



International Conference on the Status and Future of the World's Large Rivers

August 3-6, 2021
Moscow, Russia



Congo



Yangtze



Mississippi



Danube



Murray



Amazon

WLR Conference 2021 – Final Report

This conference is part of the UNESCO World's Large Rivers Initiative and aims in providing a global forum for a wide-ranging discussion of key issues related to research on large rivers and to their effective and sustainable management, involving both scientists and decision makers especially from developing countries.

Introduction

The pressures and impacts on the World's Large Rivers have increased greatly in recent years. Large rivers are particularly exposed to problems of multiple uses, often with conflicting aims. At the global scale, there is no comprehensive assessment of the current status of the World's Large Rivers, the conflicting demands on such rivers, and likely future anthropogenic impacts, as well as the potential for restoration and the associated problems.

In 2011, the first International Conference on „The Status and Future of the World's Large Rivers“ in Vienna, Austria, provided a global forum for a wide-ranging discussion of key issues related to research on large rivers and to their effective and sustainable management, involving both scientists and decision makers. This successful event has been continued in 2014 in Manaus, Brazil at the fascinating Amazon River, and in 2017 in New Delhi, India at the outstanding Ganga River.

In this context, a new UNESCO / IHP Programme (WLRI - World's Large Rivers Initiative) has been established in 2014, which aims to foster a global network of programmes and partners related to the work and research at large rivers. In 2018 the WLRI officially became part of the UNESCO-IHP work programme.

One of the main tasks of this Initiative is to continue the successful series of World's Large Rivers Conferences. Moscow, Russia's capital city, was therefore chosen as venue to host the next conference. Due to the ongoing Covid-19-pandemic, the **4th World's Large Rivers Conference was held from 3rd to 6th of August 2021** as an online event – allowing attendees to participate virtually online.

Conference Organizers



BOKU - University of Natural Resources and Life Sciences, Vienna, Austria

Helmut Habersack

Chair of International Scientific Committee (ISC)



MSU - Lomonosov Moscow State University, Moscow, Russia

Nikolay Kasimov, Sergey Dobroliubov, Natalia Frolova & Sergey Chalov

Co-Chairs of Local Organizing Committee (LOC)

Cooperation Partner & Support



Main cooperation partner of this conference is **UNESCO-IHP** which supported the conference ideologically and financially by allowing 100 participants from developing countries to attend the conference virtually. UNESCO was always the key partner of the World's Large Rivers Conference series. With the support provided by UNESCO it was possible to enable hundred scientists from developing countries (mainly from the regions of Africa, Asia & the Pacific as well as Latin America & the Caribbean) to participate in the conference, to present their work and ideas and to develop new cooperation networks and strategies. Knowledge exchange and dissemination of research results (already 10 special issues published in highly ranked international journals and 4 more in planning) helped to bridge the gap between developing and developed countries.

This supportive funding by UNESCO enabled participants from developing countries to attend free of costs. Further benefit of the virtual character of this conference was that persons from these regions were able to participate without travel or accommodation costs, which represent further obstacles regarding their participation. Further, these persons were hence enabled to join the **World's Large Rivers Initiative Meeting** which was held during the conference (4th of August 2021). Participation of people from different regions all over the world was a prerequisite for a successful development and implementation of this initiative.

Further international institutions which supported the conference ideologically were:

- IAHR International Association of Hydro-Environment Engineering and Research
- IAHS International Association of Hydrological Sciences
- WASER World Association for Sedimentation and Erosion Research
- IAG International Association of Geomorphologists
- SIL International Society of Limnology

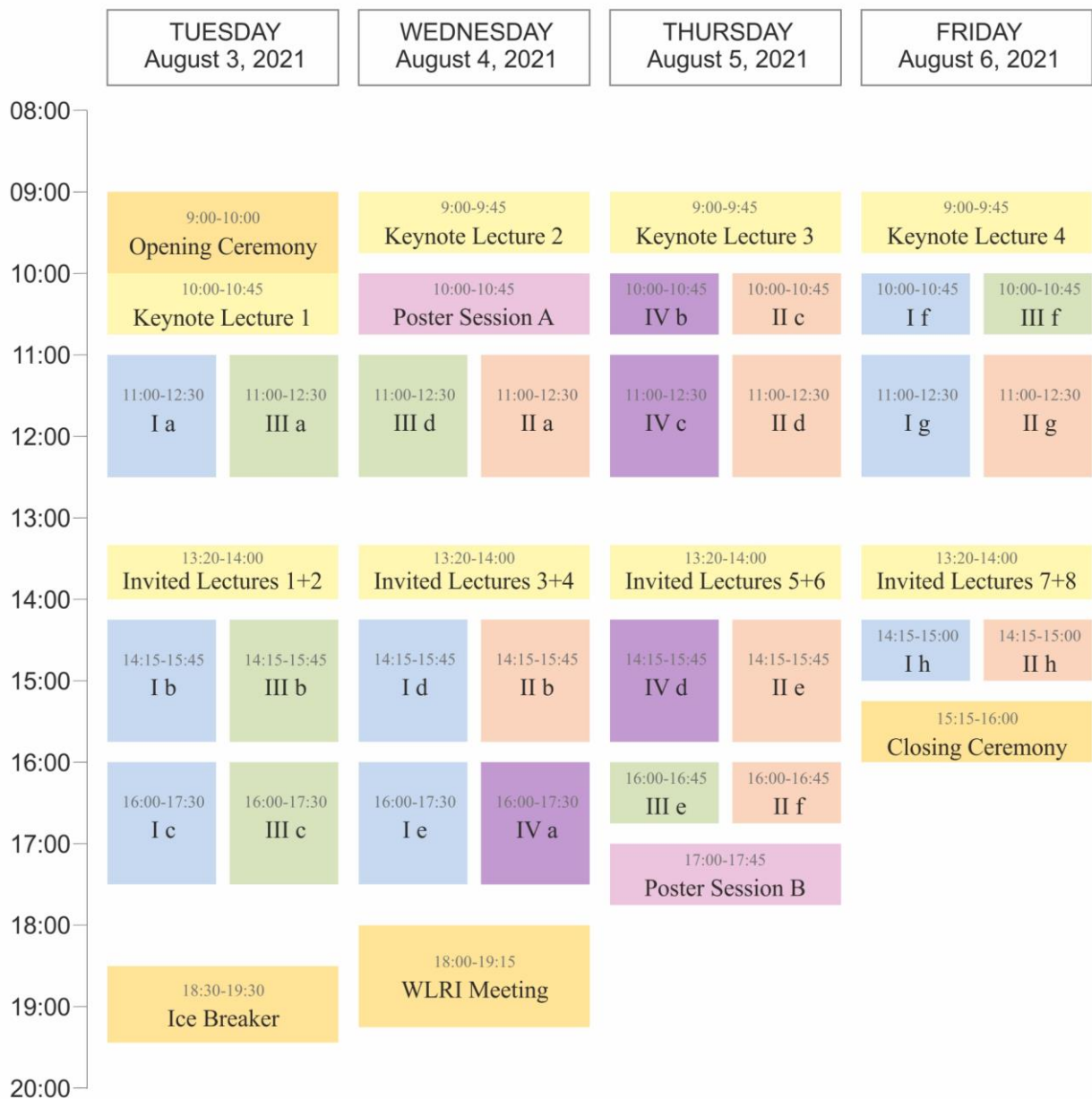


Technical Programme

Special focus has been given to presentations coming from different regions of the world and different scientific fields. Contributions from developing countries were especially welcomed.

Topics

- I Hydrology, Hydraulics & Hydroclimatic Impacts
 - 1a Hydrology & Hydraulics
 - 1b Water Resources & Availability
 - 1c Climate Change Impact on Large Basin Hydrology
- II Sediment Transport & River Morphology
 - 2a Sediment Transport & Material Fluxes
 - 2b River Morphology & Morphodynamics
 - 2c Sedimentary Floodplain Archives
 - 2d Influence of Climate Change on Sediment Transport and River Morphology
- III River Pollution, Ecology & Restoration
 - 3a River Pollution & Water Quality
 - 3b Water & Sediment Quality
 - 3c River Ecology & River Restoration
 - 3d Influence of Climate Change on Ecology and Restoration
- IV Integrated River Basin Management
 - 4a Human Uses, Conflicting Demands and Stresses on Large Rivers
 - 4b Climate Change – Water Security & Natural Disasters
 - 4c Hydropower, Navigation, Flood Control & Protection, Water Resources & Irrigation
 - 4d Integrated Management & Shared Benefit

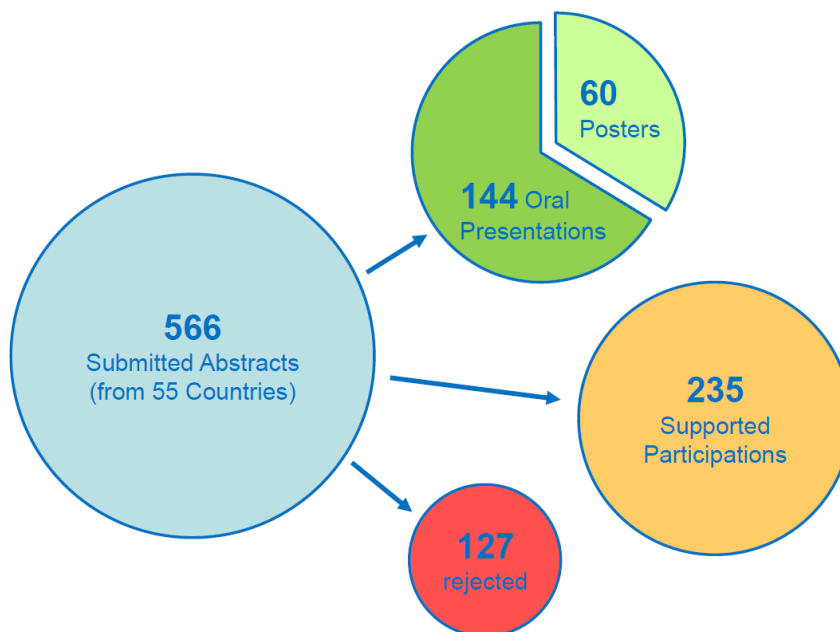


- I Topic I: Hydrology, Hydraulics & Hydroclimatic Impacts
- II Topic II: Sediment Transport & River Morphology
- III Topic III: River Pollution, Ecology & Restoration
- IV Topic IV: Integrated River Basin Management

Conference Statistics

For this conference, 566 abstracts from 55 countries have been submitted. Of these, 144 were presented as oral presentations, 60 as poster presentations and 235 as supported participations. UNESCO's support helped presenters from developing countries to present their research in all three of these categories. Besides this, 127 abstracts have been rejected due to lack of quality.

The presentations were given over four days in parallel online sessions covering all relevant conference topics. After each presentation, there was time for discussion. Deeper discussion took place in the virtual coffee rooms during the breaks and after the official conference programme.



Conference Outcome

- **Conference Abstract Book:** publication of all 439 accepted abstracts; see separate document
- **Recordings of all oral presentations:**
<https://www.youtube.com/channel/UCW4sTEBUJkj17aBRnB3LYXA>
- **Documentation of all poster presentations:**
<https://bokubox.boku.ac.at/index.php/#df649372c33fa660e1366b5bfbf50aef>
- **Networking:** Online Discussion Forums, Virtual Coffee Rooms, Participants List (see separate document)
- **Journal Publication:** currently, four special issues with conference contributions are prepared in the SI-Journals Aquatic Conservation, Hydrobiologia, WATER and Geography, Environment, Sustainability.
- **WLRI Meeting:** Discussion panel with exchange of ideas and knowledge; documented as video file (<https://www.youtube.com/watch?v=QnyNq03ytxc>) and as report (see separate document)