



The Congo Basin Forum 2025 will be held in Kinshasa from 10 to 13 June 2025, with the central theme :

« Unlocking the Potential of Water Resource Services to Achieve Sustainable Development in the Congo basin » The forum aims to bring together a large community of researchers, policymakers, managers and users to share the latest scientific advancements and innovations on water resources of the Congo basin, and to promote initiatives for the sustainable management of these vital ressources.



The Congo Basin Forum 2025 is :

- » A unique opportunity for knowledge sharing cross-fertalisation and capacity building to contribute to sustainable development in the Congo basin
- » Focuses on innovative tools and technologies for water resource services

### **Contexte and Justification**

The Congo basin is the second largest river basin in the wold, behind the Amazon basin. It generates an annual flow volume of about 1,300 billion m<sup>3</sup> at its outlet, which represents more than half of the total discharge of the african continent. The water resources of the Congo basin are essential for agriculture, hydropower, food security, transport, and biodiversity conservation.

The basin plays a key role in the circulation of

atmospheric moisture and carbon budgets at the regional and global scales. The water resources of the Congo basin face several major challenges, including :

- > Climate change and seasonal variability
- > Deforestation, mining activities, and pollution

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> Critical scientific information gap and lack of infrastructure

## **Objectives of the Forum**

The Congo Basin Forum 2025 targets the following key objectives :

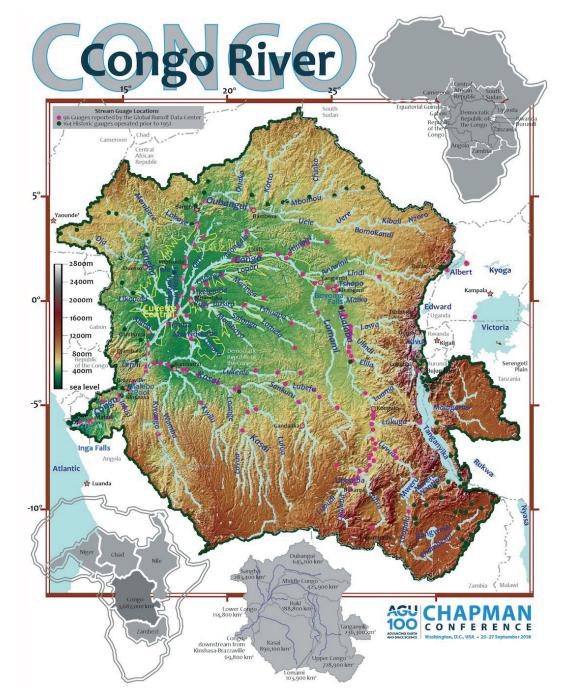
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- » To disseminate the results of research activities carried out in the Congo Basin ;
- » To evaluate the state of current knowledge and the progress made in understanding the dynamics and processes of water resources in the Congo basin.
- » To promote mutual learning on the interventions carried out by different stakeholders
- » To share experience from other research initiatives carried out in the other large river basins of the world
- » To stimulate partnership, networking and create opportunities for future investment in research and development of water resources services in the Congo basin.

### **Outcomes**

The following outcomes are expected:

- » New research guidlines on water resources of the Congo basin
  - Commitment of public and private partners
- » Improved regional collaboration



# **Context and jusification**

#### Water resource services

The importance of water cannot be stressed enough. Water is not only vital to the human population in terms of domestic needs, but it is also directly and indirectly linked to many other areas related to the environment, economy, and health. Ensuring the sustainability of these resources has become a matter of global concern. Better management of water resources is a genuine guarantee of social peace and prosperity for our communities.

### Presentation of the Congo basin

The Congo basin, in which the Democratic Republic of Congo (DRC) holds about 2/3 of the total drainage area, is located in Central Africa, and is shared by nine riparian countries. Hydrologically, the Congo basin is the second largest river basin in the world, behind the Amazon basin. It generates an annual flow volume of about 1,300 billion m<sup>3</sup> at its outlet, which represents more than half of the total discharge of the African continent.

The basin offers opportunities for the production and satisfaction of many goods and services, including agriculture and food security, fisheries, hydropower, water supply, transport, maintenance of aquatic biodiversity and vulnerable ecosystems such as flooded forests and peatlands. It also has a unique and diverse natural assets that places it in a relevant geostrategic position. The basin plays a key role in the circulation of atmospheric moisture and carbon budgets at the regional and global scales. Overall, the basin has the potential to play a leading role in regional cooperation to reduce poverty, while providing opportunities for livelihoods and income to communities for sustainable development in African.

# Major challenges of water resources management in the Congo basin

On one hand, the Congo basin offers the potential to support regional cooperation for the management of shared water systems; on the other hand, this resource is the subject of potential conflicts between competing uses (Tshimanga et al., 2022). The theme of water wars is frequently highlighted in literature and debates in the basin as one of the many facets of emerging conflicts – exacerbated by the impacts of climate change and new migration patterns (Dialogue des Peuples, 2016).

Demands for water to support socio-economic growth continue to rise, although the quality services to meet them are far behind. These demands are not only expected from the nine riparian countries, but also from other water scarce regions of Africa. The strategic challenge for the future is, therefore, to secure water in sufficient quantity and quality to meet the growing competing demands for agricultural, commercial, domestic, environmental and industrial needs (Tshimanga et al., 2022).

#### The major challenges can be summarised as follows :

- » Impacts of humain activities and pressure on water resources which include large-scale deforestation, mining activities, dislocation and pollution of rivers, rapid and sometimes uncontrolled urbanisation, sedimentation of water resourses and loss of aquatics habitats;
- » Methods of measurement and estimation of hydro-climatic parameters, including inadequate hydro-meterological network, lack of experimental research, lack of information on water resources dynamics.



- » Uncertainty in the management of water resources which includes inadequate legal and institutional framework reflecting the lack of synergy between the various stakeholders, redundancy of actions and lack of transparency, lack of decision support systems; and
- » Uncertainty due to climate change.

Investment in the science, innovation and capacity building needed to develop a better understanding of the dynamics of water resources and improve access to their services is largely lacking. Achieving sustainable development and inclusive growth in the Congo basin region would be seriously compromised if water resources are not

### **Previous scientific initiatives**

A review of the gaps in scientific knowledge about the Congo basin and the way of performing research to address the challenges of water resources management in the basin is provided by Alsdorf et al. (2016) « Opportunities for Hydrological Research in the Congo basin» and Tshimanga et al. (2022) « Hydrology, Climate and Biogeochimestry of the Congo Basin : A Foundation for the Future. These two reviews were followed with the implementation of two majour scientific forums, including the Congo AGU (American Geophysical Union) Chapman Conference, held in Washington DC, USA, in 2018, with the aim of establishing research pathways that managed and used in a sustainable, integrated and efficient manner. As the countries of the Congo basin region strive to improve political, economic and social stability, the need for sucure water supplies will become increasingly important.

#### If this aspect is neglected, there is a risk of conflicts :

- » (i) within communities due to a lack of access to water resource services;
- » (ii) between countries due to a lack of agreement on the «sharing of transboundary water resources and
- » (iii) between social groups due to a sharing of water resources perceived as not being inclusive(distributive justice).

will lead to scientific discoveries in hydrology, climate change and biogeochemestry ; and the first Congo Basin Forum «Congo River 2020 » held in the DRC in 2021 in the post-covid 19 period, which focused on learning and sharing experiences from research initiatives and experiments in the Congo basin as well as in other major African basins and worldwide.

# **Objectives**

The Congo basin Forum 2025 builds upon these previous initiatives and provides an opportunity for scientif knowledge and experience sharing in a view of assessing our efforts in terms of the availability of new data, scientific advancement and technologies applicable to monitoring water resources in large river basins. It also provide an oppotunity to identify gaps in balancing the objectives of conservation and socio-economic well-being within the Congo basin. The conference will also focus on learning and sharing experiences from other research initiatives and experiments in the other major African basins and the worldwilde. Specifically, the Forum aims to :

To disseminate the results of research activities carried out in the Congo basin to a wider community of researchers, managers and users

To evaluate the state of current knowledge and the progress made in understanding the dynamics and processes of water resources in the Congo Basin, to facilitate the exchange of information necessary to define the guidelines for innovative scientific research in this river basin

To promote mutual learning on the interventions carried out by different stakeholders aimed to improve access to water resources services in the Congo basin

To share experience from other research initiatives carried out in the other large river basins of the world

To stimulate partnership, networking and create opportunities for future investment in research and development of water resources services in the Congo basin



# Methodology

The Congo Basin Forum aims to bring together about **500 participants from different categories of stakeholders**, including :

- » Researchers
- » Investors
- » Decision-makers
- » Managers
- » Users

Activities will take place during 4 days in the form of thematic sessions and panel discussions led by regional and international experts.

A training session is planned during the conference in order to build the capacity of young researchers and professionals to new tools of research and decision-making adapted to the context of the Congo basin.



The Second Congo Basin Forum will take place under the main theme: «Unlocking the Potential of Water Resource Services to Achieve Sustainable Development in the Congo Basin» and will cover the following six thematic areas.

- Water-Climat-Forest-Biodiversity-Carbon
  - Water and Energy
- **B**Water and Navigation
  - Water-Agriculture and Food Security

Water supply, Hygiene and Sanitation

Water, Society and Governance These thematic areas are open to a wide range of research methods, including field and laboratory approaches, modelling, remote sensing, machine learning, artificial intelligence and new observation data. Quantitative and qualitative approaches applied in the social sciences will also be of interest for addressing aspects of water-related uses, society and governance in the Congo basin.

The conference will also target several short training sessions, such as :

- Application of acoustic Doppler technology in large rivers (with measurements on the main reach of the Congo River),
- » Application of Earth Observation techniques to flood risk mapping and assessment,
- » Spatial altimetry and its application to monitoring surface water height and river discharge for water resource management

Young researchers and professionals are invited to register for one of the training sessions before the deadline.

The city of Kinshasa is located downstream of the main course of the Congo River, participants to the Forum will have the opportunity to explore some of the Congo River's distinctive features, such as the Chenal of the Congo River, the Pool Malebo and the Kinsuka rapids, as well as other beautiful natural landscapes of the lower course of the Congo River.

# Outcomes

The following results are expected:

New directions for the future development of science in the basin will be highlighted, based on the real needs of the region. This will involve an assessment of current knowledge and the progress already made in the field of water resources in the Congo basin. The commitment of public, private and international partners to invest in water resources research and innovation for the Congo basin, as a guarantee of sustainable management and development strategies for these resources.



# **Organising Comittee**

The organising committee is made of members from the following institutions :



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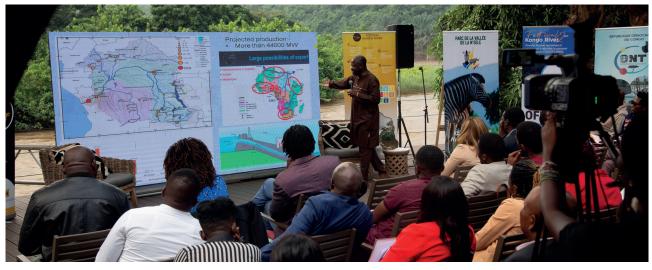




to improve knowledge development of water resources. The list of members of the Scientific Advisory Board can be viewed bu following the link below: https://www.crrebac.org/en\_GB/ le-conseil-scientifique-du-crrebac

This committee is supported by a scientific council of scientists and academics with research experience in the Congo basin or any other major river basin in the World, and with an interest in promoting research and innovation

# Agenda of the Forum



### Date and venue of the Forum

The Congo Basin Forum 2025 will take place during four days, from 10 to 13 June 2025, in Kinshasa, DR Congo.

## Agenda

14 Octobre 2024 >	Conference registration and abstract submission open
31 January 2025 >	Deadline for submission of abstracts
15 February 2025 >	Notification of acceptance of abstracts and mode of presentation
20 February 2025 >	Publication of the full conference programme with the moderators
15 April 2025 >	Deadline for conference registrations
10 au 13 June 2025 >	Conference sessions

#### Conference programme Languages

The full conference programme will be published in February 2025.

**English** and **French will be used simultaneously** for communications before, during and after the conference

Submit your abstract or Register at > https://cbforum.crrebac.org/en

# Contacts

crrebac@crrebac.org

#### +243820949456 +243852780555

### **Contact person:**

Prof. Raphael Tshimanga >	raphael.tshimanga@unikin.ac.cd
Prof. Guy Moukandi >	guymoukandi@yahoo.fr
Dr. Gode Bola >	gode.bola@gmail.com
Dr. Benjamin Kitambo >	kitambom@unilu.ac.cd
Ir. Felly Ngandu >	felly.ngandu@crrebac.org

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