

# INFORMATION BOOKLET FOR POTENTIAL PARTNERS



GROUNDWATER MANAGEMENT INSTITUTE



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## SADC – GMI Background

The Southern African Development Community region is subjected to more severe climatic variability scenarios which negatively impact on more than 70% of the region's population (and more than 75% in Sub-Saharan Africa) who are dependent on groundwater for their livelihood. With the challenges of climate change, pollution and rapidly growing water demand in the region, the need to strengthen the management and development of groundwater for social and economic development cannot be overemphasized.

Groundwater plays an indispensable role in promoting regional socio-economic integration and development. Be that as it may, groundwater management issues are often not granted befitting priority in national and international water management discourses and hence are not prominently featured in water legislation or policies in Southern Africa.

Despite the abundant availability of groundwater at about 2,500m<sup>3</sup>/capita/year, only an estimated 1.5% of this resource is extracted and utilized to promote regional socio-economic development. Although there are an estimated 30 Transboundary Aquifers that share similar challenges in the SADC region in comparison to about 14 Transboundary surface water systems, institutional structures are in place that predominantly promote the management and development of surface water resources in these systems. This approach defies the fact that groundwater (and not surface water) constitutes about 97% of

freshwater resources in Africa and its pollution and salinization is irreversible. It is therefore imperative to conjunctively manage the surface and groundwater resources. Moreover the ongoing impacts of drought and climate change increase the dependency on groundwater resources.

The historical implementation of short-term groundwater projects through temporary Project Implementing Units culminated in the absence of a permanent institutional structure, thus aggravated the absence of skills and capacity to steer the conjunctive management and development of groundwater resources in the SADC region.

The rationale for the establishment of the Southern African Development Community Groundwater Management Institute (SADC-GMI) was premised on the importance of groundwater in the region and the need to set up a "Centre of Excellence" for groundwater management and groundwater dependent ecosystems in the region, and to have an institution that will serve as an interlocutor with national, regional and international groundwater initiatives and institutions.

The institute is hosted by the University of the Free State, Bloemfontein, South Africa on behalf of, and under the strategic guidance of the SADC Secretariat, Directorate of Infrastructure's Water Division, in Gaborone, Botswana. SADC-GMI is a project driven institute, currently implementing multiple projects in the SADC Region in partnership with key players in the water sector.



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## Who is SADC-GMI?

The Southern African Development Community Groundwater Management Institute (SADC-GMI) is established as a section 21 not-for-profit company registered under the South African Companies Act No. 71 of 2008, as amended. The company is run by a Board of Directors composed of representatives from the SADC Member States, University of the Free State, SADC-GMI Executive Director and SADC Secretariat's Water Division as the Chair. It is hosted by the University of the Free State's Institute for Groundwater Studies in Bloemfontein, South Africa on behalf of, and under the strategic guidance of the SADC Secretariat, Directorate of Infrastructure's Water Division, in Gaborone, Botswana.

## SADC-GMI's Mandate

SADC-GMI's core mandate is to promote sustainable groundwater management and providing solutions to groundwater challenges in the SADC region through creating an enabling policy, legal and regulatory environment, capacity building, advancing research, supporting infrastructure development, and enabling dialogue and accessibility of groundwater information. Four strategic objectives are key in achieving the SADC-GMI mandate.

## Strategic objectives (next 5 years)



As a subsidiary structure of SADC, SADC-GMI draws its mandate from the fourth phase Regional Strategic Action Plan for Integrated Water Resources Management (RSAP IV: 2016-2020). Through cooperation on shared aquifers in the region, SADC-GMI also contributes to realisation of the objectives of the Revised SADC Protocol on Shared Watercourses of 2000 and river basin agreements across the region.



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## Vision

“To be a Centre of Excellence in promoting equitable and sustainable groundwater management in the SADC region”

## Mission

The SADC-GMI vision and mandate is brought to life through the following 6 mission statements:

- **Advocate, raise awareness and provide technical support** in SADC around sustainable groundwater management through the dissemination of information and knowledge management
- **Create an enabling environment** for groundwater management through policy, legal and regulatory frameworks
- **Promote action-oriented research**
- **Promote impact-oriented capacity building and training** for groundwater management in the region
- **Lead and promote regional coordination for groundwater management**
- **Support infrastructure development for groundwater management**

## Values

### **Integrity:**

As an advisory institution, SADC-GMI will act with integrity.

### **Diversity:**

The diversity of SADC and its people is valued as a strength and will be promoted during decision-making

### **Equity:**

Groundwater resources are often shared resources and the benefits arising from its use will be equitable

### **Accountability & Transparency:**

Accountability arises from responsible and transparent behaviour.

To act as a trusted advisor for groundwater management in SADC, the SADC-GMI will have transparent communication and decision-making and be accountable to Member States.

### **Excellence:**

SADC-GMI will demonstrate leadership and excellence in groundwater management in the SADC region

### **Professionalism:**

SADC-GMI will behave in a professional manner in all interactions.

### **Collaboration & Partnership:**

SADC-GMI will lead collaborative groundwater initiatives for national and regional groundwater management and will develop strong partnerships with key stakeholders in the sector.





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## Key Focus Areas

### *Creating an enabling Policy, Legal and Regulatory Environment for Groundwater Management*

In order to raise the prominence of groundwater in the national and regional policy, legal and regulatory frameworks, SADC-GMI is implementing various initiatives which include gap analyses, benchmarking, action planning and advocacy, as well as rendering national level technical assistance for closing the gaps. This effort also focuses on aligning with the Revised SADC Protocol on Shared Watercourses of 2000 and river basin agreements across the region. Transboundary water cooperation through Transboundary Aquifers and shared River Basin Organizations is also a key focus area under this cluster.

### *Lead and promote regional coordination, across various spatial scales, for groundwater management and development.*

Cooperation at the regional or transboundary levels is often compounded with perceived and changing risks and opportunities among parties. SADC-GMI will focus on both policy and technical aspects of groundwater to inform regional and transboundary dialogue on cooperation. Equally, SADC-GMI will invest in analytical research, dialogue and cooperation that can help unlock solutions for SADC Member States who share challenges in groundwater management in transboundary aquifers.



### *Promote impact-oriented capacity building and training to develop a growing cohort of groundwater expertise across the region*

Capacity building is one of the most important functions of the SADC-GMI. Independently or in collaboration with other key players in the water sector, SADC-GMI conducts capacity building initiatives to public and private sector groundwater practitioners and decision makers in 16 SADC Member States on several topics including international water law, groundwater modelling, data collection and management, conjunctive water resources management, managed aquifer recharge, borehole drilling, gender, borehole forensics, integration of groundwater management in Transboundary Basin Organizations in Africa among others. Our training interventions endeavor to respond to the national and regional capacity needs as identified in our Capacity Needs Assessment study.

### *Promote and coordinate action-oriented research to support the development of regional understanding of groundwater resources*

In tandem with its core mandate to build a knowledge base for groundwater in the region, SADC-GMI prioritizes research which seeks to establish the full geophysical and scientific features and potential of the estimated 30 Transboundary Aquifers in the region. In this regard, research is undertaken on Transboundary Diagnostic Analysis which zero in on conjunctive water resources management, environmental sustainability, stakeholder involvement as well as transboundary policy, legal and institutional cooperation. The research component also incorporates groundwater data collection, analysis and information sharing to support the application of research findings. In this regard SADC-GMI collaborates with other regional and global partners to undertake and disseminate groundwater research.

### *Support infrastructure development for improved groundwater management and sustainable groundwater development.*

SADC-GMI acknowledges that without appropriate physical infrastructure, sustainable access to and management of groundwater is not feasible. We therefore work to develop, pilot and roll-out different infrastructure options for the abstraction, recharge, monitoring and protection of groundwater. We believe that poor installation, operation and maintenance of groundwater infrastructure inhibits the sustainable access and management of the resource. As such SADC-GMI highly prioritizes issues of ownership through community based management of infrastructure.





Photo Credits: Dr Manuel Magombeyi (IWM)



## Delivery through Partnerships

SADC-GMI acknowledges the need to build partnerships in order to deliver to existing and new stakeholders (16 SADC Member States) and also enhance its footprint in the region. In this regard, SADC-GMI has partnered with national, regional and international partners, including United Nations Educational, Scientific and Cultural Organizations – International Hydrological Programme (UNESCO-IHP), the University of the Free State's Institute for Groundwater Studies (IGS), WaterNet, Africa Groundwater Network (AGW-Net), Deutsche Gesellschaft Für Internationale Zusammenarbeit (GIZ), United States Agency for International Development (USAID), International Water Management Institute (IWMI), International Groundwater Resources Assessment Centre, Global Water Partnerships for Southern Africa (GWP-SA), Southern African Research and Documentation Centre (SARDC), the South African Research Commission (WRC) and River Basin Organizations in the region. SADC-GMI will continue to form strategic partnerships with key players in the water sector in order to advance the groundwater agenda in the region.

**Key words** pertaining to our active search for partnerships include the following:

*Transboundary Aquifers; Conjunctive Management; Climate Change; Drought; Water Resources; Policy/Administration/Management; Water Resources Protection; Groundwater and agriculture; Groundwater Capacity Building; Groundwater Governance; Groundwater Modelling; Groundwater Research; Transboundary Diagnostic Analysis and Strategic Planning; Groundwater Data Collection and Management; Water Quality/Pollution; Groundwater Research, Regional Socio-economic Development*



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## Current Projects

### *Implementing the Sustainable Groundwater Management in the SADC Member States Project*

SADC-GMI is currently implementing the World Bank funded project, the project was launched in September 2016 and will end in June 2020. The project is funded through a US\$8.20 million Grant from the Global Environment Facility (GEF) and a US\$2.00 million Grant from the multi donor trust fund Cooperation in International Waters in Africa (CIWA). The Project Development Objective entailed supporting sustainable management of groundwater at national and transboundary levels across SADC Member States. The project intervenes to catalyse multi-state cooperation in balancing conflicting water uses particularly in transboundary groundwater basins, and prioritizes climatic variability, and change, as well as supports capacity building, portfolio learning, and targeted needs for joint ecosystem-based management of transboundary water systems.

### *Implementation of Sub-Grant Scheme through National Focal Groups*

SADC-GMI's work in creating an enabling environment, research and capacity building culminate in the need to enhance the sustainable access to the groundwater resource through infrastructure development. In this regard SADC-GMI is working with National Focal Groups composed of different stakeholders in the groundwater sector within each SADC Member State to identify needs and to implement pilot groundwater infrastructure projects in their respective countries using a sub-grant scheme that is available through the SADC-GMI. The National Focal Groups also anchor capacity building and advocacy initiatives for the sustainable access and management of groundwater in their respective countries.

### *Sharing Information and Knowledge through the SADC Groundwater Information Portal (GIP)*

The SADC hydrogeological maps that were developed in 2010 had inexplicably disappeared from the online public domain and Member States could no longer access them. In January 2017, SADC-GMI engaged the International Groundwater Resources Assessment Centre (IGRAC) of the Netherlands to revive the SADC Hydrogeological Map and Atlas which went live in June 2017 from SADC Groundwater Information Portal (SADC-GIP) now available on the SADC-GMI website: [www.gip.sadc-gmi.org](http://www.gip.sadc-gmi.org).

### *Capacity Building for Groundwater Data Collection and Management in the 15 SADC Member States (SADC-Groundwater DataCoM)*

In September 2017, SADC-GMI launched the DataCoM project to address the glaring disparities for data collection and management existing across the Member States. The International Groundwater Resources Assessment Centre (IGRAC) and the Institute for Groundwater Studies at the University of the Free State were contracted and are currently jointly implementing the project until January 2019. Besides collecting up-to-date data that will be used to update the SADC-GIP, the project is also aimed at benchmarking and harmonizing data collection and management tools and practices. An internship programme involving 2 young professionals from each one of the 15 SADC Member States has been designed as part of the project.

### *Conjunctive Water Resources Management Research*

In pursuit of its core objective to fill the Transboundary Aquifer knowledge gaps through research, SADC-GMI engaged private consultants to undertake a conjunctive water resources management research in the Shire river/aquifer system involving transboundary Diagnostic Analysis and stakeholder involvement for a strategic planning process to identify priority issues on transboundary cooperation. Over and above that, SADC-GMI continues to actively pursue opportunities for partnerships with several national, regional and international organizations in order to undertake more research to better understand transboundary aquifers in the region and to establish their groundwater potential.

### *Policy, Legal and Institutional Development for Groundwater Management in SADC member States (GMI-PLI)*

In April 2018, SADC-GMI launched the Policy, Legal and Institutional Development for groundwater management in SADC Member States projects. The overarching objective of the project is to address prevailing gaps in Policy, legal and Institutional groundwater management at national and transboundary levels. The project undertakes the Gap Analysis study on existing legal, policy and regulatory frameworks and compliance thereof for groundwater management in SADC Member States. Fundamentally, the gap analysis compares the Current State against a Desired Future State, and in the process, identify the gaps and reasons why the gaps exist to support the development of appropriate remedial actions for the closing of the gaps. It is implemented by the Pegasys Institute on behalf of SADC-GMI.

### *SADC Groundwater Conference*

The Southern African Development Community Groundwater Management Institute (SADC-GMI) in collaboration with other regional and International partners annually host a Groundwater Conference, the inaugural conference was hosted in September 2018. The conference is in response to the very high dependence of human populations and ecosystems on groundwater in the region. The SADC Groundwater Conference is held annually, with the primary objective of providing a platform for the advancement of knowledge sharing on sustainable management of groundwater at national and transboundary levels across SADC Member States.

## Key Stakeholders

Our stakeholders are wide and varied ranging from hydrogeological experts, water authorities, support agencies and the communities who depend on groundwater – or who could potentially depend on it. SADC-GMI strives to engage in projects/activities that directly respond to the varied needs of our stakeholders in the region. As a regional institute, we endeavour to engage with our stakeholders across the region, using various communication platforms in order to understand their daily challenges and come up with the best possible solutions.

- **Communities**
- **Water Authorities**
- **Groundwater Experts**
- **Research Institutions**
- **Media Organisations**
- **Education Institutions/Universities**
- **Decision makers**
- **Groundwater Agencies**
- **International Cooperating Partners**
- **Donors**



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## SADC-GMI's Financial Sustainability Model

SADC-GMI's cost centres are envisaged to be funded through the model categories below:

Cost component	Funding Sources
 <b>Core Operational costs</b>	<ul style="list-style-type: none"> <li>• SADC Member States contributions</li> <li>• Grants</li> <li>• Corporate Funding</li> <li>• Endowments</li> <li>• Management fees on events/projects</li> <li>• In-kind contributions</li> </ul>
 <b>Training</b>	<ul style="list-style-type: none"> <li>• Fees</li> <li>• Partnerships</li> <li>• Corporate sponsorship</li> </ul>
 <b>Projects/Programmes</b>	<ul style="list-style-type: none"> <li>• Member States contributions</li> <li>• Corporate support</li> <li>• Private sector</li> <li>• Co-operating partners</li> </ul>
 <b>Scholarships</b>	<ul style="list-style-type: none"> <li>• Endowments</li> <li>• Corporate sponsorship</li> <li>• Private sector</li> </ul>

For the period ending 30 June 2020, SADC-GMI's confirmed funding comprises 95% of the GEF Grant and 5% from other sources including a grant from the Deutsche Gesellschaft Für Internationale Zusammenarbeit (GIZ) to implement a regional training on "Integration of Groundwater Management in Transboundary Basin Organisations in Africa" as well as partnerships with UNESCO-IHP and WaterNet to implement training on International Water Law, Gender and Groundwater Modelling.

**The primary objective of the SADC-GMI's Financial Sustainability Strategy is to diversify its funding model to, by 31 December 2020, reduce the dependency on one source of funding to less than 50% of its total annual operational budget.**

SADC-GMI is therefore actively seeking opportunities to diversify its funding models as a means to realise the set objective.



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