

IUFRO



SPOTLIGHT

International Union of Forest Research Organizations

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IUFRO Spotlight is an initiative of the International Union of Forest Research Organizations. Its aim is to introduce, in a timely fashion, significant findings in forest research from IUFRO officeholders and member organizations to a worldwide network of decision makers, policy makers and researchers. IUFRO will encapsulate, and distribute in plain language, brief, topical and policy-relevant highlights of those findings, along with information on where/how to access the full documents.

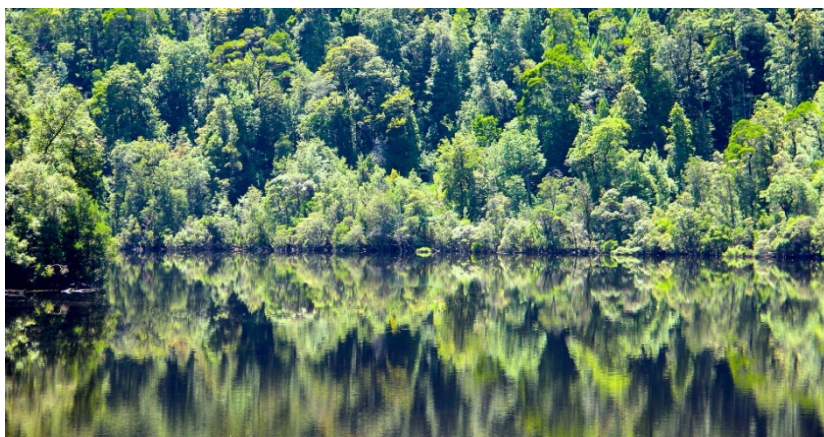
IUFRO Spotlight also aims to present activities such as sessions at major IUFRO congresses or the work of IUFRO Task Forces with a focus on emerging key issues that are of great interest to policy makers and groups inside and outside the forest sector and contribute to international processes and activities. The IUFRO Spotlight findings will be distributed in a periodic series of emails as well as blog postings.

IUFRO Spotlight #91 / December 2021

Forests and Water

Science-Policy-Practice Interface for Managing Forest and Water Interactions under a Changing Environment

Water is fundamental to life on earth. What may not be quite so obvious is that forests are equally vital resources for life on the planet.



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And the two – water and forests – are inseparable in the pursuit of a sustainable and sustainably developed world. Therefore, forests and water resources have been identified as essential elements in adaptation to climate change.

The IUFRO-sponsored Forests and Water science-policy forum at the IUFRO World Day provided a platform for scientists, forest managers and decision-makers from the Asia-Oceania region to share insights and experiences about forest and water interactions from different perspectives.

Among the significant challenges discussed by the forum panelists were the increasing competition for water resources, the positive and negative impacts of carbon sequestration due to large scale afforestation and reforestation, climate change-related shifts in rainfall patterns and capacity building requirements among civil groups at various levels to ensure competent engagement in forest and water management.

To address the challenges of competition for water, a range of technical, social and political actions have been suggested – technical advancements such as GIS, remote sensing and climate modelling to better understand the full hydrological cycle, targeted reforestation, better integration of planted forests in the wider landscape, good community engagement and tighter regulatory environments.

Integrated watershed management was also advocated as a way to deal with the impact of changes in rainfall due to climate change. This varies across the region; in some areas such as Japan there have been record-breaking heavy rains, while in others there have been droughts.

Forests play a crucial role in supplying clean water, help prevent environmental hazards such as soil erosion and flooding as well as ensuring many other ecological functions. Any forest changes – and their interactions with climate – can significantly affect water resources and water-related ecological functions and services.



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Therefore, managing forests for water provision is an important priority in various international initiatives (Bonn Challenge, UN SDGs etc.). In addition, there is an active agenda to use reforestation for landscape restoration and to mitigate rising atmospheric carbon dioxide content.

The forum panelists also underlined that communicating and sharing technical advances and policies must be strengthened to ensure that research on forest and water interactions in a changing environment is appropriately addressed.

The opening address for the forum was delivered by IUFRO Vice President *Liu Shirong* of the Chinese Academy of Forestry.

Keynote presentations were given by *Meine van Noordwijk*, World Agroforestry Centre (ICRAF), Nairobi, Kenya; and by *Richard Harper* of Murdoch University, Perth, Australia. Richard Harper is also Deputy Coordinator of IUFRO's Task Force on Forests and Water Interactions in a Changing Environment.

The panel discussion featured:

Brenda Baillie, Northland Regional Council, New Zealand;

Mingfang Zhang, University of Electronic Science and Technology of China;

Kyoichi Otsuki, Kyushu University, Japan;

Diomedes A. Racelis, University of the Philippines Los Baños, Philippines; and

Hyung Tae Choi, National Institute of Forest Science, Republic of Korea.

The online discussion was one of three science-policy forums organized for IUFRO World Day. (The other two – Forests and Fire and Forest-based Bioeconomy for All – will be covered in separate Spotlights.)

Link to the forums: [Science & Policy | IUFRO World Day](#)

Link to the recording: [Forest-Water-Session](#)

IUFRO World Day was a worldwide digital event that took place on September 28-29 in three time zones around the world. It comprised 24 hours of forest-related research topics, networking, and emerging issues of relevancy for global policy makers. The event was designed to showcase the diversity of the IUFRO network, including IUFRO's scientific units and IUFRO's member organizations, to facilitate networking, and to enhance communication and outreach.

The World Day comprised 79 live sessions from IUFRO Units and Members – including the three forums mentioned above – covering highly relevant topics for policy makers as well as three central IUFRO sessions, one in each time zone. Over 3000 participants from more than 100 countries registered for the event. [IUFRO: IUFRO World Day - Digital Forest Science Forum 2021 / Events](#)

The findings reported in IUFRO Spotlight are submitted by IUFRO officeholders and member organizations. IUFRO is pleased to highlight and circulate these findings to a broad audience but, in doing so, acts only as a conduit. The quality and accuracy of the reports are the responsibility of the member organization and the authors.

Suggestions for reports and findings that could be promoted through IUFRO Spotlight are encouraged. To be considered, reports should be fresh, have policy implications and be applicable to more than one country. If you would like to have a publication highlighted by Spotlight, contact: Gerda Wolfrum, IUFRO Communications Coordinator, [wolfrum\(at\)iufro.org](mailto:wolfrum(at)iufro.org)

The International Union of Forest Research Organizations (IUFRO) is the only worldwide organization devoted to forest research and related sciences. Its members are research institutions, universities, and individual scientists as well as decision-making authorities and other stakeholders with a focus on forests and trees. Visit: <https://www.iufro.org/>

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