-led Initiatives

IUFRO Special Programme for Development of Capacities (IUFRO-SPDC) and IUFRO Deputy Executive Director:
Michael Kleine, Austria
IUFRO World Forests, Society and Environment (IUFRO-WFSE): Pia Katila, Finland
Global Forest Information Service (GFIS):
Eero Mikkola, Finland
CPF Global Forest Expert Panels (GFEP):
Christoph Wildburger, Austria

IUFRO World Congress Organizing Committee Chairs (Brazil 2019):

Joberto Veloso de Freitas, Yeda Maria Malheiros de Oliveira, Brazil

Congress Scientific Committee Chair:

Jerry Vanclay, Australia

FAO Representative:

Eduardo Rojas Briaes, Spain

IUFRO Headquarters (Vienna Office)

Executive Director: Alexander Buck, Austria
Deputy Executive Director and SPDC Coordinator:
Michael Kleine, Austria
Web Management and Communication:
Brigitte Burger, Austria
Library and Database Administrator:
Sylvia Fiege, Austria
SPDC Project Management and Translation Services:
Margareta Khorchidi, Austria
Junior Professional Officer – IUFRO/IFSA Joint Position:
Andre Purret, Estonia
Project Coordinator:
Renate Prüller, Austria
System Administrator:
Heimo Schaffer, Austria
SPDC/GFEP Project Management and Translation Services:
Eva Schimpf, Austria
Finances and Administration (Projects)
Judith Stoeger-Goiser, Austria
Finances and Administration:
Astrid Toppel, Austria
PR & Communication, Publications and Translation:
Gerda Wolfrum, Austria

IUFRO Honours and Awards

Certificates of Appreciation:

Filimon Carcea, Heok-Choh Sim, Stephen Harrison, Aneta Rydel, Milozs Mielcarek, Radomir Balazy, Terry Sunderland, Henry Neufeldt, Daniela Kleinschmit, John Parrotta, Stepha McMullin, Ramni Jamnadass, Stephanie Mansourian, Bhaskar Vira

IUFRO Headquarters Publications 2015

- World Series Vol. 34 - *Forest Landscape Restoration as a Key Component of Climate Change Mitigation and Adaptation*
- World Series Vol. 33 - *Forests, Trees and Landscapes for Food Security and Nutrition. A Global Assessment Report*
- IUFRO Occasional Paper 30 - *Creating and Sharing New Knowledge Through Joint Learning on Water Governance and Climate Change Adaptation in Three Latin American Model Forests: The EcoAdapt Case*
- IUFRO Occasional Paper 29 - *COST FP 1207: Orchestrating Forest-related Policy Analysis in Europe (ORCHESTRA)*
- IUFRO News Issues 1-12 (3 double issues), 2015
- 6 Scientific Summaries related to IUFRO News
- 8 IUFRO Spotlight issues
- IUFRO Annual Report 2014

Editorial:

Annual Report 2015:

Copyright by IUFRO, Vienna, 2016
Edited by Gerda Wolfrum, IUFRO Headquarters

Cover picture by:

David Jakob Müllegger, 7 years

Readers are encouraged to copy and distribute this Annual Report or part of it indicating the citation:

IUFRO (ed) 2016: Annual Report 2015, Vienna, IUFRO Headquarters, 30 pp. *Download at the IUFRO Publications webpage.*

Contact us at: office(at)iufro.org

Find out more about the benefits of IUFRO membership:
<http://www.iufro.org/membership/benefits/>

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.



www.iufro.org