

# 2<sup>nd</sup> SADC GROUNDWATER CONFERENCE



## THEME: "Groundwater Contribution to achievement of Sustainable Development Goals in SADC Region"

Johannesburg, South Africa

Southern Sun Hotel OR Tambo International Airport

2nd Call for Abstracts



## BACKGROUND

The Southern African Development Community-Groundwater Management Institute (SADC-GMI) and its partners are proud to announce their 2nd Annual SADC Groundwater Conference to be held under the theme **“Groundwater Contribution to achievement of Sustainable Development Goals in SADC Region”**. The conference will be held in Johannesburg, South Africa from the 4th to the 6th of September 2019.

Water and sanitation, as absolute necessities for people, planet and prosperity, are at the very core of sustainable development. Safe drinking water and adequate sanitation and hygiene are pillars of human health and well-being. The 2030 Agenda for Sustainable Development includes a dedicated goal on Water and Sanitation (SDG 6) that sets out to “ensure availability and sustainable management of water and sanitation for all.” SDG 6 expands the MDG focus on drinking Water and Sanitation to cover the entire water cycle, including the management of water, wastewater and ecosystem resources. With water at the very core of sustainable development, SDG 6 does not only have strong linkages to all of the other SDGs, it also underpins them; therefore, meeting SDG 6 would go a long way towards achieving much of the 2030 Agenda, i.e. ending poverty, improving health, spurring economic growth, and preserving ecological integrity.

As nations endeavor to attain the Sustainable Development Goals, there is increasing pressure on groundwater resources. Groundwater availability in SADC is estimated at 13 percent of the total annual water availability of 7,200 m<sup>3</sup> per capita, implying that there is an opportunity for groundwater development to provide water to the 40 percent of the 280 million people in SADC without access to adequate and safe drinking water and sanitation services.

The conference will provide a platform for exchange of views and experiences; dialogue and network; foster new thinking; and benchmark on best practices amongst researchers, practitioners and decision makers on the extent and role of groundwater in achievement of SDGs. Central to the discussion are SDG 6 targets that relate to improving access to water and sanitation and implications on groundwater quantity and quality, water use efficiency and reducing water scarcity across all sectors of the economy and the need for increased efforts at the policy and technical level to sustainably develop and manage groundwater resources. Beyond SDG 6, groundwater plays a critical and increasing role in SDG 2, food security, SDG 11, sustainable cities, SDG 13 climate action and SDG 15 life on land. Of concern is the widening gap between water demand and availability and the increasing dependency of nations on groundwater. There is a need to move away from the notion of neglecting groundwater or viewing it as a standalone resource, hence not integrated into the overall planning process for water management interventions. Reliable data to provide a basis for measuring progress towards attaining SDG targets is not always available, and so are the primary data on the status of groundwater. Compounding this is that the limited groundwater information and knowledge generated is rarely used to inform policy and decision making.

The SADC annual groundwater conference has the primary objective of providing a platform for the advancement of knowledge and experience sharing on sustainable development and management of groundwater as part of larger water management goals at national and transboundary levels across the SADC Members States. The SADC-GMI and its partners therefore, call for abstracts for oral and poster presentations at the Conference.



## SUB-THEMES

The conference is structured into three sub-themes as indicated below.

### 1. Contributions of research towards understanding, the status, trends and risks to groundwater resources.

SDG indicators relating to access to safe water and sanitation (6.1 and 6.2), reduction of threat to water quality (6.3 and 12.4), increasing water use efficiency across all sectors, ensuring sustainable withdrawals while reducing water scarcity and improving sustainability of the natural resource base (6.4 and 12.2), limiting the impact of economic growth on natural resources (8.4), ending hunger and doubling the agricultural productivity and incomes of small-scale food producers, in particular women and indigenous peoples (2.1 and 2.3) have direct reinforcing or conflicting interlinkage to groundwater. Working towards attaining the targets, puts the sustainability of the very groundwater resources under threat from a plethora of challenges, i.e. risk to pollution, unsustainable abstraction levels, etc. Mitigating the negative impacts of interventions to achieve sustainable development goals and enhancing the reinforcing targets has to be informed by research. This theme will therefore focus on research and application of scientific innovations to address the challenges affecting groundwater as a way of attaining sustainability.

**Presentations for this sub-theme will, therefore, focus on;**

- Exploration of alternative groundwater sources in the region in the face of increasing demand on groundwater for increased agricultural production, increasing human consumption, especially to meet demand in growing cities
- Understanding the groundwater/surface water interactions so as to provide a basis for conjunctive management of water resources, delineation, and management of recharge areas, methods and approaches to quantify sustainable groundwater abstractions
- Improving resource efficiency in the water-energy-food (WEF) nexus and implications for SDGs
- Scientific approaches to preventing, managing and reversing pollution to groundwater as nations seek to attain SDG target related to sanitation, and disposal of waste related to industrial and mining activities.
- Results from research implemented by the SADC-GMI through its partners in the region will be discussed.



## 2. Measuring progress towards attaining SDG targets, data collection, and management within the SADC Member States.

Progress towards achieving SDG targets needs consider groundwater and hence the need for sound and reliable groundwater data. The traditional datasets on groundwater resources and hydrogeological conditions in many parts of the world, including SADC, are not considered adequate in assessing progress towards SDG targets.

A regional gap analysis on groundwater data collection and management in the SADC Member States conducted by SADC-GMI and its partners highlighted opportunities for improving groundwater data management, making clearer objectives and procedures, capacity building, collection of data and interpretation of data. It notes that datasets for most nations have gaps, inconsistent data collection and storage procedures presenting a weak base for decision makers and informing policy, so is the dearth in information emanating from analysis of the limited data generated.

In recent years, there have been scientific advances, which can be exploited to fill the data gaps where direct in situ observations are limited, e.g. the GRACE datasets, which can be used to access groundwater levels at the regional scale. The use of proxy data sets in estimating groundwater usage and the general state of groundwater, e.g. through remote sensing, offers an opportunity to fill data gaps. This theme will inform an ongoing data collection and management framework development within SADC Member States.

### **Presentations on this theme will center on data collection,**

- Data collection, data storage, data processing, regional and national data sets, etc.
- Use of proxy data and its applications
- Groundwater data collection and management protocols for national and transboundary groundwater platforms
- Monitoring groundwater reporting for technical and non-technical audiences
- Monitoring and reporting for SDGs linked to groundwater.

- Measures of enhancing and encouraging regional data sharing amongst countries
- Case studies on progress towards achieving targets directly related to groundwater

## 3. Policy legal and institutional considerations at national and trans-boundary levels.

SDG target 6.5 calls for integrated water resources management at all levels, including through transboundary cooperation. In most national and transboundary legislation/treaties, groundwater is less conspicuous, which has the consequence of suboptimal interventions. Transboundary groundwater issues identified by the SADC Member States include weak institutional frameworks, weak functioning of RBOs in relation to groundwater management, and limited scientific data sharing between countries. More importantly is the need to move from viewing groundwater as a separate resource to managing it as an integral component of water resources and the need to provide a framework for conjunctive management at both the national and the transboundary level. There is still a need for international cooperation amongst the SADC Member States to develop instruments for TBA management contributing to SDG 6.5 indicators (6.5.1 on IWRM and 6.5.2 on transboundary water cooperation).

Presentations in this sub-theme will focus on:

- Conjunctive management of transboundary water resources
- Processes towards a roadmap for addressing gaps in policy, legal and Institutional considerations amongst the SADC-Member States
- The role of the Transboundary Diagnostic Assessment (TDA)/Strategic Action Plan (SAP) process in groundwater resources management and SDGs.
- Comparison of best practices in the SADC-region and best practices from other regions



## SUBMISSION OF ABSTRACTS

**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 given
- 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)

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.

### Conference Special Issue in *Sustainable Water Resources Management (SWAM)*

As part of our endeavors to market and improve the quality of our conferences in the broader scientific world, we have made a collaborative arrangement to have a Conference Special Issue in the *Sustainable Water Resources Management (SWAM)* (<https://link.springer.com/journal/40899>) Journal published by Springer Nature of Heidelberg Germany. SWAM is a peer reviewed international journal which publishes articles that deal with the interface of water resources science and the needs of human populations, highlighting work that addresses practical methods and basic research management of groundwater and surface water resources quantity and quality. Depending on the quality and number of papers, a Book or Proceedings in an appropriate Springer book series is also a possibility. It is also an honor to inform you **Dr. Jim LaMoreaux**, who serves as the Editor in Chief of SWAM, *Environmental Earth Sciences* and *Carbonates & Evaporates Journals* is expected to grace the occasion.

## SUBMISSION OF ABSTRACTS

Abstracts must be submitted online through the Easy Chair platform. To submit a paper follow the instructions i. to iv. below.

### i. Click on this link:

<https://easychair.org/conferences/?conf=sadcgmicon2018>

- 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 the fill 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.

## CONFERENCE PROCEEDINGS

The SADC-GMI and its partners will publish the proceedings of the conference. Experience has shown that there are numerous groundwater research products from the region, which fail to make it through to international journals. The proposed proceedings of the conference will, therefore, serve as a platform for sharing research outputs within the region and international community thereby further stimulating groundwater research and promoting budding researchers. The Technical Committee of the conference will constitute the editorial team of the proceedings.



## IMPORTANT DATES

The following deadlines will apply:

- **Deadline for submission of abstracts -**  
30th of April 2019
- **Notification of Authors of abstract review outcome -**  
17th of May 2019
- **Offer conference -**  
4th - 6th September 2019

## REGISTRATION FEES AND DEADLINES

- **Early bird registration:** US\$ 400  
(Before the 26th of April 2019)
- **Authors:** US\$ 400 (Throughout)
- **Normal registration:** US\$ 450  
(Before the 26th of June 2019)
- **Late registration:** US\$ 500  
(After the 1st of August 2019)
- **\*Exhibitors:** US\$ 1000  
(Before the 31st of July 2019)
- **Young professionals:** US\$ 250  
(Below 35 years old)
- **Student registration:** US\$ 100

\*Exhibitors fee includes one delegate registration fees

## REGISTRATION

Online registration can be done on <http://sadc-gmi.org/sadc-groundwater-conference/online-registration/>

## PAYMENT DETAILS

Payments are to be made through the account below.

**BANK:** Standard Bank  
**Account Name:** Southern African Development  
Community - Groundwater  
Management Institute  
**Branch:** Brandwag  
**Branch Code:** 055534  
**Branch Code**  
**(Electronic Payments):** 051001  
**Account Number:** 421376031  
**SWIFT:** SBZAJJ

## ENQUIRIES

Please send all enquiries about the conference to the  
Organizing Committee [conference2019@sadc-gmi.org](mailto:conference2019@sadc-gmi.org)



# SUSTAINABLE DEVELOPMENT GOALS



## CONTACT DETAILS:

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