

Advancing the groundwater agenda

It is estimated that over 70% of the 250 million people living in the SADC region rely on groundwater as their primary source of water.

James Sauramba,
director, SADC-GMI

The population of Southern Africa is expected to double in the next 25 years. In the medium term, rapid economic growth is also expected to continue. With such developments comes rising demand for water and an increased pressure and reliance on groundwater.

Despite varying dependency on groundwater across SADC member states, groundwater usually provides a critical buffer between dry and rainy seasons. The agricultural sector is the largest consumer of water, using 83% of abstracted water, 12% of which is abstracted from groundwater. In emergent capital cities such as Lusaka, Gaborone and Dar es Salaam, groundwater is the dominant source of water to meet the demand of expanding factories and growing urban populations. Against this background, the sustainable management and development of groundwater resources in the region becomes critically important for economic and social development of the population.

Managing the region's groundwater

In response to the growing demand for groundwater management in the SADC region, the Southern African Development Community

Groundwater Management Institute (SADC-GMI) was launched in September 2016 as the regionally recognised centre of excellence in groundwater management and development.

The SADC-GMI is a subsidiary of the SADC Secretariat structure and it draws its core mandate through priority intervention P6.2 – Groundwater Development and Management of the Regional Strategic Action Plan on Integrated Water Resources Development and Management Phase IV of 2016–2020.

Hosted by the University of the Free State in Bloemfontein, the SADC-GMI has grown significantly since its inception and is currently implementing the Sustainable Groundwater Management in the SADC Member States Project, with the support of the World Bank.

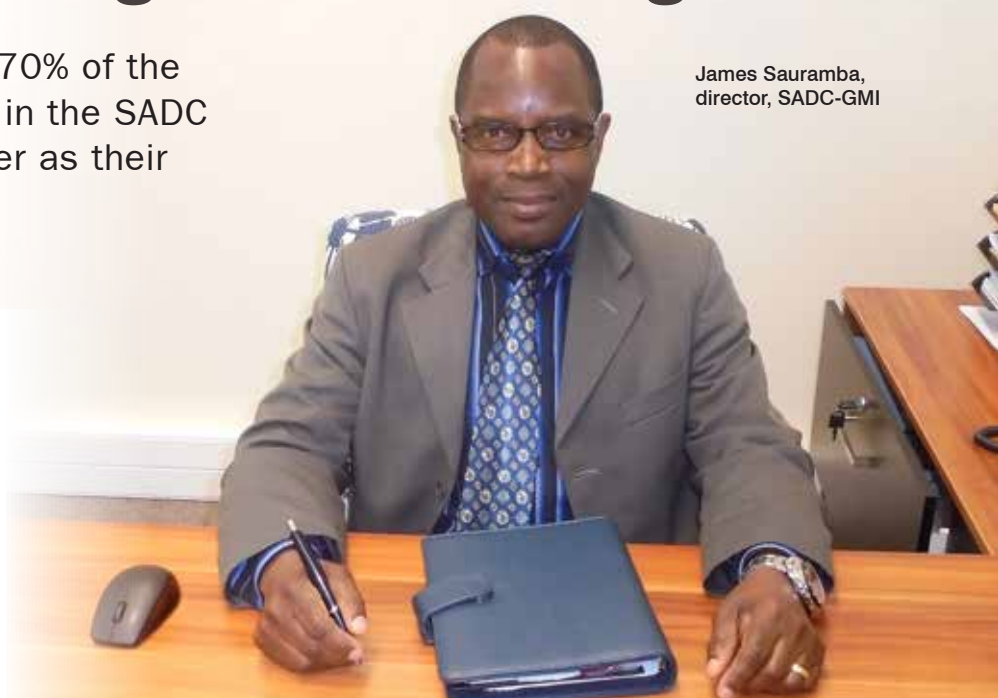
The project aims to catalyse multistate cooperation in balancing conflicting water uses, particularly in transboundary groundwater basins. The project prioritises climatic variability and change, and supports foundational capacity building, portfolio learning and targeted needs for the joint ecosystem-based

management of transboundary water systems. The project will also strengthen cooperative management and the development of international water discourses.

Through the project, SADC-GMI promotes sustainable groundwater management and solutions to groundwater challenges in the SADC region through building capacity, providing training, advancing research, supporting infrastructure development, and enabling dialogue and the exchange of groundwater information. SADC-GMI also supports the SADC member states through groundwater research, and serves as an interlocutor with national, regional and international groundwater initiatives.

The project consists of four important components, namely:

- operationalising the SADC-GMI
- strengthening institutional capacity for the sustainable management of groundwater in the SADC region
- advancing knowledge on transboundary and national groundwater
- promoting groundwater infrastructure





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management and development.

Building successful partnerships

Since its launch in 2016, SADC-GMI has worked and collaborated with other key partners in the water sector to accomplish a number of successful initiatives to advance the groundwater agenda in the region.

This included a review of the previous pilot projects implemented under the predecessor SADC Groundwater and Drought Management Project (2007–2011) to identify best practices for upscaling future groundwater interventions under the current project.

The institute also engaged the Netherlands-based International Groundwater Resources Assessment Centre (Igrac), a well-known player in groundwater data management and mapping, to resuscitate the SADC Hydrogeological Map, which had become unavailable online since its initial development in 2010.

SADC-GMI is currently joining forces with the Institute for Groundwater Studies and Igrac to implement a regional capacity-building programme for

data collection and management, involving all 15 SADC member states. By the end of this project, it is expected that member states will be equipped to establish and operate effective data management systems essential to understanding and developing aquifers in their territories.

A process is also under way to review the policy, legal and institutional frameworks for the effective management of groundwater resources in the SADC region, focusing on both national and regional protocols. This review will improve groundwater integration in water resources management policies and laws.

Driving the integration of groundwater in the overall water resources management discourses is also a priority. This is being achieved through collaboration with the River Basin Organisations. Currently, SADC-GMI is intensively engaging the Orange-Senqu River Commission and Zambezi Watercourse Commission to advance this agenda.

The institute is also contributing to the academic body of knowledge in the groundwater sector through research in order to improve the understanding, management and utilisation of the resource. In this regard, SADC-GMI will very soon embark on one of the mega research projects in the Shire river/aquifer system. The project will implement a transboundary diagnostic analysis as well as strategic action planning, which promotes the conjunctive use of water resources in the system. This project will form a strong basis for knowledge generation and potential for the upscaling and promotion of the conjunctive use of water resources management concepts

to the estimated 30 transboundary aquifers in the SADC region.

Going forward, SADC-GMI will establish national focal groups composed of different stakeholders from the 15 member states within the groundwater sector, and promote their capacity for the sustainability of groundwater resources in their respective countries. These focal groups are the key means for implementing pilot groundwater infrastructure projects in the member states using the sub-grant scheme available through the SADC-GMI. Moreover, national capacity building and advocacy for the sustainable use of groundwater will also be anchored from the national focal groups.

SADC-GMI's brand as a centre of excellence in groundwater management and development leverages on previous and ongoing achievements related to groundwater management in the region. In growing this brand, SADC-GMI will render niche services in training, research, project management, advocacy and institutional development that will simultaneously secure the institute's long-term financial sustainability beyond the current donor funding.

With the challenges of climate change, severe droughts, pollution and rapidly growing water demand in Southern Africa, SADC-GMI's work to strengthen the management and development of groundwater for social and economic development is well poised for execution. **35**

SADC-GMI promotes sustainable groundwater management and solutions to groundwater challenges in the SADC region