Congo River 2020

International Conference

Users - Hydrodynamics - Geomorphology
of the Congo River

Congo River 2020 is the first international conference on the Congo River that will be held in the basin’s member state, and provides an opportunity of experience sharing on the methods used, data and information generated from the implementation of research initiatives to a wider audience of stakeholders involved in research, policy decision making, management, and capacity development as well as investment in the Congo Basin.

The conference will also target learning and sharing experience from other large rivers of Africa and the world.

http://CongoRiver2020.CRREBaC.org
Context

The Congo River Basin is the second largest in the world after the Amazon, and holds a huge potential for water resources development, with multiple goods and services that include hydro-power, water supply, fisheries, agriculture, transportation, and maintenance of aquatic ecosystems. This potential constitutes a key asset for strategies to curb the pressure of water scarcity and thus, increasing opportunities for improved water security in Africa. In addition, the Congo River Basin has a key role in global moisture circulation and carbon budgets. However, managing water resources in the Congo River Basin involves issues of critical knowledge gaps over appropriate temporal and spatial scales, a lack of technical resources to formulate adequate management strategies and ultimately, the sheer scale of the challenge. A comprehensive review of the knowledge gaps and scientific research pathways to address the challenges of the river basin development is provided by Alsdorf et al. (2016) “Opportunities for hydrologic research in the Congo Basin”. A major activity that followed this review included the Congo AGU (American Geophysical Union) Chapman Conference that was held in Washington DC of the USA, September 2018, with the aim being to establish research pathways that will lead to scientific discoveries in hydrology, climate change, and biogeochemistry within the Basin.

At the same time, a major research and capacity building project, the Congo River users Hydraulics and Morphology (CRuHM) project, funded under the Royal Society-DFID Africa Capacity Building Initiative of the United Kingdom, was being implemented in the Congo River Basin. The main aim of this research initiative was to carry out large scale hydraulic and hydrological science research on the main channels of the Congo River in order to address the severe lack of basic knowledge and understanding, in support of socio-economic benefits with regard to water resources services. Under this research, led by a consortium of partner
institutions from the Universities of Kinshasa in the Democratic Republic of Congo (DRC), Dar es Salaam in Tanzania, Rhodes in South Africa, and Bristol and Leeds in the UK, a number of research activities have been undertaken, including:

- **Large scale annual site focused fieldworks involving application of relatively new approaches to data collection on large rivers and predictions in ungauged basins,**

- **Hydrological science research covering a large spatial scale with the objective of collecting a number of fundamental data sets related to river hydraulics and geomorphology,**

- **Testing and applying a methodological framework of fluvial sediment sampling to understand source to sink processes of sediment transport in the Congo basin,**

- **Development of hydrological and hydrodynamic modelling frameworks that incorporate new data with the objective of understanding hydraulic behavior of the river, accounting for wetland processes in large scale hydrological modelling of the basin, quantifying the poorly understood water fluxes between the main channel and the floodplain, and investigating impacts of possible future climate changes and human influences in the basin.**

In addition to CRuHM, other research initiatives are being implemented in the Congo basin, notably the CongoPeat project (congopeat.net/) funded by Natural Environment Research Council in the UK, that revealed the location of the world’s largest tropical peatland within the Congo basin, with an estimate of 30 billion tonnes of carbon that accumulated some 10000 years ago, as well as research aimed at addressing the climate-water-migration-conflicts nexus in the Congo River Basin.

All these initiatives come at a time when key decisions are needed for major options of water resources development in the basin, including the African hydropower grid from the Inga dam, river navigation to connect riparian countries, water supply, large scale irrigation as well as inter-basin water transfer options, while catering for the impacts of future changes associated with climate and land use. It is therefore important to foster a framework of knowledge management and information sharing in support of science-based decision making that will complement the economic, social and environmental dimensions of water resources to support sustainable development in the Congo River Basin.
Congo River 2020 is the first international conference on the Congo River that will be held in the basin’s member state, and provides an opportunity of experience sharing on the methods used, data and information generated from the implementation of the above mentioned research initiatives to a wider audience of stakeholders involved in research, policy decision making, management, and capacity development as well as investment in the Congo Basin. The conference will also target learning and sharing experience from other research initiatives and experiments in the Congo River Basin as well as other large rivers of Africa and the world.

Objectives

- To share experience from research initiatives and experiments in the Congo basin as well as other large rivers of Africa and the world
- To disseminate the results of the CRUHM research activities to a wider community of researchers, managers and users
- To establish the current status and progress made in understanding river water dynamics and processes in the Congo basin, and identify future directions of science development for the basin
- To stimulate partnership, networking and create opportunities for future investments in research and development for the Congo basin

Thematic Areas

Congo River 2020 will be held under the main theme: “Congo River: Users, Hydrodynamics and Geomorphology”, and will encompass the following three thematic areas:

- Hydrology and Climate
- Hydraulics, Geomorphology and Sediment transport
- Water Uses and Governance
These thematic areas are open to research utilising a wide range of methods including field, laboratory, modelling and remote sensing approaches. Quantitative and qualitative social science approaches will also be of considerable interest in addressing aspects of climate-water-migration-conflicts in the Congo River Basin.

The conference will also provide a number of short training sessions such as:

- Application of acoustic Doppler technology in large rivers (with field measurements on main stem of the Congo River)
- Application of the Pitman hydrology model
- Application of Lisflood hydrodynamic model
- HYFLOOD for flood risks assessment
- Sediment sampling framework for large rivers
- Water Security: Climate-Water-Migration-Conflicts in the Congo River Basin

Organising Committee

- CRREBaC, University of Kinshasa, DRC,
- University of Dar es Salaam, Tanzania,
- University of Rhodes, South Africa,
- University of Bristol, UK,
- University of Leeds, UK.

Scientific Committee

The Congo Basin Water Resources Research (CRREBaC) is supported by a Scientific Advisory Committee that will also be involved in providing scientific support to the Congo River 2020. CRREBaC Scientific Advisory Committee is currently led by Dr. Gil Mahe of the IRD, and consists of Scientists and Academics with a research record in the Congo Basin or African region, and interested in promoting research and innovation for knowledge enhancement and water resources development within the Congo River Basin.

You can find the members of CRREBaC Scientific Advisory Committee who will be involved in the Congo River 2020 at the following link.

Date and Venue
The conference will be held for four days from 28 to 31 July 2020, in Kinshasa, DRC. The city of Kinshasa is located downstream of the Congo River, where participants will have an opportunity to explore some main features of the river such as the Congo Chenal, Malebo Pool and the Kinsuka rapids.

Main Events and Conference Agenda

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<tr>
<th>Submission of abstracts</th>
<th>Submission of abstracts</th>
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<tr>
<td>10 December 2019 to 03 March 2020</td>
<td>Please submit your abstract at <a href="mailto:congoriver2020@crrebac.org">congoriver2020@crrebac.org</a> or use this link <a href="http://congoriver2020.crrebac.org/submit">http://congoriver2020.crrebac.org/submit</a></td>
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<tr>
<td>09 to 14 March 2020</td>
<td>Notification of acceptance of abstracts</td>
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<tr>
<td>14 March 2020</td>
<td>Publication of full conference programme with presenters</td>
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Conference registration and invitation

| 07 January 2020 to 07 March 2020 | Conference registration |

Conference sessions

| 28 to 31 July 2020 | Conference sessions |

Conference Programme
A full conference programme will be released in March 2020.

Language
Both English and French will be used simultaneously for communications, before and during the conference.
Contacts

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