

# IUFRO Annual Report 2017

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



# Foreword

By Mike Wingfield, IUFRO President

By far the most important highlight of 2017 for IUFRO was the celebration of our 125th Anniversary. And the high point of a suite of celebratory events was an extraordinary and inspiring Anniversary Congress in Freiburg, Germany. Allow me to share with you some impressive figures regarding the Congress: 1,934 participants from 90 countries were registered; 1,517 participants gave scientific presentations; 171 sessions were included in the Congress program, and five all-Division meetings were held. I would like to extend my sincere gratitude to all of those involved in the organization of this splendid Congress. And likewise to all who attended the event, shared their knowledge and expertise and broadly contributed to making our 125th Anniversary an important milestone in IUFRO's history.

For the Anniversary Congress the IUFRO leadership defined three key goals. These were that the event should provide a platform for scientists from around the globe to meet and share their research findings and that it should celebrate the achievements of the organization throughout its history. But there was another important objective. This was for IUFRO to reach out more strongly to its stakeholders, national and international policy and decision-makers, business representatives, and research managers to discuss with them the challenges of sustainable development. In all, the Congress participants had many opportunities to interact with leading representatives from different societal groups and, among other issues, to learn how forest science can provide them with more effective support in addressing the forest-related Sustainable Development Goals.

The IUFRO 125th Anniversary Congress will be remembered for many of the offered events but also as the occasion when we adopted our new slogan of "Interconnecting forests, science and people". This slogan captures in a nutshell what IUFRO stands for and now forms an inseparable part of the IUFRO logo. For the launch of the slogan, a short video was presented which can be used to share with IUFRO stakeholders and other interested parties how IUFRO functions and what we achieve. It is available on our website and I would encourage you to use it at meetings and other relevant IUFRO events. All other relevant information related to the Anniversary Congress can also be found on our website under the "Events" section.

Despite the fact that most IUFRO activities in 2017 were focused on the Anniversary Congress, more than 50 other remarkable IUFRO meetings were held during the year. Of these, one of the major events certainly was the all-Division 5 Conference in Vancouver, Canada. The conference was arranged under the theme of "Forest Sector Innovations for a Greener Future". Vital questions were considered including just as examples "How will fibre and forests be used in the near- and long-term?" and "Will there be enough biomass and sustainable products to support the growing global population?"

One of IUFRO's key interests and objectives during the current Board Term is to better understand and promote education in forestry. IUFRO made considerable progress towards this objective in 2017. In a podcast interview published by IUFRO's Division 3 in early 2017, I was asked, among other things, to name



*IUFRO President Mike Wingfield speaking at the Tree Planting Ceremony of the IUFRO 125th Anniversary Congress. (Photo by FVA/Klaus Polkowski)*

the areas of activity that would be amongst the most important in the future. My response was clear - "Communication, collaboration and education." Education, in particular, is rapidly moving to the center of our interest. We must ask ourselves, "What will forests and forestry look like in the future?", and against that background, "How should forestry education respond in order to be relevant to the forests and forestry in the future?" Research will surely underpin the future of forests and forestry and we must ensure that students educated in forestry will be suitably equipped to provide the research needed.

As part of our focus on forestry education, I am proud to report that in 2017 we were very successful at further intensifying our collaboration with students and early career scientists. In this regard, you might read the report from the Joint IUFRO-IFSA Task Force on Forest Education (JTF) in this Annual Report. You will also be interested to know that the IUFRO-EFI Young Scientists Initiative (YSI), a recent collaborative venture between IUFRO and the European Forest Institute (EFI), was established in 2017. This exciting initiative is rapidly gaining traction and I believe that we will be able to grow the project and greatly increase the number of students supported in the future.

Collectively, the initiatives noted above, together with enhanced communication and networking cooperation, contribute to equipping IUFRO for the important task of providing relevant quality research to inform policy and responsible decision-making. Our overall aim here is to increase the policy impact of scientific knowledge. And to achieve this goal, IUFRO participates actively in major forest-related policy processes. In 2017, for example, IUFRO was again well represented at the 12th Session of the United Nations Forum on Forests (UNFF) in New York. Likewise at the Global Landscapes Forum (GLF) in Bonn where we co-hosted two discussion forums, one on forest and water interactions and one on capacity building for forest and landscape restoration.

2017 was an exciting and very productive year for IUFRO. It has been a privilege for me to be able to lead this remarkable organization. Let me conclude by expressing my warmest thanks to all our donors, partners, supporters and stakeholders as well as to each and every one in IUFRO, our members, scientists, officeholders and Headquarters staff, for contributing to a truly outstanding year!



IUFRO Board Meeting, Freiburg, Germany.  
(Photo by Morne Booij-Liewes, FABI)



Opening of the 125th IUFRO 125th Anniversary Congress. (Photo by FVA/Klaus Polkowski)

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### Note:

All texts in this Annual Report have either been provided by IUFRO officeholders or have been taken from IUFRO conference information websites and reports or IUFRO News. The abbreviations RG and WP refer to Research Group and Working Party, respectively.

Please note that in the IUFRO context the term “to sponsor/co-sponsor” a meeting does not imply any financial assistance. It means that it complies with the IUFRO criteria for sponsoring meetings, that IUFRO officeholders are prominently involved in the meeting and that IUFRO supports the promotion of the event through its media.

# Looking Ahead

John Parrotta and Björn Hånell,  
IUFRO Vice-Presidents

Our view from the outlook tower is dominated by the great challenges we face, including the urgent need to replace fossil fuels with renewable energy to limit climate change and its impacts, a growing and increasingly urbanized population estimated to reach 9 billion by 2050, and the need to produce more food, goods and services from the same, or even smaller, land area than today in the face of ongoing land degradation, erosion of biodiversity and loss of natural forests, particularly in the tropics. There is no doubt that forest science should – and will – be instrumental in creating the future we want. Land degradation and forest loss must be reversed. Urban citizens need greener, healthier cities and the opportunities to connect with the natural environment. New products from the forest to replace those based on fossil fuels will likely require significant changes in forest management.

It is said that we are now on the brink of the Fourth Industrial Revolution (following the First which used water and steam to mechanize production, the Second in which mass production was powered by electricity, and a Third using electronics and IT to automate production). This Fourth Industrial Revolution is characterized by a fusion of technologies, building on the digital revolution but differing in its velocity, scope and systems impact (Schwab, 2016). How and to what extent can the global forest science community respond to the opportunities – and challenges – presented by this new era? In our view, new knowledge about forests, forest management and forest products will be indispensable if we are to help steer these developments in constructive and sustainable directions rather than reacting defensively to them, and perhaps too late. An important element of the digital age, which we are already well into as we straddle the Third and Fourth Industrial Revolutions, is that billions of people are connected by mobile devices with unprecedented processing power, storage capacity and access to knowledge, or at least information. A new era of fundamentally improved opportunities for collecting, analysing, and sharing information is a wonderful prospect for science.

There is, however, a downside associated with this unprecedented expansion of available information and its public accessibility. The old computer science expression, “garbage in, garbage out” (i.e., flawed, or nonsense input data produces nonsense output) is worth remembering. This principle also applies to the information consumed by society, and the resultant opinions formed and decisions made. As we know, influential interest groups and irresponsible actors pursuing their ideological, political or personal agendas increasingly make use of media outlets (including social media) that exercise little if any “quality control” to spread misinformation, including biased information about the reality and impacts of “inconvenient truths” like climate change, land degradation, biodiversity loss, and unsustainable production and consumption of forest-based goods and services. Any fool with a Twitter account can easily – in 280 characters or less – sow confusion and indifference in the minds of millions of people. Amid such confusion, the scientific community – including all of us connected via IUFRO – has an obligation to communicate facts and to educate the public and decision-makers about the importance of forests, forest science and global scientific collaboration to people’s lives, and those of generations to come.



(Photo Pixabay)

A well-informed public convinced of the importance of forests is needed to get messages through to decision-makers at all levels. All of us have a role to play in educating the public about the many important ways we depend on forests for our individual and collective well-being, and how solutions for many of the problems we face depend on the knowledge, expertise and imagination of the forest science community. In recent years, IUFRO has made very significant advances in our forest science communications activities. We have also stepped up efforts to provide decision-makers – particularly at the global level – with policy-relevant scientific assessments on topics of great importance that help to inform forest-related policy discussions, including those related to the Sustainable Development Goals. These efforts need to continue, and expand, through collaboration with organizations and scientists within the IUFRO network and those beyond the IUFRO “family”. In doing so, we can achieve one of IUFRO’s most important objectives, fostering the development of science-based solutions to forest-related challenges for the benefit of forests and people worldwide

Reference: Schwab, K. (2016). *The Fourth Industrial Revolution*. Crown Business. New York.



**iufro2019**  
Curitiba • Brazil

**XXV IUFRO World Congress 2019**  
**Curitiba, Brazil, 29 September - 5 October**

Congress website: <http://www.iufro2019.com/>



(Photo Pixabay)

# Silviculture - Division 1

**Coordinator:** Jens Peter Skovsgaard, Sweden

**Deputy Coordinators:**

Kevin L. O'Hara, USA

Khosro Sagheb-Talebi, Iran

Pil Sun Park, Korea (Rep)

*IUFRO Division 1 Silviculture includes 8 Research Groups (RGs) and 20 Working Parties (WPs) and is structured as follows:*

*RG 1.01.00 : Temperate and boreal silviculture (13 WPs)*

*RG 1.02.00 : Tropical and subtropical silviculture (6 WPs)*

*RG 1.03.00 : Short-rotation forestry (1 WP)*

*RG 1.04.00 : Agroforestry*

*RG 1.05.00 : Uneven-aged silviculture*

*RG 1.06.00 : Restoration of degraded sites*

*RG 1.07.00 : Silviculture and management of threatened and endangered tree species*

*RG 1.08.00 : Silviculture for production of edible fruits*

In 2017, the units were heavily involved in organizing sessions at the IUFRO 125th Anniversary Congress in Freiburg, Germany. These included a large number of cross-divisional sessions. In addition to sessions at the Freiburg Congress, units in Division 1 organized and hosted 11 other major events during 2017.

Climate change and adaptive silviculture were overarching themes for our activities that generally focused on related processes such as the ecological, social and cultural context of silviculture. Landscape restoration, forest regeneration practices, wildlife management, ground water protection, silviculture for edible forest products and historical management practices are some examples of the topics highlighted during 2017.

Worldwide, there is an increasing need to renew and maintain long-term field experiments in silviculture in order to update research objectives and to ensure payback of resources invested in such experiments. It is important for ensuring the relevance of forest research in the long run to adjust forest experiments such as to address a wider range of research questions. As part of this endeavour, some units in Division 1 are getting increasingly involved in networking activities related to the establishment and maintenance of field-based infrastructures with long-term ecological research facilities.

Publications from Division 1 in 2017 include three significant compilations of journal papers, one in the *Journal of Forest Research* addressing research on the silviculture of silver fir, one in the journal *Options Méditerranéennes* addressing research on pine nut production, and one in the journal *Flora Mediterranea* addressing Mediterranean forest restoration.

## Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

19-21 April, Palermo, Italy

**Sustainable Restoration of Mediterranean Forests - Analysis and perspective within the context of bio-based economy development under global changes**

IUFRO 1.06.00, 3.02.00, TF Climate Change and Forest Health, TF Forest Adaptation and Restoration under Global Change



(Photo Pixabay)

## Silviculture and Ungulates

IUFRO scientists of WP 1.01.12 *Silviculture and ungulates* held a special session at the IUFRO 125th Anniversary Congress on **joint management of large herbivores and forests for resilient ecosystems.**

Large herbivores are major drivers of forest dynamics worldwide. Wild herbivores and livestock alter species composition, soil properties, nutrient cycling, wildfire susceptibility, and other forest ecosystem properties and processes. Large herbivores have been agents of sound landscape management as well as of habitat degradation.

Management of forests and large herbivores has often been presented as an either/or dilemma. Either we can have healthy, resilient forests, or we can have abundant populations of large herbivores. However, it is possible to have both, if we broaden our perspective.

This session explored the joint management of large herbivores and forests throughout North America, Europe, and Japan, highlighting successes, failures, and new approaches in the spirit of adaptive management.

A common theme emerged from the presentations. The social, cultural, and historic context of study sites strongly influences management options, and, by extension, the future state of both forests and large herbivore populations. Scientists highlighted the need for international and interdisciplinary teams working on multi-site experiments.

(See *Book of Abstracts*, pages 643-644: <https://www.iufro.org/events/anniversary-congress/#c24907> Publications)

24-26 May, St. Petersburg, Russia

**II International Conference Forests of Russia: Policy, Industry, Science and Education**

IUFRO 1.00.00, 3.00.00, 4.00.00

28-31 May, Aberdeen, Scotland, United Kingdom

**Convention, Symposium and Workshops of the International Peatland Society (IPS): Responsible Management of Peatlands**

IUFRO 1.01.02

6-9 June, San Juan, Puerto Rico  
**International Conference on Forest Landscape Restoration under Global Change - A Contribution to the Implementation of the Bonn Challenge: Synthesising and sharing globally available forest-related scientific knowledge**

IUFRO 1.06.00, TF Forest Adaptation and Restoration under Global Change, IUFRO-SPDC

12 June, Vancouver, BC, Canada  
**IUFRO All-Division 5 (Forest Products) Conference; Session: Co-Production for Sustainable Sourcing of Timber and Non-Timber Forest Products**

IUFRO 1.08.00, 5.11.00

11-13 July, Corvallis, OR, USA  
**Forest Regeneration in Changing Environments**

IUFRO 1.01.04, 2.01.15

24-28 July, Yogyakarta, Indonesia  
**IUFRO Acacia Conference 2017: Towards a sustainable future for Acacia plantations**

IUFRO 1.02.06, 2.08.07

1-3 August, Harbin, China  
**International Symposium on Sustainable Forest Management in the Context of Global Change (ISSFM-CGC)**

IUFRO 8.00.00, 1.00.00, 1.06.00

13-17 August, Ulaanbaatar, Mongolia  
**Expert Workshop on Dryland Forest Restoration and Conservation in Central and Northeast Asia**

IUFRO 1.01.13, 1.06.00



Flux monitoring tower at Tomakomai  
Experimental Forest of Hokkaido University.  
(Photo by Miin Bang)

29 August-1 September, Hokkaido, Japan  
**2017 International Workshop on Lessons Learnt and Challenges from Forest Long-term Ecological Research (LTER) in the Northeast Asian Region**

IUFRO 1.01.13, 8.01.00, 8.02.00

The IUFRO WP 1.01.13 convened an *International Workshop on Lessons Learnt and Challenges from Forest Long-term Ecological Research (LTER)* in the Northeast Asian Region in Hokkaido, Japan on 29 August – 1 September 2017. Participants from China, Republic of Korea, Mongolia, Russia and Japan exchanged their LTER research experiences and results. Knowledge exchange between senior and junior researchers particularly contributed to strengthening the research capability of junior researchers in the Northeast Asian region. In addition, the participants visited LTER sites in the Tomakomai Experimental Forest of Hokkaido University and discussed the establishment of future strategies on the regional level to promote the ecological response and adaptation of forests to the changes caused by anthropogenic and natural factors.

12-14 September, Lund, Sweden  
**3rd Restoring Forests: Regeneration and Ecosystem Function for the Future**

IUFRO 1.01.00, 1.01.06, 1.06.00, 2.01.15, TF Forest Adaptation and Restoration under Global Change

18-22 September, Freiburg, Germany  
**IUFRO 125th Anniversary Congress**

Diverse sessions

## Physiology and Genetics - Division 2

**Coordinator:** Yousry A. El-Kassaby, Canada

**Deputy Coordinators:**

Janice Cook, Canada

Santiago C. Gonzalez-Martinez, France

Dario Grattapaglia, Brazil

*Division 2 includes 5 Research Groups (RGs) and 29 Working Parties (WPs), which are organized as follows:*

RG 2.01.00: *Physiology (6 WPs)*

RG 2.02.00: *Conifer breeding and genetic resources (8 WPs)*

RG 2.02.00: *Genetics (6 WPs)*

RG 2.08.00: *Hardwood improvement, culture and genetic resources (6 WPs)*

RG 2.09.00: *Tree seed, physiology and biotechnology (3 WPs)*

The Division organized or was involved in the organization of 12 major conferences, some of which will be highlighted below to illustrate the diversity of research fields that were dealt with:

### Forest Tree Genomics

*IUFRO Working Party 2.04.10*

The meeting on 15 January 2017 in San Diego, CA, USA, featured two sessions:

The first one discussed a diversity of approaches aimed at understanding the genes and mechanisms underpinning traits and advancing genetic improvement in Eucalyptus, chestnut, poplar and willow. These included use of metabolomics to understand how manipulation of the lignin pathway relates to recalcitrance of wood to deconstruction, relationships between epigenetic modifications and clone performance, disease-resistance mapping, and use of a population with irradiation-induced chromosomal lesions to identify genomic regions involved in tension wood formation. Additionally, approaches related to improve application of genome-wide association studies (GWAS) to tree breeding were addressed.

The second session included reports on:

- 1) the use of genomic resources in diverse tree species to identify shared and lineage-specific gene modules involved in the stem gravitropic response and analysis of the recently completed silver birch genome to inform on population history and adaptation,
- 2) studies related to the accuracy of adaptive phenotypic trait prediction in *Populus trichocarpa* using single-nucleotide polymorphisms (SNPs)-based models and traditional genealogical methods, and
- 3) discussions highlighting the genomes of *Betula platyphylla*, *Quercus lobata* and *Pseudotsuga menziesii* as well as a web site facilitating omics analyses across conifer and angiosperm species.



Participants of mid-conference tour (Photo by Edy Wibowo. Copyright by Center for Forest Biotechnology and Tree Improvement, Yogyakarta)

### 5th International Conference on Conservation of Forest Genetic Resources

IUFRO Research Group 2.02.00

This meeting on 2-7 October 2017 in Gomel, Belarus, was the first in this conference cycle to be held outside the Russian Federation; previous meetings took place in Barnaul, Altai Territory (2007, 2015), Novosibirsk (2009) and Krasnoyarsk (2011).

An overarching theme of the conference was the application of innovative genetic and genomic approaches to improve conservation, protection, sustainable reproduction, resilience and rational use of forest genetic resources, considering heterogeneous environment, and climate change. Other main objectives were to give an overview of current progress in forest genetics and genomics and to share international experiences with conservation of forest genetic resources.



Conference participants.  
(Photo by courtesy of the Institute of Forest of the NAS of Belarus)

### IUFRO Acacia Conference 2017: Towards a sustainable future for Acacia plantations

Joint meeting of IUFRO Working Parties 1.02.06 and 2.08.07

The IUFRO INAFOR Joint International Conference on 24-28 July 2017 in Yogyakarta, Indonesia, was a collaborative activity of IUFRO WP 2.08.07 (Genetics and Silviculture of Acacia), WP 1.02.06 (Ecology and Silviculture of Acacia) and forestry researchers of FORDA, the Research Development and Innovation Agency of the Ministry of Environment and Forestry, Republic of Indonesia.

Sessions mainly focussed on the following topics:

- 1) Plantation management for sustainable production
- 2) Pests and diseases
- 3) Genetics and breeding
- 4) Risk and mitigation
- 5) Forest-based products for a greener future, and
- 6) Forest for community benefits

The Conference discussed the progress and development of research related to plantation issues since they are vital for the welfare of local communities as well as for the economic growth of a nation. Challenges facing plantation, ranging from plantation management to genetics and breeding, pest and diseases, climate change, product diversity and community interests, require concerted efforts from the research community and the plantation managers and policy makers.

### Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

15 January, San Diego, CA, USA

#### Forest Tree Genomics

IUFRO 2.04.10

4-9 June, Concepción, Chile

#### Tree Biotechnology 2017 Conference

IUFRO 2.04.06

15-17 June, Val Canali, Trentino, Italy

#### AForGen 2017

IUFRO 2.04.11

11-13 July, Corvallis, OR, USA

#### Forest Regeneration in Changing Environments

IUFRO 1.01.04, 2.01.15

24-27 July, Yogyakarta, Indonesia

#### IUFRO INAFOR Joint International Conference 2017: Promoting sustainable resources from plantations for economic growth and community benefits

IUFRO 2.08.07

24-28 July, Yogyakarta, Indonesia

#### IUFRO Acacia Conference 2017: Towards a sustainable future for Acacia plantations

IUFRO 1.02.06, 2.08.07

3-8 September, Akureyri, Iceland  
**13th International Christmas Tree Research and Extension Conference**  
IUFRO 2.02.09

4-6 September, Bålsta, Sweden  
**Seed Orchards - The Key to Sustainable Bio-Economy**  
IUFRO 2.09.01

12-14 September, Lund, Sweden  
**3rd Restoring Forests: *Regeneration and ecosystem function for the future***  
IUFRO 1.01.00, 1.01.06, 1.06.00, 2.01.15, TF Forest Adaptation and Restoration under Global Change

18-22 September, Freiburg, Germany  
**IUFRO 125th Anniversary Congress**  
Diverse sessions

2-7 October, Gomel, Belarus  
**5th International Conference on Conservation of Forest Genetic Resources**  
IUFRO 2.02.00

1-3 November, Shanghai, China  
**Workshop on Fagaceae and Nothofagaceae Genetics and Genomics**  
IUFRO 2.08.05

## Forest Operations Engineering and Management - Division 3

**Coordinator:** Woodam Chung, USA

**Deputy Coordinators:**

Jean-François Gingras, Canada

Ola Lindroos, Sweden

*IUFRO Division 3 consists of eight Research Groups (RGs) and five Working Parties (WPs) with a total of 48 officeholders:*

*RG 3.01.00: Harvesting and transportation engineering (3 WPs)*

*RG 3.02.00: Stand establishment and treatment*

*RG 3.03.00: Forest ergonomics*

*RG 3.04.00: Forest operations management (2 WPs)*

*RG 3.05.00: Forest operations ecology*

*RG 3.06.00: Forest operations in mountainous conditions*

*RG 3.07.00: Forest operations in the tropics*

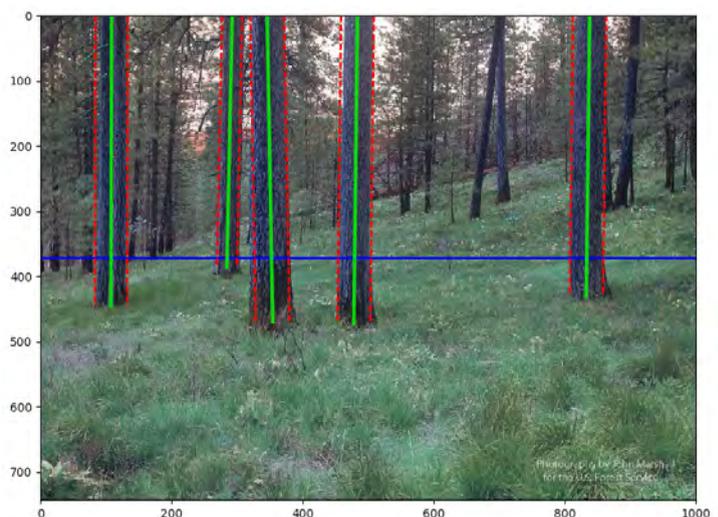
*RG 3.08.00: Small-scale forestry*

Research fields of the Division span across all aspects of forest engineering from operations in forest nurseries to forest restoration to timber production and supply chain. Throughout our research, we develop and deliver science, innovations and solutions for economically, socially and environmentally sustainable forest management practices.

### All-Division 3 Conference

The all-Division 3 Conference held in Freiburg, Germany, as part of the IUFRO 125th Anniversary Congress was a great success. One sub-assembly session and 13 technical sessions were devoted to the presentations and discussions of state-of-the-art research and practices in forest engineering. The Conference also provided the forum and opportunity to discuss global challenges facing forest engineering communities, and to identify new emerging research areas.

The diminishing and aging workforce in the forestry sector, increasing social and environmental demands, and global decline of forest engineering research and education capacities were discussed as ongoing challenges. At the same time, Division 3 researchers identified forestry education reform and new technological innovations as solutions to those observed challenges. It was recognized that it is time to redefine the concepts



*A 3D machine vision technology developed to detect and measure tree characteristics real-time during thinning operations. (Photo by Lucas Wells, Oregon State University)*

and practices of forestry using newly available technologies in engineering, information science and data analytics. The all-Division 3 Conference was a great venue to showcase the Division's ongoing efforts to bring in new innovations to forestry research, education and practices.

Read an interview with Division 3 Coordinator Woodam Chung on the IUFRO Blog: <http://blog.iufro.org/2017/10/16/on-forest-operations-engineering-and-management/>

### Education and Outreach

Division 3 was part of an award-winning educational film (2017): *Traceless* (<https://www.youtube.com/watch?v=xauLNORS4m0>) This film demonstrates how new technologies and changing attitudes can help reduce damage to the soil and water during timber harvesting operations. The film won awards from two international film festivals, the World Media Festival in Germany and the Deauville Green Film Festival in France.

The film was produced by Heurgren Production on behalf of Skogforsk and the Norwegian Forestry Extension Institute with a financial support from the Swedish Research Council Formas. Lars Högbom, Coordinator of IUFRO Research Group 3.05.00 - *Forest operations ecology*, participated in the project as the project leader and scientific advisor.

## Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

Division 3 organized and sponsored seven international conferences in 2017. Division 3 actively promotes cross-divisional activities to facilitate knowledge sharing and collaboration across research disciplines. As a result, in 2017 Division 3 co-hosted three international conferences with IUFRO Divisions 1 and 4, and organized one interdisciplinary conference between two IUFRO Research Groups 3.03.00 – *Forest ergonomics* and 3.06.00 – *Forest operations in mountainous conditions*.

27 February-2 March, Stellenbosch, South Africa  
**Precision Forestry: Producing more from less. Towards optimizing value in the bio-economy from data driven decisions**  
IUFRO 3.00.00

19-21 April, Palermo, Italy  
**Sustainable Restoration of Mediterranean Forests: Analysis and perspective within the context of bio-based economy development under global changes**

IUFRO 1.06.00, 3.02.00, TF Climate Change and Forest Health, TF Forest Adaptation and Restoration under Global Change

24-26 May, St. Petersburg, Russia  
**II International Conference - Forests of Russia: Policy, Industry, Science and Education**  
IUFRO 1.00.00, 3.00.00, 4.00.00

19-21 September, Limoges, France  
**EuroCoppice Conference - Coppice Forests in Europe: A traditional natural resource with great potential**  
IUFRO 3.01.03



Participants of the 2017 EuroCoppice Conference visiting a coppice forest during the conference excursion in the Limousin region of France. (Photo by Morgan Vuillermoz)

24-28 July, Matsuyama and Kochi, Japan  
**Joint Regional Meeting of IUFRO RG3.03.00 and RG3.06.00 in Asia: Productivity and safety of final cutting on mountain forests**

IUFRO 3.06.00, 3.03.00

27-30 August, Suquamish, WA, USA  
**17th Symposium on Systems Analysis in Forest Resources (SSAFR)**

IUFRO 3.04.00, 3.04.01, 4.04.04, 4.04.06

18-22 September, Freiburg, Germany  
**All-Division 3 Conference**  
IUFRO 3.00.00

# Forest Assessment, Modelling and Management - Division 4

**Coordinator:** Jean-Luc Peyron, France

**Deputy Coordinators:**

Ronald E. McRoberts, USA

Jerry Vanclay, Australia

Lidija Zadnik-Stirn, Slovenia

*This Division is comprised of 5 Research Groups (RGs) with 25 Working Parties (WPs):*

RG 4.01.00: *Forest mensuration and modelling (6 WPs)*

RG 4.02.00: *Forest resources inventory and monitoring (7 WPs)*

RG 4.03.00: *Informatics, modelling and statistics (3 WPs)*

RG 4.04.00: *Forest management planning (6 WPs)*

RG 4.05.00: *Managerial economics and accounting (3 WPs)*

The research range of Division 4 is rather broad, but it is consistent with the needs of policy makers and forest practitioners. Technological developments give great opportunities to forest assessment, information systems, and the constitution and use

of big data sets. Activities in the Division expand their scope from timber production to a large set of ecosystem services. They are also concerned by changes, risks and uncertainty that have to be reduced, as long as it is possible, but also “managed” – that means taken into account in the decisional process.

## All-Division 4 Conference

For the IUFRO 125th Anniversary Congress in Freiburg, Division 4 organized more than 20 sessions – most of which focused on themes identified by the different units within the Division. There was also an open session for papers that fitted well with the Division scope but not so well with the subjects of the other sessions. And, the Division also organized a sub-plenary session on ‘innovative assessment and sustainable forest management in a changing world’.

Read an interview with Division 4 Coordinator Jean-Luc Peyron on the IUFRO Blog:

<http://blog.iufro.org/2017/10/12/on-forest-assessment-modelling-and-management/>

### 17th Symposium on Systems Analysis in Forest Resources

IUFRO 3.04.00, 3.04.01, 4.04.04, 4.04.06

The Symposium on Systems Analysis in Forest Resources (SSAFR) is an international gathering that has taken place every two or more years since 1975. Past symposia brought together decision scientists from around the world who studied forest systems with the goal of making better management and policy decisions.



Participants at the 2017 SSAFR in Suquamish, USA.  
(Photo by Mikael Rönnqvist)

The 2017 SSAFR on 27-30 August in Suquamish, WA, USA, was unique in that it brought together two traditionally disconnected disciplines both working on forest decision support systems: the remote sensing/geospatial informatics community and operations researchers. The former group is concerned with how to best collect and process data on forests and other resources, whereas the latter tries to optimize resource management given whatever data is available.

Despite the obvious feedback between the two groups, so far they have generally operated separately. The two groups aimed to study such questions as how to streamline data collection protocols for competing forest management objectives. At the symposium, industry participants learned how much operations research can offer for decision support. Visualization techniques to display complex information about optimal solutions, tradeoffs, conflicts and remotely sensed data have evolved to new heights. (See full meeting report by Sándor F. Tóth, Symposium Chairman and Deputy Coordinator of IUFRO 3.04.01, University of Washington, USA on the WP website)

#### Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

19-20 January, State College, PA, USA

**Seminar on the state-of-the-art of forest management models, methods and decision support systems - the SuFoRun perspective**

IUFRO 4.04.04

24-26 May, St. Petersburg, Russia

**II International Conference Forests of Russia: Policy, Industry, Science and Education**

IUFRO 1.00.00, 3.00.00, 4.00.00

27-30 August, Suquamish, WA, USA

**2017 Symposium on Systems Analysis in Forest Resources (SSAFR)**

IUFRO 3.04.00, 3.04.01, 4.04.04, 4.04.06

6-9 September, Beijing, China

**Inaugural Global Forest Biodiversity Initiative Conference & GFBI-FECS Joint Symposium 2017: Forest research in the big data era**

IUFRO 4.02.07

18-22 September, Freiburg, Germany

**All-Division 4 Conference**

IUFRO 4.00.00

## Forest Products - Division 5

**Coordinator:** Pekka Saranpää, Finland

**Deputy Coordinators:**

Jamie Barbour, USA

Roger Meder, Australia

Andrew Wong, Malaysia

Division 5 has 10 Research Groups (RGs) including 26 Working Parties (WPs) that address all aspects from wood raw material properties and processing to marketing and sustainability.

RG 5.01.00: Wood and fibre quality (5 WPs)

RG 5.03.00: Wood protection (5 WPs)

RG 5.04.00: Wood processing (4 WPs)

RG 5.05.00: Composites and reconstituted products

RG 5.06.00: Properties and utilization of plantation wood (2 WPs)

RG 5.07.00: Biorefinery (2 WPs)

RG 5.10.00: Forest products marketing and business management

RG 5.11.00: Non-wood forest products (4 WPs)

RG 5.12.00: Sustainable utilization of forest products (2 WPs)

RG 5.15.00: Forest products culture (2 WPs)

The Division has a total number of almost 100 officeholders. Sustainable use of biomass, biochemicals, life cycle analysis, cascade use of wood and bioenergy are important issues in the field of forest products research. Division 5 promotes research related to wood biomass and its resource efficient use. One of its major aims is to extend the service life of wood and to find new environmentally friendly ways to protect wood from decaying fungi. Forest products culture and traditional uses of wood

promote the visibility of the Division and IUFRO to audiences beyond the scientific community and decision makers.

### Division 5 was reorganized and started new RGs and WPs in 2017

In summary, RG 5.02 “Physiomechanical properties of wood and wood-based materials” was joined with RG 5.01 “Wood quality” and the joint RG was renamed “Wood and fibre quality” and is coordinated by Xiping Wang from the USA.

RG 5.12 “Sustainable utilization of forest products” started a new WP 5.12.02 “Certified forest products and services”, which is coordinated by Wenming Lu from China.

WP 5.10.01 “Wood culture” was upgraded into the new RG 5.15 “Forest products culture” coordinated by Howard Rosen from the USA. The RG has two WPs: WP 5.15.01 “Wood culture” and 5.15.02 “Non-wood forest products culture”. Several other changes in officeholders took place and new officeholders were recruited.

### Forest Sector Innovations for a Greener Future

The all-Division 5 Conference and SWST 60th International Convention took place in Vancouver, Canada, 12-16 June 2017. The conference was organized jointly by IUFRO Division 5, the Faculty of Forestry at the University of British Columbia, FPInnovations, and the Society of Wood Science and Technology. In recognition of the pressing global need for the forest sector to be a leader in sustainability, diversification, and innovation, the theme of the 2017 IUFRO Division 5 Conference was: *Forest Sector Innovations for a Greener Future*. This Innovation/Sustainability theme formed a unifying basis for the week-long conference and guided the agenda through a series of plenary sessions that catalyzed discussion on what the future forest products sector might look like.

Altogether the conference had 445 delegates from 49 countries. The share of students was 21%. The Scientist Assistance



A different view to the old growth forest: the Greenheart Tree Canopy Walk during the in-congress tour at the University of British Columbia campus at Point Grey Peninsula. (Photo by Pekka Saranpää)

Program was able to fund 22 delegates from low-income countries. Almost all Research Groups and Working Parties were included in the 49 sessions. Conference highlights were the Student & Early Stage Researcher Incubator - an IUFRO, International Forestry Students' Association and Society of Wood Science and Technology Collaborative Special Session - and the three listening sessions for the IUFRO Task Force on Foresight for Forest Sector Planning. World Nieh (USDA Forest Service, National Program Lead for Forest Products), Bjorn Hånell (IUFRO Vice-President for Divisions), and Jamie Barbour (Congress Chair) led the discussions on needs and opportunities for future forest products research.

### Publications

Walter Kollert, Michael Kleine (eds.), 2017. *The Global Teak Study. Analysis, Evaluation and Future Potential of Teak Resources* IUFRO World Series Volume 36. Vienna. 108 p. The Publication is available for download at: <http://www.iufro.org/publications/series/world-series/article/2017/06/21/world-series-vol-36-the-global-teak-study-analysis-evaluation-and-future-potential-of-teak-reso/>

IUFRO 2017 all-Division 5 Conference Program, Proceedings and Abstracts. Copyright 2017 by IUFRO Division 5 Conference. ISBN: 978-0 - 9817876 - 7 - 1.

### Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

21 March, Long Beach, CA, USA

#### World Wood Day 2017 Celebration

IUFRO 5.00.00, 5.10.01

28-31 May, Ozarow Mazowiecki/Warsaw, Poland

#### 23rd International Wood Machining Seminar (IWMS-23)

IUFRO 5.04.08

12-16 June, Vancouver, Canada

#### All-Division 5 Conference:

##### *Forest Sector Innovations for a Greener Future*

IUFRO 5.00.00

6-9 July, Tianjin, China

#### Mini-Symposium *Wood and other lignocellulosic biomass for materials and energy* at International Conference on Materials & Energy (ICOME'17)

IUFRO 5.00.00

12-15 September, Madison, WI, USA

#### 20th International Nondestructive Testing and Evaluation of Wood Symposium

IUFRO 5.01.00, 5.01.09, 5.01.10

13-16 September, Istanbul, Turkey

#### 13th International IUFRO Wood Drying Conference: *Wood drying in developing countries*

IUFRO 5.04.06

18-22 September, Freiburg, Germany

#### IUFRO 125th Anniversary Congress

Division 5 participated in organizing the inter-Divisional session '*Forestry Classic' for the Future*. Several Division 5 units organized sessions during the conference.

26-28 September, Denpasar, Bali, Indonesia  
**9th Pacific Regional Wood Anatomy Meeting (PRWAC)**  
IUFRO 5.01.00

23-27 October, Colombo, Sri Lanka  
**TEAKNET-IUFRO Partner Event in the 27th Asia Pacific Forestry Commission Meeting: Teak in Productive Landscapes:**

**An introduction to global efforts for the conservation and sustainable management of teak resources**  
IUFRO 5.06.02

2-4 November, Brasov, Romania  
**11th International Conference: Wood science and engineering in the third millennium - ICWSE 2017**  
IUFRO 5.04.00

## Social Aspects of Forests and Forestry - Division 6

**Coordinator:** Tuija Sievänen, Finland

**Deputy Coordinators:**

Cecil C. Konijnendijk van den Bosch, Sweden/Canada

Teresa Cristina Magro, Brazil

Taylor Stein, USA

The range of topics covered by Division 6 is broad and goes into all kinds of issues related to the cultural and social aspects of forestry and forests. Recreation and tourism, landscape as a cultural asset, urban forests as a source of well-being for people, human health aspects, gender aspects, ethics, education, rural community development, forestry livelihoods from a social perspective, etc.

*Division 6 comprises 10 Research Groups (RG) and 2 Working Parties (WP):*

*RG 6.01.00: Forest recreation*

*RG 6.02.00: Landscape planning and management*

*RG 6.03.00: Nature-based tourism*

*RG 6.04.00: Nature conservation and protected areas*

*RG 6.05.00: Forest ethics*

*RG 6.06.00: Forest, trees and human health and wellbeing*

*RG 6.07.00: Urban forestry*

*RG 6.08.00: Gender and forestry (2 WPs)*

*RG 6.09.00: Forest education*

*RG 6.10.00: Rural development*

### Research topics in Division 6

In the future less attention will be placed on productive services of forests while other ecosystem services will become more relevant. Cultural and protection services are important both for communities and individuals. Cultural and social ecosystem services are important particularly for urban populations 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. Research on nature-based recreation and tourism, and related landscape issues, is well established in many countries in Europe and Northern America, and increasingly in Asian countries. Wellbeing and health benefits are increasingly found among the top topics that societies are now looking at as the key outputs of forest resources, particularly in developed, highly urbanized countries.

The research focusing on the social aspects of forestry is increasingly important in many countries all over the world. Gender issues in forestry, rural development and urban forestry are strong issues in Division 6. There is a continuous research

interest in topics related to forest and human health, which nowadays are studied in good partnership of 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.

Also read an interview with Division Coordinator Tuija Sievänen on the IUFRO Blog: <http://blog.iufro.org/2017/10/06/on-social-aspects-of-forests-and-forestry/>



*Photo: Landscape and Human Health Excursion.  
(Copyright BFW/S.Ette)*

### All-Division 6 Conference

Most Research Groups in Division 6 organized sessions or other events during the IUFRO 125th Anniversary Congress in Freiburg in September. In total, the Division held one sub-pleenary session and 17 technical sessions and a business meeting.

Read about activities of individual Research Groups in the Division's 2017 full report:

<https://www.iufro.org/science/divisions/division-6/60000/publications/>

### A selection of reports from Division 6 in 2017

Carol J. Pierce Colfer, Marlène Elias, Bimbika Sijapati Basnett and Susan Stevens (Eds) 2017. *The Earthscan Reader on Gender and Forests*. Routledge.

Reed, M.G. 2017. *Understanding the gendered labours of adaptation to climate change in forest-based communities through different models of analysis*. In Cohen, M. (ed.). *Gender and Climate Change in Rich Countries: Work, Public Policy and Action*. London: Routledge. 199-214.

*IUFRO Spotlight*: Forest tourism can mean billions in economic benefits

#### Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

18-22 September, Freiburg, Germany  
**All-Division 6 Conference**  
IUFRO 6.00.00

26-28 June, Prague, Czech Republic  
**SILVA Network annual conference: Forest Science Education: Forests for university education: examples and experiences**  
IUFRO 6.09.00

31 May-2 June, Barcelona, Spain  
**EFUF2017 - Urban Forest Boundaries - Within, between and beyond the city**  
IUFRO 6.07.00

17-19 May, Serra dos Órgãos National Parque, RJ, Brazil  
**III Meeting of the Community of Practice on Visitation in Protected Areas**  
IUFRO 6.04.00

17-19 May, Vienna, Austria  
**3rd International Conference on Landscape & Human Health - Forests, Parks and Green Care**  
IUFRO 6.06.00, 6.02.00

## Forest Health - Division 7

**Coordinator:** Eckehard Brockerhoff, New Zealand

**Deputy Coordinators:**

Elena Paoletti, Italy  
Tod Ramsfield, Canada  
Andrew Liebhold, USA

*Division 7 deals with topics that are all concerned with forest and tree health, and the causes of interactions between air pollution and climate change, tree pathogens, and tree-feeding insects. It is comprised of 3 Research Groups (RGs) with 31 Working Parties (WPs):*

**RG 7.01.00:** *Impacts of air pollution and climate change on forest ecosystems (8 WPs)*

**RG 7.02.00:** *Pathology (11 WPs)*

**RG 7.03.00:** *Entomology (12 WPs)*

#### All-Division 7 Conference

2017 was a special year for Division 7; it marked the first all-Division 7 Conference with contributions across all three Research Groups (Air Pollution and Climate Change, Pathology, and Entomology). Initially the conference was planned to take place in Istanbul, Turkey, but unfortunately, it had to be relocated due to security concerns. Instead it took place as part of the IUFRO 125th Anniversary Congress in Freiburg, Germany, in September 2017. The conference was very successful and was attended by ca. 300 Division 7 delegates. Read an interview with Division 7 Coordinator Eckehard Brockerhoff on the IUFRO Blog:

<http://blog.iufro.org/2017/10/17/on-forest-health/>

#### Actions for Sustainable Forest Ecosystems under Air Pollution and Climate Change

Another highlight in 2017 was the 28th RG 7.01 conference



*Scientific excursion to Mt. Fuji and surrounding forests.  
(Photos by courtesy of IUFRO Tokyo 2017)*

for Specialists in Air Pollution and Climate Change Impacts on Forest Ecosystems in Tokyo, Japan. The conference was attended by 72 participants from 16 countries. Major emphasis was placed on air pollution in East Asia, particularly on the impacts of tropospheric ozone and nitrogen deposition, and on climate change impacts (e.g. heat and drought) on growth and carbon sequestration of forests. Novel subjects e.g. effects of black carbon on tree physiology or impacts of global changes on pollination were also presented, among other things. At the conference the IUFRO award 2017 for achievements in air pollution and climate change impacts on forest ecosystems was presented to Professor Takayoshi Koike, from Hokkaido University, Japan, in recognition of his outstanding merits as a scientist and as a mentor of young scientists.

#### Jolanda Roux Resigned as Coordinator of Research Group 7.02 (Pathology)

Jolanda, who had been coordinating the RG since 2010, had facilitated many IUFRO pathology conferences as well as contributions to IUFRO congresses, and she was a committed advo-

cate of fostering involvement and participation of researchers and students from Africa. Jolanda had a large impact on the Research Group and her input will be missed. The IUFRO Board approved Tod Ramsfield as the new coordinator of RG 7.02, with Beccy Ganley and Julio Diez Casero serving as new deputies.

### Publications

Several Division 7 participants contributed to a special issue of the journal *'Biological Invasions'* that was coordinated by the IUFRO Task Force on *'Biological Invasions in Forests'*. This is the first major compilation of papers on invasions of forests across a wide range of taxa (further details at <https://link.springer.com/journal/10530/19/11/page/1>)

### Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

19-25 March, Sapa, Vietnam

**8th Meeting of IUFRO Working Party 7.02.09: *Phytophthora in Forests and Natural Ecosystems***

IUFRO 7.02.09

7-11 May, Niagara Falls, Ontario, Canada

**Meeting of Working Party 7.02.02 *Foliage, Shoot and Stem Diseases of Forest Trees***

IUFRO 7.02.02

11-15 September, Thessaloniki, Greece

**Joint meeting of IUFRO WP 7.03.05 and WP 7.03.10**

IUFRO 7.03.05, 7.03.10

18-22 September, Freiburg, Germany

**All-Division 7 Conference**

IUFRO 7.00.00

22-26 October, Fuchu, Tokyo, Japan

**28th IUFRO conference for Specialists in Air Pollution and Climate Change Impacts on Forest Ecosystems: *Actions for Sustainable Forest Ecosystems under Air Pollution and Climate Change***

IUFRO 7.01.00, 7.01.05

## Forest Environment - Division 8

**Coordinator:** Jean-Michel Carnus, France

**Deputy Coordinator:**

Sandra Luque, France

Shirong Liu, China

Alexia Stokes, France

*Division 8 concerns research on forest ecosystems, landscape ecology, forest biodiversity, ecohydrology and natural disturbances. Currently, it includes 3 Research Groups (RGs) and 20 Working Parties (WPs) with a total number of 56 officeholders.*

RG 8.01.00: *Forest ecosystem functions (7 WPs)*

RG 8.02.00: *Forest biodiversity (8 WPs)*

RG 8.03.00: *Natural hazards and risk management (5 WPs)*

In 2017 many units were actively involved in the IUFRO 125th Anniversary Congress and the organization of sessions related to two main themes of the Congress: biodiversity & ecosystem services; soil & water. Furthermore, some officeholders from Division 8 were heavily involved in the organization of Congress sessions led by IUFRO Task Forces.

Division 8 also contributed to major scientific events in 2017 such as the Congress of the International Association of Ecology *"Ecology and civilization in a changing world"*. Research results and future trends were discussed during those events with particular emphasis on the overall theme of nature-based solutions for resilient landscapes and cities in the context of global change, including following topics:

- Green infrastructure: as a planning tool at regional and local levels, green infrastructure such as urban forests can provide a range of ecosystem services, but research is needed



*Forest fire in protection forest. (Photo U. Wasem/WSL)*

ded to quantify environmental effects and to integrate the ecological and social benefits produced in urban environments, particularly in the context of climate change adaptation and mitigation.

- Risk mitigation: forest ecosystems are increasingly exposed to natural disturbances such as fires, windstorms and pest outbreaks. New forest management strategies that increase forest resistance to multiple risks are urgently needed both for socioeconomic and ecological reasons. As there is growing evidence that mixed forests could be beneficial for a broad range of ecosystem functions including greater forest resistance to multiple damaging agents, more efforts should be made to develop new mixed planted forests.
- Security of water supply: forests are vital for protecting water resources, regulating hydrological cycles and sustaining aquatic functions and services. Climate change and land cover change are two major drivers for hydrological alteration. The understanding of hydrological responses to

forest management or land cover changes is essential for developing strategies to ensure the security of water supply and ecological values.

- Sustaining ecosystem services: enhanced knowledge of the ecological, biophysical and socio-economical processes driving and shaping forest landscapes is needed as well as working with local communities and policy makers to inspire and encourage stewardship of landscapes and to sustain ecosystem services.

#### Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

4-7 April, Orvieto, Italy

**COST FP1204 - Green Infrastructure: Nature-based solutions for sustainable and resilient cities**

IUFRO 8.01.02

17-19 May, Dresden, Germany

**Water - Soil - Waste: 2nd Dresden Nexus Conference: Session A.4 - Water and soil related ecosystem services provided by forests and agroforestry systems**

IUFRO 8.01.04

17-21 July, Boulder, CO, USA

**8th International Conference on Wind and Trees**

IUFRO 8.03.06

1-3 August, Harbin, China

**International Symposium on Sustainable Forest Management in the Context of Global Change (ISSFM-CGC)**

IUFRO 8.00.00, 1.00.00, 1.06.00

21-25 August, Beijing, China

**12th Congress of International Association of Ecology (INTECOL) Ecology and civilization in a changing world**

IUFRO 8.00.00. 8.01.02

18-22 September, Freiburg, Germany

**IUFRO 125th Anniversary Congress**

Division units co-organized sessions under Theme 4 – *Biodiversity, ecosystem services and biological invasions*; and Theme 5 – *Forests, soil and water interactions*

24-29 September, Halle, Germany

**Biennial 8.01.02 Working Party Conference: The green-blue nexus: Forests, landscapes and services**

IUFRO 8.01.02

#### Other meeting of relevance to Division 8

11-15 December, Shenzhen, China

**World Conference: Ecosystem Services for Eco-civilization: Restoring connections between people & landscapes through nature-based solutions**

Supporting ESP (Ecosystem Services Partnership)

#### IUFRO Publications

IUFRO Spotlight #45 - *If you're 'remotely' interested in monitoring biodiversity* (WP 8.01.02).

IUFRO Anniversary Congress Spotlight #50 - *Filling in knowledge gaps about natural disturbances and their interactions in mountains forests* (WP 8.03.03).



Windthrow, Austrian Alps. (Photo by Gerda Wolfrum, IUFRO)

IUFRO Anniversary Congress Spotlight #53 - *Humans and Wildlife: sharing space in a crowded world* (WP 8.02.08).

Scientific Summary 145, IUFRO NEWS VOL. 46, Issue 11, November 2017. *Sustainable forest management in the context of global change* (WP 8.00.00)

#### Other Publications

- **A global review on hydrological responses to forest change across multiple spatial scales:** Importance of scale, climate, forest type and hydrological regime. Mingfang Zhang, Ning Liu, Richard Harper, Qiang Li, Kuan Liu, Xiaohua Wei, Dingyuan Ning, Yiping Hou, ShirongLiu. *Journal of Hydrology* 546 (2017) 44–59. DOI: 10.1016/j.jhydrol.2016.12.040
- **Forest cover change and water yield in large forested watersheds: A global synthetic assessment.** Qiang Li, Xiaohua Wei, Mingfang Zhang, Wenfei Liu, Houbao Fan, Guoyi Zhou, Krysta Giles-Hansen, Shirong Liu, and Yi Wang. *Ecology* (2017) e1838. <https://doi.org/10.1002/eco.1838>
- **The Biodiversity Sourcebook:** GEO BON website: <http://geobon.org/products/books/>. Gill, M., Jongman, R., Luque, S., Mora, B., Paganini, M., Szantoi, Z. (Eds. ) (2017) *A Sourcebook of Methods and Procedures for Monitoring Essential Biodiversity Variables in Tropical Forests with Remote Sensing*. GOF-C-GOLD & GEO BON. Report version UNCCD COP-13, GOF-C-GOLD Land Cover Project Office, Wageningen University, The Netherlands. 299 pages ISSN: 2542-6729 (cf IUFRO Spotlight #45)
- **Open Source Special Issue:** *International Journal of Biodiversity Science, Ecosystem Services & Management* (Taylor & Francis) - *Ecosystem services supporting integrative natural resource management*. New Virtual Special Issue: <http://explore.tandfonline.com/page/est/tbsm-vsi-ecosystem-services-nexus-thinking/>
- **Editorial article (IUFRO 8.01.02):** Christine Fürst; Sandra Luque; Davide Geneletti. *Nexus thinking – How ecosystem services (ES) can contribute to enhance the cross-scale and cross-sectoral coherence between land use, spatial planning and policy making*.
- **Special Issue: Ecological Engineering**, Volume 109, Part B, December 2017, Pages 141-144. 4th International Conference on soil bio- and eco-engineering (SBEE2016) - *The Use of Vegetation to Improve Slope Stability*. Editorial article. Thomas Hubble Samantha Clarke, Alexia Stokes, Chris Phillips

# Forest Policy and Economics - Division 9

## Coordinator:

Daniela Kleinschmit, Germany

## Deputy Coordinators:

Mercy Afua Adutwumwaa Derkyi, Ghana

Jurij Begus, Slovenia

*The Division comprises 6 Research Groups (RGs) with a total of 25 Working Parties (WPs):*

*RG 9.01.00: Information and communication (6 WPs)*

*RG 9.02.00: Forest sector analysis*

*RG 9.03.00: Forest history and traditional knowledge (6 WPs)*

*RG 9.04.00: Forest resource economics (4 WPs)*

*RG 9.05.00: Forest policy and governance (8 WPs)*

*RG 9.06.00: Forest law and environmental legislation (1 WP)*

It is at the heart of Division 9 to understand and explain steering mechanisms for sustainable forest management and its effects on society. Division 9 covers a wide spectrum of social scientific research areas – the historical perspective, the economic and political analysis and the regulative perspective. Within these areas, a diversity of topics are addressed, e.g. biodiversity, cultural diversity, ecosystem services, landscape management and people and society.

In 2017 Division 9 activities mainly took place in the context of the IUFRO 125th Anniversary Congress held in September in Freiburg, Germany, as part of the all-Division 9 Conference. More than 30 sessions were offered by Division 9 at the Congress, showing the great range of activities of scientists involved in forest policy and economics. The session themes mirrored the diversity of research areas represented in Division 9. Sessions on communication, history, law and governance - some of which with a focus on specific regions - addressed issues ranging from bio-economy and climate change to illegal logging and forest restoration.

In addition to the scientific, technical and sub-plenary sessions, a Division 9 business meeting took place in which Division members discussed the state of the art and ways forward for the Division with great verve and enthusiasm. Furthermore, the Anniversary Congress featured a summer school for PhD students and a training workshop on communicating forest sci-



*Traditional forest knowledge conference, group photo taken at Hahoe Village during the field trip. (Copyright NIFoS, Republic of Korea)*

ence with Division 9 participating in the organization of both these events.

Read an interview with Division 9 Coordinator Daniela Kleinschmit on the IUFRO Blog: <http://blog.iufro.org/2017/10/02/on-forest-policy-and-economics/>

## Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

12-15 September, University House on Schauinsland (Black Forest) close to Freiburg, Germany

**Summer School 7 - Forest and environmental policy research: from theory to method and back**

IUFRO 9.00.00

18-22 September, Freiburg, Germany

**All-Division 9 Conference**

31 October-3 November, Seoul, South Korea

**10th International Conference on Traditional Forest Knowledge and Culture in Asia: Traditional use of non-wood forest products in Asian natives and its sustainability**

IUFRO 9.03.04, 9.03.05

## IUFRO at UNFF12 and GLF 2017

The 12th session of the UNFF was held from 1-5 May 2017 in New York at UN Headquarters. Over 300 participants gathered to discuss the implementation of the United Nations Strategic Plan for Forests (2017-2030), means of implementation for sustainable forest management, monitoring, assessment and reporting, and emerging issues.

IUFRO successfully engaged in the discussions of the UNFF by delivering statements, organizing scientific side events on topics of high concern and showcasing the effective impacts of IUFRO's work at the science-policy interface. For details: <https://www.iufro.org/events/other-major-events/iufro-at-unff12/>

On 19-20 December the Global Landscapes Forum (GLF) brought together 1000 attendees from 103 countries in the World Conference Center in Bonn, Germany. Several thousands more were reached across social media or tuned in live.

IUFRO was also strongly represented at the 2017 GLF event. Two discussion forums and an exhibition booth at the Restoration Pavilion were successfully used to present and discuss state-of-the art forest science in the context of the landscape approach. For details: <https://www.iufro.org/events/other-major-events/glf-2017/>

# 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

Forest adaptation and restoration are among the key challenges for securing forest integrity, vitality and productivity under ongoing changes of climatic and societal conditions worldwide. This Task Force (TF) aims to compile and improve globally available knowledge on how to achieve an optimal adaptation status of forest and forests landscapes. Our Adaptive Measure (AM) approach (1) considers all actions that increase adaptive capacity of forests and forest land, (2) combines Adaptive Forest Management (AFM) concepts at a stand-scale with Forest Landscape Restoration (FLR) concepts at a landscape scale, (3) links national and trans-national policies, as well as trans-disciplinary expertise in various fields, and (4) integrates experts and research activities among various IUFRO sections. The TF pursues the following three objectives: identifying knowledge gaps, comparing existing activities and techniques, and elaborating best practice approaches.

To help address the need for more complete information about forest adaptation and restoration activities and experiences for successful training and capacity building activities, a key TF activity in 2017 was the launching of an online survey (<http://gdi.thuenen.de/wo/limesurvey/index.php/883655?lang=en>) about experiences with Adaptive Measures worldwide. By the end of the year more than 50 responses from five continents were received.

Another focus in 2017 was the continuation of training and knowledge sharing workshops and scientific conferences. These included the workshop “*Translating global FLR policies into local action*” held in Puerto Rico, USA, organized together with the German Federal Ministry of Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and the United States Forest Service, where more than 80 participants from five continents discussed all aspects of implementing forest restoration (report available at: <https://www.iufro.org/science/special/spdc/flr/flrconf/>). In close collaboration with our TF, the IUFRO-SPDC published practical guidelines on “*Implementing Forest Landscape Restoration: A Practitioner’s Guide*” in 2017 (<https://www.iufro.org/science/special/spdc/flr/flr/pract-guide/>). The guide book is intended as a training resource for FLR facilitators to implement FLR in a specific country or local context.

## Meetings in 2017

<http://www.iufro.org/events/calendar/2017/>

19-22 April, Palermo, Italy

**Sustainable Restoration of Mediterranean Forests**

6-9 June, San Juan, PR, USA

**International Conference on Forest Landscape Restoration under Global Change - a contribution to the implementation of the Bonn Challenge**



*Forest recovery after devastating radiation impact; El Verde field station of the U.S. Forest Service, International Institute of Tropical Forestry (IITF). Excursion during the International Conference on Forest Landscape Restoration under Global Change; San Juan (PR), USA, 8 June 2017 (Photo by Andreas Bolte)*

12-14 September, Lund, Sweden

**3rd International Forest Restoration Conference**

21 September, Freiburg, Germany

**Session Forest Adaptation and Restoration under Global Change, IUFRO 125th Anniversary Congress**

20 December, Bonn, Germany

**Session at the Global Landscape Forum (GLF)**

## Publications

- **Bolte, A., Madsen, P., Derkyi, M.A.A., Stanturf, J.A. 2017.** Forest adaptation and restoration under global change - concept and status of an IUFRO Task Force. *Flora Mediterranea* 27, p. 6.
- **Bräuning, A., Bolte, A., Nabais, C., Rossi, S., Sass-Klaassen, U. 2017.** Editorial: Studying tree responses to extreme events. *Frontiers in Plant Science* 8, Art. 506. doi:10.3389/fpls.2017.00596
- **Chiatante, D., Domina, G., Montagnoli, A., Raimondo, F. M. (eds.) 2017:** Sustainable restoration of Mediterranean forests. *Flora Mediterranea* 27, p. 5-76. doi:10.7320/FIMedit27.005.
- **Kleine, M., Parrotta, J., Stanturf, J. 2017.** International Conference on Forest Landscape Restoration under Global Change - a contribution to the implementation of the Bonn Challenge. “Synthesising and sharing globally available forest-related scientific knowledge”. San Juan, PR, USA, 6-9 June 2017. Conference Report (available at <https://www.iufro.org/science/special/spdc/flr/flrconf/>)
- **Löf, M. (ed.) 2017.** Program and Book of Abstracts of the IUFRO 3rd Conference on Restoring Forests: Regeneration and Ecosystem Function for the Future. Lund, Sweden, 12-14 September 2017. Report 51. Swedish University of Agricultural Sciences, Southern Swedish Forest Research

Centre, Alnarp. (available at [https://www.iufro.org/download/file/27484/6464/10106-10600-20105-t31-lund17-abstracts\\_pdf/](https://www.iufro.org/download/file/27484/6464/10106-10600-20105-t31-lund17-abstracts_pdf/))

- **Mansourian, S. 2017.** Governance and Forest Landscape Restoration: A framework to support decision-making. *Journal for Nature Conservation* 37:21-30. doi:10.1016/j.jnc.2017.02.010
- **Mansourian, S. 2017.** Governance and Restoration. In: Allison, SK; Murphy, SD (eds.) *Routledge Handbook of Ecological and Environmental Restoration*. London: Routledge.

- **Mansourian, S., Dudley, N., Vallauri, D. 2017.** Forest Landscape Restoration: Progress in the last decade and remaining challenges. *Ecological Restoration* 35: 281-288. doi:10.3368/er.35.4.281.
- **Mansourian, S., Stanturf, J., Derkyi, M., Engel, V. 2017.** Forest Landscape Restoration: Increasing the positive impacts of forest restoration or simply the area under tree cover? *Restoration Ecology* 25: 178-183. doi: 10.1111/rec.12489.

## Task Force on Climate Change and Forest Health

**Coordinator:** Elena Paoletti, Italy

**Deputy Coordinators:**

Eckehard Brockerhoff, New Zealand

Andrzej Bytnerowicz, USA

Marcus Lindner, Finland

Climate change is one of the most challenging issues for forests worldwide. The Task Force (TF) concludes that only healthy forests are able to provide those ecosystem services that are so important nowadays under the pressure of climate change.

Among the many forest degradation factors, the TF puts emphasis on air pollution (in particular surface ozone and nitrogen deposition) and climate disturbances (e.g. drought, fire, wind), because they are different sides of the same story. Traditional air pollutants and 'modern' greenhouse gases come from the same sources, interact in the atmosphere and jointly impact on the ecosystems. As air pollution and climate change are interlinked, it is important to establish joint policies and focus on the interactions. Overall the results of the TF suggest that climate change effects on forests are likely to increase in the future.

The TF also noted that the higher the forest productivity, the higher the disturbance damage to forests would be. So the current challenge in planning forest adaptation to climate change is to maximize productivity and at the same time minimize climate change impacts. It is a major constraint for successful adaptation policies that our understanding of changes still remains highly fragmented, because effects are frequently studied independently and at a local scale. Knowledge gaps exist particularly outside Europe and North America. A better integration of experimentation, modelling and large scale monitoring is urgently needed. Against this background, the TF developed two proposals for biodiversity-based indicators and forest supersites.

In addition, the TF stressed the fact that new forest management principles are now becoming available, although it is often poorly understood that sustainable forest operations are the key starting point of any sustainable forest management strategy. As part of the TF activities, Division 3 scientists developed new concepts around forest operation sustainability, based on the sustainability of environment, ergonomics, economics, quality, people and the society. Overall, the TF continued to work towards consolidating a scientifically-based awareness of the processes regulating the interactions between forests and climate and of the approaches to increase resilience and health of present and future forest ecosystems.

### Activities in 2017

The TF organized a Side Event at the 12th Session of the United Nations Forum on Forests on **Healthy forests for a prosperous environment: the multi-faceted aspect of forest degradation**; Trusteeship Chamber, UN Headquarters in New York, 1 May 2017, as an opportunity to bridge science and policy by transferring scientific results to policy makers and informing scientists about policy priorities.

**A scientific session - no. 191 Climate change and forest health: insights from the IUFRO Task Force** - was held at the IUFRO Anniversary 125th Congress; Freiburg, Germany, on 18 September 2017, as a major opportunity of scientific updates and discussions.

The TF was also involved in the organization of the conference **Sustainable restoration of Mediterranean forests - Analysis and perspective within the context of bio-based economy development under global changes**; Palermo, Italy, 19-21 April 2017 (other Units involved: 1.06.00, 3.02.00, Task Force on Forest Adaptation and Restoration under Global Change).

*Members of the TF met back to back with the following events, with the major aim of discussing results and finalizing papers:*

- National Congress of the Italian Society of Silviculture and Forest Ecology (October 2017, Rome, Italy, all IUFRO Divisions represented)
- III Asian Air Pollution Workshop (October 2017, Tokyo, Japan, Division 7)
- 28th conference for specialists in air pollution and climate change impacts on forest ecosystems (October 2017, Tokyo, Japan, Division 7)



*As a major result of the Task Force on Climate Change and Forest Health, Division 3 developed a new concept of Sustainable Forest Operation. (Credit: Enrico Marchi, Florence University, Italy)*

# Task Force Sustainable Forest Biomass Network (SFBN)

**Coordinator:** Viktor J. Bruckman, Austria

**Deputy Coordinator:** Maliwan Haruthaithanasan, Thailand

Biomass from forests is an increasingly demanded feedstock for construction purposes, energy, and industrial processes. The members of the Task Force (TF) are committed to support the future availability of this renewable feedstock, while ensuring that the increased demand meets the targets set by the Sustainable Development Goals, which include protection of biodiversity, poverty alleviation, sustainable production and many more. While it is clear that these aims are not always free of contradictions, it is necessary to evaluate individual cases from a systems perspective to minimize negative impacts. The three major aims, framing the working program of the TF, are defined in the TF rationale:

- 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, and
- 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.

In 2017, the Task Force focused its attention on the continuation of its very successful intervention in establishing a regional bioenergy network in Southeast Asia, where reports and a proposal for further implementation steps were developed. The second major activity was the assessment of forest biomass harvesting guidelines and their potential harmonization with other existing guidelines and sustainable forest management (SFM) mechanisms, such as certification schemes. Several TF members were involved in organizing a workshop on forest biomass harvesting guidelines in September 2017 in Vienna. In addition the TF was very actively involved in IUFRO's key event of 2017, the 125th Anniversary Congress in Freiburg, and in the General Assembly of the European Geosciences Union (EGU-GA 2017). The term of the TF was renewed following a decision of the IUFRO Board during the Anniversary Congress 2017 in Freiburg. The TF defined a new research agenda until the IUFRO World Congress 2019 in Brazil, and its name was changed from "Sustainable Forest Biomass Network (SFBN)" to "Forest Biomass Network (FBN)".

## List of activities in 2017

<https://www.iufro.org/science/task-forces/forest-biomass/activities/>

24 April, Vienna, Austria

The TF organized the session **"The role of biomass in a sustainable bio-economy: implications for land use, climate and environmental services"** at the General Assembly 2017 of the European Geosciences Union (EGU)



*Harvesting guidelines were developed very early for the Pacific west coast in the USA following severe consequences of overlogging. (Photo by Viktor J. Bruckman)*

9 June, Bangkok, Thailand

The TF co-organized the **Bioenergy and Bioeconomy Conference 2017** – Sustainable management and partnership within the ASEAN Sustainable Energy Week 2017.

11 September, Vienna, Austria

Workshop **"Guidelines for Sustainable Forest Biomass Production"**

22 September, Freiburg, Germany

During the IUFRO 125th Anniversary Congress 2017 (Freiburg, Germany), the TF organized two sessions:

- *The nexus between bioeconomy and forest biomass: Challenges, opportunities and necessary steps in the forthcoming decades*
- *Perspective of short rotation forestry for sustaining society and environment*

13 November, Vienna, Austria

Workshop **"Progress in Gaurishankar Conservation Area"**: <https://www.oeaw.ac.at/en/kioes/aktivitaeten/detail/article/progress-in-gaurishankar-conservation-area/>. As a part of the long-term research project coordinated by the University of Natural Resources and Life Sciences, Vienna, the TF was involved in organizing this international meeting.



*The foyer of the General Assembly of the European Geosciences Union 2017 in Vienna, Austria, featured a range of exhibitors from the geosciences. The General Assembly brought together 15,000 scientists from 107 countries. Many sessions were tightly connected with issues that require expertise on forest sciences. (Photo by Viktor Bruckman)*

# Task Force Resources for the Future: Transformation in Forest Use

**Coordinator:** John Innes, Canada

**Deputy Coordinator:** William Nikolakis, Canada

## Outline

The IUFRO Resources for the Future Task Force aims to both generate and mobilize knowledge on institutional approaches that deal effectively with complex problems. Knowledge generation occurs among Task Force members, drawn from across the globe, and this knowledge is mobilized in workshops and in publications. The Task Force is multidisciplinary and cross-sectoral, mobilizing knowledge across sectors and disciplines, which is fundamental to dealing with complex problems facing global forests. Given the success of previous Task Force efforts the initiative was extended to 2019.

In 2017, a workshop with Task Force members was held in Dehradun, India, during March and a special issue in the journal *Environmental Conservation* was published, focused on *Forest Ecosystem Services* (including various Task Force members as contributors). In 2018, a book will be published by Cambridge University Press, and two conferences will be held: one at the Department of Forestry and Wood Technology, Federal University of Technology Akure, Nigeria, in May 2018, another at the University of British Columbia, Faculty of Forestry in July 2018.

## List of activities

At the Commonwealth Forestry Conference in April 2017 the Task Force convened a two-hour workshop with Task Force members and others in Dehradun, India. The event brought together a diverse range of professionals from more than a dozen jurisdictions, to discuss institutional pathways to enable successful transformation and sustainable forests. Task Force members who attended the event included Professor John L. Innes and Dr. William Nikolakis (University of British Columbia), who discussed the Task Force outcomes to date. Dr. William Mala, who provided an overview of reforms in Cameroon (University of Yaounde), Mr. Rob de Fegely, who presented on the Australian experience (President of the Institute of Foresters of

Australia) and Dr. Hosny El-Lakany, who brought an international perspective to the discussions. Drawing on this discussion, a proposal was developed for an edited book to be published by Cambridge University Press, entitled *"The Wicked Problem of Forest Policy"*. All Task Force members were invited to submit a chapter. Several chapters have already been completed including chapters by Drs. Nabuurs, Brand, Nikolakis and Innes. The book was approved later in 2017 for publication by Cambridge University Press by Dr. William Nikolakis (Deputy Coordinator) and Professor John L. Innes (Coordinator), under the title: *The Wicked Problem of Forest Policy: A Multidisciplinary Approach to Sustainability*. The planned date of publication is May 2018.

This book will draw from diverse theoretical disciplines in the social and natural sciences, and will bring in theories that are under-utilized in forest literature, including (and not limited to) institutional and neo-institutional, complex systems, planning, collective action, rational choice and behavioural decision theories. These theoretical perspectives offer important insight into developing institutional pathways to tackle dynamic problems that are collective in nature. These perspectives bring understanding to the norms, incentives and rules that can resolve individual and collective level trade-offs related to forests, or social dilemma.

A Special Issue in *Environmental Conservation*, on *"Forest Ecosystem Services"*, was published in March 2017. This peer-reviewed journal special issue included papers from Drs. Wunder, Innes and Nikolakis (all Task Force members).

<https://www.iufro.org/science/task-forces/transformation-forest-use/publications/>

A session was organized at the IUFRO 125th Anniversary Congress, September 2017, Freiburg, Germany. The session, entitled *"Resources for the Future Task Force: Institutions for Forest Transformation"* (session number 152), was related to the General Congress Theme 3: *Forests and Forest-Based Products for a Greener Future*. This session included presentations by Task Force members such as Drs. Brand, Wunder, Innes and Nikolakis.

## 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

## Objective

The group cooperated well with the EFIATLANTIC secretariat, which was turned into an EFI facility dedicated to plantation, thus favoring synergies with the Task Force. In addition, the

process to organize the 2018 international congress on planted forests in China was initiated and will benefit IUFRO's goals. Furthermore, some funding opportunities have been identified to support the networking activities, the organization of events and the preparation of publications.

## Involvement of IUFRO Division and Task Force members

The main means to support coordination with other Divisions and Task Forces is to involve in the Task Force representatives

from many Divisions, Research Groups and Working Parties. The second channel to facilitate cooperation between Units is the organization of joint events and publications.

#### Planned activities and products for 2018-2019

During the 2018-2019 period, the Task Force plans the following activities.

#### Publications:

(2019) What science can tell us (WSTU) about the potential of afforestation and plantation forests to promote a resilient bio-based society in Europe 2019: Summary (and proceedings) of ICPF 2018.

(2018) Joint paper with Biodiversity Task Force and Ecosystem Services Task Force about mixed plantations.

(2018) Book in Portuguese about forest plantations for technicians and students

#### Upcoming Events

- Reforestation Challenges Conference, Belgrade, 2018
- 4th International Congress on Planted Forests, China, 2018 - sponsored by FAO NGP EFI
- Planted forest: an opportunity for the EU. Presentation of WSCU to the EU parliament, 2018
- Special session on planted forests, Curitiba, Brazil, 2019, XXV IUFRO World Congress

#### New Generation Plantations (NGP) Encounters:

Beijing, China, organized back-to-back with the Planted Forests Congress, 2018

Curitiba, Brazil, organized back-to-back with the XXV IUFRO Congress, 2019

#### Networking

Application for funding and calls for global exchanges will continue to be promoted (for instance H2020 and OECD).

## Joint IUFRO-IFSA Task Force of Forest Education

**Coordinators:** Sandra Rodríguez Piñeros, Mexico  
Magdalena Lackner, Austria

**Deputy Coordinators:** Mika Rekola, Finland  
Janice Burns, Canada

The Joint IUFRO-IFSA Task Force on Forest Education (JTF) was established to identify, compile and communicate the gaps and challenges in forest education, especially highlighting new fields of forest education, and to enhance forestry students' mobility and education opportunities.

#### Major achievements in 2017

The active involvement of students from different countries and continents in the JTF continued. Nine countries were represented in our Global Outlook of Forest Education. Students interviewed graduates from their home countries using the Behavioral Event Interview (BEI) to explore thresholds and differentiating competencies in the working life. Each student finished a harmonized country report and these reports were compiled and edited by the members of JTF and other IUFRO members.

Results showed that the most frequently observed threshold and differentiating competencies were related to generic skills such as leadership and management, human interactions, and communication. The subject-specific competencies were not frequently observed in BEIs and the variation was also high among countries. The fact that forest-specific skills were not among the most frequently mentioned threshold or differentiating skills suggests furthermore that graduates have been satisfactorily prepared in these skills for success in working life. A final report of this work was presented during the Forest Education Technical Session at the IUFRO 125th Anniversary Congress. A blog ([www.foresteducation.wordpress.com](http://www.foresteducation.wordpress.com)) was ins-



Short course participants during the IUFRO 125th Anniversary Congress in Freiburg, Germany. (Photo by Mika Rekola)

talled to enhance the communication between all participants and future partners.

IFSA students in cooperation with the GFIS coordinators launched a list of forestry programs and created the basis for an education platform on the GFIS website [www.gfis.net/gfis/education](http://www.gfis.net/gfis/education). The archive shall be updated regularly and institutions are asked to submit any changes and news.

A total of 260 students from different countries participated in the four short courses delivered during 2017. During the *2nd Congreso Internacional de Estudiantes de Ciencias Forestales* – CONECIFORN in Mexico a course on forest governance and local communities was included as a side event. A workshop on *Preparing and Writing Research Proposals* was held during the IFSA Northern African Regional Meeting in Sunyani, Ghana.

Two workshops took place during the IUFRO 125th Anniversary Congress in Freiburg (*Getting published in the changing science landscape*, and *Forest governance – A case study of tropical timber trade between EU and Colombia*). The partners for these courses were: RELADEFA, IUFRO WP 9.01.06 Forest Science Publishing, IUFRO WP 9.05.00 Forest Policy and Governance, Universidad Distrital Francisco José de Caldas, Universidad Autónoma de Chihuahua, FAO-UE FLEGT Colombia,

Ministerio de Ambiente y Desarrollo Sostenible Colombia, Forestry Research Institute of Ghana, University of Freiburg Forest and Environmental Policy.

The members of the JTF participated in 9 events including IFSA and IUFRO symposiums where they communicated about their work and encouraged professors and students to join the Task Force.

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

**Coordinator:** Michael Kleine, Austria

### IUFRO-SPDC's Capacity Development Activities in 2017

In the year 2017 IUFRO-SPDC concentrated on the organization and implementation of training workshops, mostly in conjunction with IUFRO-SPDC's Scientist Assistance Programme (SAP), as well as on thematic networking projects.

The absolute highlight of the year 2017, also for IUFRO-SPDC, was the IUFRO 125th Anniversary Congress, bringing together more than 2000 forest scientists from all over the world. Among them were 81 early to mid-career scientists from economically disadvantaged countries in Africa, Asia and Latin America, whose participation IUFRO-SPDC had made possible through its SAP. Additionally, 29 of these scientists could take part in one of the two pre-Congress Training Workshops IUFRO-SPDC held on this occasion (<https://www.iufro.org/science/special/spdc/actproj/annivtws/>):

- *Communicating Forest Science: Making Science Work for Policy and Management*, on communication tools and approaches for forest scientists to promote and disseminate their research results to society, including policy makers and practitioners.
- *Science-Society Interactions in Support of Forest Landscape Restoration*, about ways and means of transforming scientific knowledge into useful information for policy and management decisions on the ground in order to contribute to effective forest and landscape restoration.

With Bhutan, Ethiopia, South Africa and Germany the venues of the training workshops organized by IUFRO-SPDC in 2017 were as diverse as the thematic areas and training content of the events. These included science-policy interactions on climate change adaptation potentials in Bhutan; the farm-forest interface with a focus on the improvement of livelihood and environmental outcomes addressed in the setting of Ethiopia's mosaic landscape; systematic review in forest science on various researchable questions relevant in the African context (South Africa); and general science communication and science policy interactions in the two pre-Congress Training Workshops in Germany.

### The workshops in chronological order:

Training Workshop on *Working Effectively at the Interface of Forest Science and Forest Policy*, 27-30 March, Thimpu, Bhutan; <https://www.iufro.org/science/special/spdc/actproj/wsbhutan0/>

Training Workshop on *Systematic Review in Forest Science*, 15-17 July, Pietermaritzburg, South Africa; <https://www.iufro.org/science/special/spdc/actproj/twsouthafrica/>

IUFRO-CIFOR Training Workshop on *Science-Policy Interactions - Making Science Work for Policy and Management*, 6-8 September, Addis Abeba, Ethiopia; <https://www.iufro.org/science/special/spdc/actproj/tws-ethiopia/>

Participants of pre-Congress Training Workshops, Freiburg, Germany (Photo by IUFRO)



In 2017 two multi-year thematic networking projects could be completed: (a) Forest landscape restoration and climate change mitigation and adaptation, and (b) The Global Study on the Conservation and Sustainable Management of Teak Resources (*Tectona grandis*). In addition, IUFRO-SPDC organized a global FLR conference in Puerto Rico, in June 2017.

### (a) Forest Landscape Restoration

In support of global policy initiatives such as the Bonn Challenge, the New York Declaration on Forests, and Land Net Degradation Neutrality (LDN) objectives set by the United Nations Convention to Combat Desertification (UNCCD) an *International Conference on Forest Landscape Restoration under Global Change: Synthesizing and Sharing Globally Available Forest-Related Scientific Knowledge* was held in San Juan, Puerto Rico, in June 2017 to review and discuss state-of-the-art scientific knowledge on how to implement large-scale forest landscape restoration (FLR) on the ground. The conference, which was co-hosted by the German Ministry of the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), the US Forest Service, and IUFRO, was attended by around 100 scientists, experts and policy makers. The results of the conference and all presentations are available for download at: <https://www.iufro.org/science/special/spdc/flr/flrconf/>

As announced in the 2016 Annual Report, IUFRO-SPDC is proud to report the publication of **A Practitioner's Guide** designed to assist facilitators and coordinators of FLR initiatives at national, subnational (landscape) and local levels in implementing forest landscape restoration in diverse ecological and socio-economic contexts. This practical guide is the result of 4 years of work by IUFRO scientists within the framework of the IUFRO Task Force on Forest Adaptation and Restoration under Global Change bringing together approaches and tools for operating forest landscape restoration projects on the ground. <https://www.iufro.org/science/special/spdc/flr/flr/pract-guide/>

Experiences on success and failures of FLR projects have been drawn from several case studies related to community forestry, forest restoration and trees on farms from around the world and are available for download from the IUFRO-SPDC homepage: <https://www.iufro.org/science/special/spdc/flr/flr/>

### (b) Sustainable Management and Genetic Conservation of Teak Resources

With funding provided by the International Tropical Timber Organization (ITTO) IUFRO-SPDC, together with FAO and TEAKNET, was leading an evaluation and assessment of the global situation on Teak with respect to its conservation and sustainable management. Following an ex-post evaluation of a project in Myanmar on “*Ex-situ* and *in-situ* conservation of Teak (*Tectona grandis* L.F.) to support sustainable forest management” and the collation of globally available scientific knowledge on teak conservation and management, a global study report was compiled and published in early 2017 as IUFRO World Series Vol. 36 “*The Global Teak Study. Analysis, Evaluation and Future Potential of Teak Resources*”. (<https://www.iufro.org/publications/series/world-series/article/2017/06/21/world-series-vol-36-the-global-teak-study-analysis-evaluation-and-future-potential-of-teak-reso/>).



At the International Conference on Forest Landscape Restoration under Global Change: Synthesizing and Sharing Globally Available Forest-Related Scientific Knowledge in San Juan, Puerto Rico. (Photo IUFRO)

The results of this study provide a major input for establishing a global teak support programme.

As in previous years IUFRO-SPDC, via its Scientist Assistance Programme, offered scientists the possibility to participate in IUFRO meetings all over the globe. All in all, IUFRO-SPDC could facilitate the participation of 131 researchers in IUFRO scientific congresses, conferences and training workshops by granting them financial support.

Finally, IUFRO-SPDC would like to thank the following donors for their generous support provided throughout the year 2017: the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, BMLFUW (recently renamed into Austrian Federal Ministry of Sustainability and Tourism, BMNT), the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), the German Federal Ministry of Food and Agriculture (BMEL), the Ministry of Foreign Affairs of Finland (MFA), the Republic of Korea's National Institute of Forest Science (NIFoS), the US Forest Service, the Center for International Forestry Research (CIFOR), the International Tropical Timber Organization (ITTO), as well as the Food and Agriculture Organization of the United Nations (FAO). Without their support in cash and in kind IUFRO-SPDC could not support the global forest science community to this extent.



Training workshop prior to the Forest Science Symposium “Research Underpinning the Sustainability of a Diverse Forestry Sector” in Pietermaritzburg, South Africa, 15-17 July 2017. (Photo provided by Gillian Petrokofsky)

# Global Forest Expert Panels (GFEP)

**Coordinator:** Christoph Wildburger, Austria

**Project Manager:** Andre Purrett, Austria

The Global Forest Expert Panels (GFEP) are a joint initiative of the Collaborative Partnership on Forests (CPF), led and coordinated by IUFRO. Their mission is to support intergovernmental processes related to forests and trees by assessing available scientific information in a comprehensive, interdisciplinary, objective, open and transparent way. By producing independent scientific reports on forest-related key issues of high concern, the GFEP initiative supports more informed decision-making at the global level. Based on the work of thematic Expert Panels involving internationally recognized leading scientific experts, GFEP provides peer-reviewed scientific assessment reports and policy briefs to international forest-related forums, policy processes and debates.



*1st Meeting of the Global Forest Expert Panel (GFEP) on Forests and Water in Cambridge, UK.  
(Photo provided by Andre Purrett)*

To date, five scientific assessments have been completed (Adaptation of Forests and People to Climate Change; International Forest Governance; Biodiversity, Forest Management, and REDD+; Forest and Food Security; Illegal Logging and Related Timber Trade). All of them received considerable international media attention and had a significant impact on international policies. The outcomes of GFEP assessments have served as background information for discussions, briefing documents for negotiators as well as guidance for strategic policy development. GFEP reports have been used as comprehensive, interdisciplinary and scientifically sound information source for scientists and communicators, including as teaching materials for universities.

From January 2017 on, the GFEP team was fully engaged with conducting a global scientific assessment looking at the interactions between forests and water. The GFEP assessment on Forests and Water is the sixth assessment within the framework of the initiative, with the goal to prepare a peer-reviewed scientific report and accompanying policy brief by July 2018. The assessment contributes to the implementation of the 2030 Agenda for Sustainable Development by exploring the interactions between the Sustainable Development Goals (SDGs) related to forests and water, thus illustrating the cross-sectoral contributions of forests to the various SDGs. The outcomes of the assessment will be launched at the United Nations High-Level Political Forum on Sustainable Development (HLPF 2018) in July 2018 in New York, where, among others, SDG 6 on “water” and SDG 15 on “forests” will be reviewed.

The assessment started off with a Scoping Meeting in March 2017 at FAO Headquarters in Rome, Italy, where the draft thematic outline for the study was developed. The outcomes of the meeting set the basis for the Terms of Reference (ToR), providing the general thematic and organizational structure for the work of an Expert Panel. The ToR were endorsed by all members of the Collaborative Partnership on Forests.

The Global Forest Expert Panel on Forests and Water, composed of 20 internationally renowned scientists, is co-chaired

by Prof. Irena Creed, University of Saskatchewan, Canada, and Prof. Meine van Noordwijk, Wageningen University, the Netherlands (formerly World Agroforestry Centre (ICRAF), Indonesia). The full list of members of the Expert Panel can be found at: <https://www.iufro.org/science/gfep/forests-and-water-panel/panel-members/>.

The Expert Panel convened for two meetings in 2017. The 1st meeting of the GFEP Expert Panel on Forests and Water took place from 26-29 June 2017, in Cambridge, UK. At this meeting, the Panel agreed on key concepts and methodological approaches, developed an annotated outline of the assessment report, and clarified the roles and contributions of Panel Members.

Over the summer of 2017, the chapter teams worked on the assessment, resulting in the first draft manuscripts in October. These were then discussed in detail during the 2nd meeting of the Expert Panel on Forests and Water, held from 18-20 October in Leeds, UK. As an outcome of the meeting, the Panel clarified overlaps between chapters, identified gaps to be addressed, and agreed on the further steps in developing the final drafts of chapters. It was agreed that the Panel would finalize their draft chapter texts by the end of 2017 and would convene for the 3rd Panel meeting in Vienna, Austria, from 17-19 January 2018.

In the autumn of 2017, the GFEP team advertised and promoted the study at the IUFRO 125th Anniversary Congress (18-22 September in Freiburg, Germany) and at the Global Landscapes Forum (GLF) 2017 (19-20 December in Bonn, Germany), where IUFRO, the CGIAR Research Program on Forests, Trees and Agroforestry (FTA) and the Swedish International Agricultural Network Initiative (SIANI) organized a Discussion Forum titled “Rainfall Recycling as a Landscape Function: Connecting SDGs 6, 13 and 15”. Further details about the session: <https://www.iufro.org/events/other-major-events/glf-2017/>

For more detailed information about the GFEP assessment on Forests and Water, please visit the GFEP website at: <https://www.iufro.org/science/gfep/forests-and-water-panel/>

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

**Coordinator:** Pia Katila, Finland

WFSE is an open, global network of scientists and experts. WFSE supports sustainable development, livelihoods, and inclusive growth, and the related policy processes by drawing out important lessons learned and recommendations through collating, critically analyzing, and synthesizing existing scientific knowledge on topics of international relevance in the forest, society and environment interface and by undertaking new research to fill in crucial gaps in existing knowledge. WFSE addresses these topics in a cross-sectoral, holistic and interdisciplinary fashion encouraging innovative approaches and anticipating future developments that will influence forest-related development at different scales, from local to global. WFSE produces science-based, future oriented, policy-relevant information. It publishes scientific publications and policy and information briefs.

The WFSE network includes eleven international research and development organizations and universities: CATIE (Tropical Agricultural Research and Higher Education Center), CIAS (Center for Southeast Asian and 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), Renmin University of China, Thünen Institute of International Forestry and Forest Economics, University of Florida, VITRI (Viikki Tropical Resources Institute, University of Helsinki). The network builds on the collaboration of about one hundred scientists and practitioners, many of which come from outside the partner organizations. It is coordinated at the Natural Resources Institute Finland (Luke).

In 2017, WFSE activities concentrated on three main themes that all relate to sustainable development and the interaction among forestry and Sustainable Development Goals (SDGs). Firstly, the project focused on how community and smallholder forestry contribute to achieving the SDGs, and also, how making progress in the SDGs can strengthen community and smallholder forestry. Secondly, WFSE addressed forest-related development discourses, how they are understood and how they play out in different locations and contexts, and how they may influence forestry and forest-related livelihoods and development. Thirdly, WFSE initiated the development of a comprehensive assessment on the potential and likely impacts of the efforts towards achieving the Sustainable Development Goals on forests and forest-related development and livelihoods. The resulting scientific publication and related policy brief will be launched in 2019.

## Side Events, Sessions and Meetings

WFSE Side Event at the United Nations Forum on Forests, UNFF12: **Harnessing the potential of community and smallholder forestry for sustainable development goals**



WFSE Side Event at UNFF12. (Photo by Andre Purret)

WFSE organized a side event in the UNFF12 on 2 May 2017. The event focused on the significant interlinkages between community and smallholder forestry and the Sustainable Development Goals (SDGs) and included the launch of the related WFSE Policy Brief *Building on synergies: Harnessing community and smallholder forestry for sustainable development goals*. Find presentations of this side event here: <https://www.iufro.org/science/special/wfse/wfse-news/#c26245>

**WFSE Session in the IUFRO 125th Anniversary Congress: Forests for sustainable development - Shifting discourses and approaches** in Freiburg, Germany, 22 September 2017.

The irrefutable role of forests and forestry in sustainable development was reinstated by the global sustainable development goals and the global climate agreement decided upon in 2015. To harness the potential of forests and forest-based activities to sustainable development requires critical analyses of the current forest-related discourses and development approaches. The WFSE session discussed from different perspectives some of the important approaches, policies and measures to advance sustainable forest management and forest-related development. It demonstrated how they are understood and applied in different contexts. The session further discussed the need for effective linkages between processes within the forest sector and with other sectors and emphasized the need for the forest sector process and approaches to evolve to meet the global development and climate goals.

The presentations are for a large part based on the WFSE Special Issue of the International Forestry Review *Shifting global development discourses: Implications for forests and livelihoods*. They are available at: <https://www.iufro.org/science/special/wfse/wfse-news/#c26959>

## WFSE Steering Committee meeting 2017

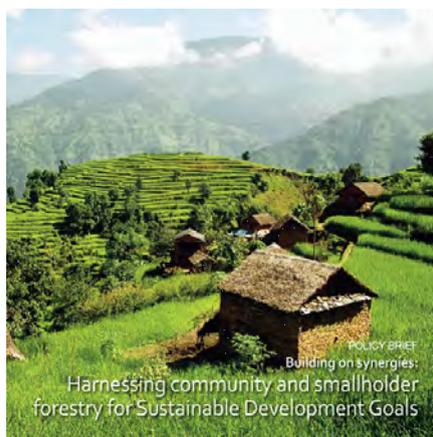
The WFSE Steering Committee meeting was held in connection with the IUFRO 125th Anniversary Congress on 19 September 2017 in Freiburg.

## Publications

Katila, P., de Jong, W., Galloway, G., Pokorny, B. and Pacheco, P. 2017. **Policy brief. Building on synergies: Harnessing community and smallholder forestry for sustainable development goals**. IUFRO. 22 p.

The key messages highlight the potential of community and smallholder forestry to contribute to sustainable development and present key recommendations for harnessing this potential. The Policy Brief was launched at UNFF12 in May 2017.

Katila, P., de Jong, W. Galloway, G. Pacheco, P. and Pottinger, A.J. 2017. Special Issue. **Shifting Global Development Discourses - Implications for Forests and Livelihoods.** International Forestry Review Vol 19, Suppl. 1. December 2017.



ervation discourses. The papers place special attention on the drivers that lead to the emergence of the forest discourses and how they are reflected in forest policy, administration, management and forest development support.

#### Newsletters

In 2017 WFSE produced two newsletters. They are meant for sharing the latest news and information about the special project's activities with IUFRO officeholders, member organizations, WFSE partners, donors and the members of the WFSE network from research organizations and universities around the world.

This Special Issue of the International Forestry Review brings together 12 papers and an Editorial. It focuses on forest development discourses while taking into consideration broader development, climate change and con-

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

## Global Forest Information Service (GFIS)

**Coordinator:** Eero Mikkola, Finland

2017 was a positive year for the Global Forest Information Service, a CPF joint initiative led by IUFRO and maintained by Luke (Natural Resources Institute Finland). The website had a high level of website traffic with a total of 471,000 visits from over 295,000 visitors and an average of 24,650 visitors and 39,200 visits monthly. GFIS also saw an increase in the number of information providers and content on the website. Over 395 partner organizations now contribute information to the gateway, with over 348,000 publications, news, videos, events and job vacancies searchable through the portal.

In addition to an increase in partners, GFIS saw an increase in social media network activities, and regular traffic throughout the year. Over 7900 individuals and organizations follow GFIS on twitter, thus bringing an increase in interactions and expan-

sion of reach. The newsletter grew by over 200 subscribers, raising the total to 1620 subscribers. In addition it was noted that an increasing number of organizations utilized GFIS as an information source when developing their newsletters and web-based papers.

In 2017 an updated global database of forest-related university programs was released by GFIS and the Joint IUFRO-IFSA Task Force on Forest Education. The database currently includes over 1275 forest-related academic programs from more than 300 institutions.

The Global Forest Information Service is thankful to its partners and 2017 sponsors; i.e. the United States Forest Service, and the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (recently renamed into Austrian Federal Ministry of Sustainability and Tourism).

### IUFRO Represented in the Regions

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

Region	OF	MO	MT
Europe	312	217	30
Northern America	172	128	11
Latin America	48	58	4
Africa	30	66	2
Asia	112	133	17
Oceania	32	26	0
<b>Total</b>	<b>706</b>	<b>628</b>	<b>64</b>

### IUFRO Scientific Structure

- 9 Divisions with 249 Research Units (*Research Groups and Working Parties*)
- 10 Task Forces (interdisciplinary)
- 5 Special Programmes, Projects and IUFRO-led Initiatives

For details: <https://www.iufro.org/science/>

### IUFRO Management and Administration

- International Council
- Board and Board Committees
- IUFRO Headquarters

For details: <https://www.iufro.org/who-is-who/>

# New Members in 2017

## Member Organizations

### Australia 1022.00.00

University of the Sunshine Coast – USC  
Maroochydore DC, Queensland

### Austria 1023.00.00

Österreichische Akademie der Wissenschaften  
Wien

### Benin 1019.00.00

Laboratoire de Biomathématiques et d'Estimations Forestières  
Faculté des Sciences Agronomiques  
Université d'Abomey-Calavi  
Cotonou

### Brazil 1021.00.00

UFG - Universidade Federal de Goiás  
Campus Samambaia - Prédio da Reitoria  
Goiania, Goiás

### Germany 0614.00.00 (reinstated)

Hochschule für Forstwirtschaft Rottenburg  
Rottenburg am Neckar

### South Africa 1018.00.00

Hans Merensky Holdings PTY Ltd.  
Parktown

### USA 1020.00.00

University of Georgia  
Warnell School of Forestry and Natural Resources  
Athens, Georgia 30602

## Associated Members

### Algeria 864

El Zerey-Belaskri Asma  
Sidi Bel Abbes University  
Sidi Bel Abbes

### Australia 855

Halder Nirmol Kumar  
The University of Sydney  
Center for Carbon, Water and Food  
Brownlow Hill, New South Wales

### Australia 868

Carnegie Angus  
NSW Department of Primary Industries - Lands & Forestry  
Parramatta, New South Wales

### Bangladesh 870

Al-Amin Mohammed  
Institute of Forestry and Environmental Sciences  
University of Chittagong  
Chittagong

### Benin 853

Adekanmbi Dende Ibrahim  
Tokpota Maison Fakote  
Porto Novo

### Cameroon 858

Lekah Uta-Rein  
The University of Yaounde  
Central Library  
Yaounde

### Denmark 852

Elers Koch Niels  
Trap Danmark A/S  
Hoersholm

### India 859

Shrivastava Ajit Kumar  
Forest Department Madhya Pradesh India  
Jabalpur

### Indonesia 866

Hermudananto  
Bogor

### Korea (Rep) 867

Jang Jihwi  
University of Seoul  
Department of Environmental Horticulture  
Seoul

### Malaysia 862

Ismail Mohd Hasmadi  
Universiti Putra Malaysia  
Faculty of Forestry  
Serdang, Selangor

### Netherlands 863

Ros-Tonen Mirjam A.F.  
Amsterdam Institute for Social Science Research (AISSR)  
University of Amsterdam  
Amsterdam

### Poland 861

Bozetka Barbara  
Ostrow, Wielkopolski

### South Africa 856

Heath Ronald  
Forestry South Africa (FSA)  
Birnam Park, Johannesburg

### Spain 865

Piqué Nicolau Miriam  
Centre Tecnològic Forestal de Catalunya  
Solsona

### Togo 869

Houelete Komlan  
Forest Development and Exploitation Organization  
Lome

### United Kingdom 872

Oxbrough Anne  
Edge Hill University  
Department of Biology  
Ormskirk, Lancashire

### USA 871

Minkova Teodora  
Washington State Department of Natural Resources  
Olympia, Washington

### Zambia 860

Kalaba Felix Kanungwe  
Copperbelt University  
School of Natural Resources  
Kitwe

# Finances

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

## IUFRO Balance - as of 31 December 2017 in Euro

ASSETS		TOTAL	EQUITY and LIABILITIES		TOTAL
<b>A.</b>	<b>Fixed Assets</b>		<b>A.</b>	<b>Equity</b>	
I.	Intangible property	3,857	I.	Capital as per 31 Dec 2016	638,620
II.	Tangible assets	13,173	II.	Loss actual 2017	- 80,605
III.	Financial assets	428,929			
	<b>Total</b>	<b>445,959</b>			<b>558,015</b>
<b>B.</b>	<b>Current Assets</b>		<b>B.</b>	<b>Accruals</b>	<b>148,900</b>
I.	Accounts receivable	36,840	<b>C.</b>	<b>Liabilities</b>	<b>63,983</b>
II.	Other receivables	139,382	<b>D.</b>	<b>Liabilities from contributions not yet used</b>	<b>355,692</b>
III.	Cash on hand and in banks	493,187	<b>E.</b>	<b>Deferred income and credits</b>	<b>0</b>
	<b>Total</b>	<b>669,409</b>			
<b>C.</b>	<b>Prepaid Expenses</b>	<b>11,222</b>			
<b>TOTAL ASSETS</b>		<b>1,126,590</b>	<b>TOTAL LIABILITIES and EQUITY</b>		<b>1,126,590</b>

## IUFRO International Union of Forest Research Organizations - UNION Profit and Loss - Overview 31 December 2017 in Euro

Capital 31 Dec 2016 638,620

### INCOME 2017:

Membership Fees (received)	230,591
Donations for budget year 2017	1,520,016
Other income / refunds	156,871
Interest/profit from financial result (bank)	5,523

**TOTAL INCOME** **1,913,001**

### EXPENDITURE 2017:

Salaries and contracts	-892,458
Contributions for third organizations	-2,597
Office equipment and maintenance	-19,207
Printing, postage and PR activities	-131,408
Travel	-84,501
Organization of meetings, travel support, SAP	-602,239
Legal expenses, accounting	-48,252
Equipment (depreciation), operating costs, insurances	-18,934
Bank charges, currency differences	-46,305
Others	-147,706

**TOTAL EXPENDITURE** **-1,993,606**

**Loss for the year 2017** **-80,605**

**Capital 31 Dec 2017** **558,015**

Please note that the donations include the rest-balances of the year 2016, but exclude the accruals of revenue into the year 2018.

## Sponsorships

Grants and  
in-kind contributions  
to IUFRO in 2017

**IUFRO is most grateful to all its 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.*

### Sponsorships actually received in 2017 in the various cost centers in Euro (Grants and in-kind contributions)



Konzerthaus Freiburg, IUFRO 125th Anniversary  
Congress. (Photo by Klaus Polkowski for FVA)

Grantors/Contributors	In-kind contributions <sup>1</sup>	TOTAL
Austrian Federal Ministry for Sustainability and Tourism & BFW	154,864	597,863.85
Finnish Ministry of Foreign Affairs (FMA)	0	400,000.00
German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)	0	288,366.00
National Institute of Forest Science, Korea (NIFoS)	0	167,345.00
Natural Resources Institute, Finland (LUKE)	150,255	150,255.00
US Forest Service	0	144,728.00
Forest Research Institute Baden-Wuerttemberg (FVA) through funding by BMEL	0	100,300.00
Contribution FABI	0	30,000.00
Contribution Mondi	0	25,000.00
Contribution WRI	0	22,206.00
Contribution CIFOR	0	22,000.00
Contribution FAO	0	4,448.00
Contribution ITTO	0	4,211.00

<sup>1</sup>These are non-cash contributions such as staff time and office facilities.

## 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 Sievänen, 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 Initiatives:

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

### XXV IUFRO World Congress Organizing Committee Chairs

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

### Congress Scientific Committee Chair:

Jerry Vanclay, Australia

### FAO Representative:

Eva Müller, Germany/Italy (until mid-2017), Hiroto Mitsugi, Japan/Italy

## IUFRO Headquarters (Vienna)

*Executive Director:* Alexander Buck, Austria  
*Deputy Executive Director and IUFRO-SPDC Coordinator:*  
Michael Kleine, Austria  
*Finances and Administration:* Astrid Toppel, Austria  
*Project Coordinator:* Renate Prüller, Austria  
*Web Management, Communication and Social Media:*  
Brigitte Burger, Austria  
*Communication, PR, Publications and Translation:*  
Gerda Wolfrum, Austria  
*Library and Database Administrator:*  
Sylvia Fiege, Austria  
*System Administrator:* Heimo Schaffer, Austria  
*GFEP Coordinator:* Christoph Wildburger, Austria  
*GFEP Project Manager:* Andre Purret, Estonia  
*SPDC/GFEP Project Management and Translation Services:*  
Eva Schimpf, Austria  
*IUFRO-SPDC Project Management and Translation Services:*  
Margareta Khorchidi, Austria  
*Finances and Administration (Projects):*  
Judith Stöger-Goiser, Austria  
*Junior Professional Officer – IUFRO/IFSA Joint Position:*  
Janice Burns, Canada  
*Junior Professional Officer (IUFRO-EFI YSI):*  
Daniel Boehnke, South Africa

## IUFRO Honours and Awards

### Distinguished Service Award (DSA)

Margarida Tomé, Konstantin von Teuffel (2017); Hans Heinemann (2016, handed over in 2017)

### Special Recognition Award (SRA)

Jan Heino (2016, handed over 2017)

### Certificate of Appreciation (CoA)

Jung-Hwan Park, Min-Jeong Jo, Eli Koleva, Robert Kozak, Jamie Barbour, Jorma Neuvonen, Laura Cottle, Tim Christophersen, Horst Freiberg, Monica Gabay, Bernard de Galembert, Tatenda Mapeto, Jun Xia, Mercy Gichora, Andreas Bolte, Helen Desmond, Janina Radny, Carol Grossmann, Uwe E. Schmidt

## IUFRO Headquarters Publications 2017

- World Series Vol. 36 - The Global Teak Study. Analysis, Evaluation and Future Potential of Teak Resources
- IUFRO News Issues 1-12 (3 double issues), 2017
- 3 Scientific Summaries related to IUFRO News
- 14 IUFRO Spotlight issues
- IUFRO Annual Report 2016

## Editorial:

Annual Report 2017, copyright by IUFRO, Vienna, 2018

Cover picture by Simon Goiser (aged 5)

IUFRO 2017 Highlights (short): <https://www.iufro.org/publications/annual-report/article/2017/05/11/annual-report-2017-highlights/>

*Former forest academy in Eberswalde, Germany, the "birthplace" of IUFRO, with B. Danckelmann memorial. (Photo by Marco Natkhin/HNNE)*



## 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.

