

# Background

The Southern African Community Development Groundwater Management Institute (SADC-GMI)<sub>1</sub> in collaboration with its partners, is hosting the  $4^{th}$  SADC groundwater Conference on 10 - 12 November 2021, under the theme <u>"Towards a Water Resilient SADC-Groundwater Systems Thinking"</u>.

The multiple sectors, disciplines and the associated uncertainties in managing groundwater present a challenge. Systems thinking provides an opportunity to understand how groundwater systems function and react to anthropogenic influences, thereby enhancing its contribution to water security. The Systems thinking approach offers a toolkit of techniques relevant to studying groundwater issues, including system dynamics, integrated assessment, simulation and modelling, and anthropogenic issues and policy considerations for groundwater systems.

Systems thinking offers solutions to some groundwater challenges, for example, i) anticipating and adapting to climate change impacts on groundwater resources and dependent social-ecological systems ii) allocating available water among competing consumptive and environmental water needs, especially at times of scarcity iii) establishing the public's trust and acceptance of management decisions, and the credibility of underpinning science and iv) building the adaptative capacity of individuals, communities and institutions to communicate, learn and self-adjust to respond timely to incremental and abrupt changes in resources conditions.

The 4<sup>th</sup> SADC Groundwater conference will discuss how the systems thinking approach will contribute to a water-secure SADC region. Outputs from the conference will include; i) Multi-stakeholders' Declaration ii) Conference proceedings iii) Side-session reports iv) Press and media releases. The conference will provide a inputs into the Africa Water and Sanitation week, the Groundwater Summit to be held in 2022. The conference will be held under three sub-themes outlined below.

## SUB-THEMES

#### ) SUB-THEME 1: Groundwater an Integral part of the hydrological system

Groundwater systems are not readily amenable to investigations, a situation that further complicates their management. The bio-geophysical understanding of groundwater systems is at the core of systems thinking, in which groundwater is an integral part of the hydrologic circle. However, often groundwater investigations exclude groundwater-surface water interactions, and groundwater-dependent ecosystems.

This sub-theme seeks presentations, special sessions panel discussions on the research, case studies on issues including system dynamics, integrated assessment, simulation and modelling (for example, the use of Integrated Hydrological Models), evaluation and assessment of Groundwater Dependent Ecosystems, Environmental Flows, Shallow aquifer systems and alluvial aquifers,

Surface-water-groundwater interactions, Transboundary

aquifer Investigations, modelling of conjunctive water supply schemes, groundwater

and the WEFE Nexus.

#### ) SUB-THEME 2: Communities, institutions, capacity and local-level governance.

Sustainable management of groundwater is firmly anchored on societal values and managing conflicting stakeholder interests. Therefore, the local capacity of institutions (including) to respond to water resources challenges, especially under extreme and harsh climate change-induced conditions, is a vital component of the systems approach. Citizen Science offers potential solutions to some groundwater challenges, hence the need for groundwater professionals to further explore its roles, especially around groundwater data collection. Closely related to this is the policy considerations that arise and the resultant impact on groundwater conditions. Thus, the systems thinking approach emphasises the inclusion of the community, the capacity of institutions and policy issues to manage the resource sustainably. In addition, groundwater contributes significantly to Water Sanitation and Hygiene (WASH), with its role becoming more evident with the current COVID 19 pandemic. Communities play a central role in the sustainability of WASH infrastructure hence are pivotal to the success of interventions to contain current and future pandemics.

This sub-theme seeks presentations, special sessions or panel discussions on the role of formal and informal, institutions and policy in shaping the groundwater discourse, including groundwater and WASH.

# SUB-THEME 3: Deriving benefits from the groundwater system: Innovative groundwater infrastructure interventions.

Groundwater's contribution to the water security of the region requires significant infrastructure interventions. The dispersed nature of populations served further complicates matters. Often nations in the SADC region have to provide water to populations, often with limited budgets and capacity. Sustainable provision of water to the needy communities in the region calls for innovation. Innovative Interventions can be conjunctive supply schemes, alternative energy sources, pollution prevention interventions, monitoring and data collection interventions, monitoring and evaluation interventions, and operation and maintenance considerations. The exploitation of Artesian Aquifers/Wells and Alluvial aquifers requires innovative infrastructure solutions.

This sub-theme seeks to showcase innovative groundwater interventions from the region and beyond to provide a platform for sharing experiences and providing opportunities for cases to be piloted elsewhere in the region. In general, this sub-theme seeks to explore emerging technologies for groundwater-based water supply schemes.

The private sector is particularly invited to showcase products that can be potentially shared in the region, e.g. drilling techniques, monitoring technologies, power supply, to water schemes.

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#### earrow PANEL DISCUSSIONS AND SPECIAL SESSIONS.

Partners and Stakeholders wishing to run special sessions and panel discussions under the sponsorship program are requested to submit an expression of interest by the 20<sup>th</sup> of August 2021 and concept notes in line with the conference's theme by the 9th of October 2021.

Please direct enquiries to conference@sadc-gmi.org . OR thokozani@sadc-gmi.org

## Submission of Abstracts and Posters

Authors are invited to submit abstracts for both oral and poster presentation for the sub-themes outlined above. Authors are requested to indicate the sub-theme for which they are making submissions.

#### Abstract specifications

Authors are requested to indicate whether the submission is for an oral or poster presentation. Abstracts should:

- have font: Times New Roman, font-size: 11, line spacing: 1.5
- have a short title (concise and informative) that adequately captures the scope of the presentation.
- · Authors are discouraged from using excessively long titles
- be written in English, French or Portuguese
- indicate the authors of the abstract and their affiliations, with the corresponding author, clearly marked and contact details provided
- provide the main results, the main conclusion, statement of the problem, objectives, methods, and results
- avoid using abbreviations
- be a maximum of 300 words
- provide keywords for the abstract (up to 5)

#### **Peer Review**

Abstracts will be peer-reviewed by the Technical Committee comprising representatives from the University of Botswana, University of Zambia, International Groundwater Resources Assessment Centre, Institute for Groundwater Studies and the British Geological Survey. In addition, peer-reviewed proceedings of the conference will be published after the conference.

The Technical Committee reserves the right to reject or accept an abstract. By submitting an abstract, the authors commit that at least one author will attend the conference to present the paper/poster if accepted.

#### Submission of Abstracts

Abstracts must be submitted online through the Easy Chair platform. To submit an abstract, follow the instructions below:

- i. Click on this link: https://easychair.org/conferences/?conf=4thsadcgroundwaterco
- ii. If you do not have an easy chair account, please create one as directed
- iii. When logged in, enter as an author
- iv. Follow instructions on filling out the form (making sure you paste the abstract in the space provided and also uploading the file as a pdf)
- v. After submitting your abstract, you will receive an email acknowledging receipt of the abstract.



Important Dates

The following deadlines will apply:

Call for Abstracts Close for receipt of Abstracts Notification of Authors First Draft of the programme Confirmation by Authors Publishing of Final Programme Conference run 5th July 2021 27<sup>th</sup> August 17th September 2021 18th October 2021 25th October 2021 1st November 2021 10, 11 & 12 November 2021

### ( Registration Fees and Deadlines

- Normal registration:
- Late registration:
- US\$ 100.00 (until 24 October 2021) US\$ 150.00 (From 25<sup>th</sup> October 2021)
- Young professionals/ Students Free (Below 35 years old)

Online registration can be done on <a href="https://conference.sadc-gmi.org/conference-registration?id=62">https://conference.sadc-gmi.org/conference-registration?id=62</a>

#### Payment Details

Payments are to be made through the account below:

Bank:Standard BankAccount Name:South African Development Community Groundwater Management InstituteAccount Number:00421376031Account Type:BIZLAUNCHBranch:BrandwagBranch Code:05534Branch Code (Electronic payments): 051001SWIFT Address:SBZAZAJJ

NB: Send the proof of payment to conference@sadc-gmi.org after you have made your payment

Enquiries Please send all enquiries about the conference to <u>conference@sadc-gmi.org</u> OR <u>thokozani@sadc-gmi.org</u>

Contact numbers for enquiries: Mr Thokozani Dlamini: +2762 425 3942 Mr Brighton Munyai: +2763 093 6805

#### Follow us on the following social media platforms for regular updates on the Conference.

