This inaugural report ... encourages us to reflect on our journey and to ponder on our successes and milestones as an institute.
The establishment of the 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.

ABOUT SADC-GMI

The Southern African Development Community Groundwater Management Institute (SADC-GMI) is a regional Centre of Excellence for Sustainable Groundwater Management in the SADC Region. Founded in 2008, and registered on 6 May 2011 as a Not-for-Profit Company in South Africa, the Southern African Development Community Groundwater Management Institute (SADC-GMI) commenced its operations in September 2016 as the Centre of Excellence for Equitable and Sustainable Groundwater Management in the SADC Region. The institute is implementing the Sustainable Groundwater Management in SADC Member States Project, funded by the Global Environment Facility (GEF) and multi-donor trust fund, Cooperation in International Waters in Africa (CIWA) through the World Bank until 31 December 2020. Since its inception, SADC-GMI has expanded significantly making a number of particularly notable strides in providing solutions to sustainable groundwater management issues in the region. Through collaboration with governments and other regional and international partners, SADC-GMI has reached out to diverse communities and contributed to the United Nations Sustainable Development Goals, more particularly to the SDG 6 Goal to ensure access to water and sanitation for all.

This inaugural report is an interesting read which encourages us to reflect on our journey so far and to ponder on our successes and milestones as an institute, since our launch in September 2016. Being the first Annual Report to be produced by SADC GMI, some of the narratives of the report embody activities covering the period 2017 to 2020, which includes the genesis and rationale to the establishment of the Institute as a “Centre of Excellence for Sustainable Groundwater Management in the SADC Region”. Details of the milestones achieved by the Institute through various activities undertaken during the reporting period are also presented here.

In an endeavour to uphold the Institute’s values for transparency and accountability, the report provides the Financial Performance of the Institute for the Financial Year ended 31 March 2020. It specifically focuses on the Sustainable Groundwater Management in SADC Member States project, which constituted the bulk of the Institute’s core engagement.

It is of supreme importance to note that the financial statements of the Institute presented in this report are compliant with the International Financial Reporting Standards as well as general International Accounting Standards as per the requirement of the King IV Report. The report does not cover the full scope of what has transpired over the past four years of our operations, but rather highlights our key activities. Our readers are encouraged to consult our offices and our online platforms should there be further questions regarding the content of the report or where more information about SADC Groundwater Management Institute is required.

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on Groundwater Management hosted by the University of the Free State in Bloemfontein, South Africa, on behalf of and under the strategic guidance of the SADC Secretariat, Directorate of Infrastructure and Services – Water Division, in Gaborone, Botswana. It is a subsidiary structure of the SADC Secretariat and since its establishment in 2016, it was charged by the SADC Secretariat to implement the five-year (initially 2014 – 2019) regional project on Sustainable Groundwater Management in SADC Member States. The project aimed to mitigate the challenges of climate change, pollution and rapidly growing water demand in Southern Africa through strengthening the management and development of groundwater for social and economic development at national, regional and Transboundary levels. Component A of the project, whose implementation has been extended until 31 December 2020, seeks to operationalise SADC-GMI as a Centre of Excellence for Groundwater in the SADC region.

SADC-GMI’s Vision as presented in its Strategic Business Plan (2018-2023) is, “To be a Centre of Excellence in promoting equitable and sustainable groundwater management in the SADC region.” SADC-GMI promotes sustainable groundwater management and provides 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.

The establishment of the 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. This move was necessitated by historical institutional shortcomings in the conjunctive governance and management of groundwater resources across the region.

It is established as a not-for-profit company registered with the Companies and Intellectual Property Commission (CIPC) under the South African Companies Act No. 71 of 2008, as amended. As a subsidiary structure of the SADC Secretariat, SADC-GMI draws its mandate from the Regional Strategic Action Plans for Integrated Water Resources Management (RSAP) currently at the fourth phase (2016-2020). Through cooperation on shared aquifers in the region, SADC-GMI also contributes to the realisation of the objectives of the Revised SADC Protocol on Shared Watercourses of 2000 and river basin agreements across the region.

SADC-GMI is governed by a ten member Board of Directors composed of four Non-Executive Directors (NED) from SADC Member States, two NED from the University of the Free State, two Independent NEDs, a SADC-GMI Executive Director and one NED from the SADC Secretariat’s Water Division who also serves as the Board Chairperson. The Sub-Committee on Hydrogeology, which is comprised of groundwater representatives from all the 16 SADC Member States, also serves as the Project Steering Committee of the ongoing project providing primary oversight on the Board performance and reporting to the SADC Water Resources Technical Committee.
WHERE TO FIND US

SADC-GMI is hosted by the University of Free State, Institute for Groundwater Studies (IGS) Bloemfontein, The Republic of South Africa

Telephone Number | (+27) 51 401 7734 Email Address | info@sadc-gmi.org

Physical Address | Institute for Groundwater Studies Building, Dean Street, University of the Free State, 205 Nelson Mandela Drive, Bloemfontein, Republic of South Africa.

Postal Address | SADC Groundwater Management Institute, Internal Box 56, P. O. Box 339, Bloemfontein, 9300, Republic of South Africa.

Website | www.sadc-gmi.org

Twitter | sadc_gmi | Instagram | sadc_gmi | Facebook | @theSADCGMI

ACKNOWLEDGEMENTS

This Annual report is an important document in the history of the SADC Groundwater Management Institute, highlighting key achievements and milestones in the organization since its inception in 2016. Therefore, it is important to note that the development of the report has not been an easy task, requiring the concerted efforts of various parties inside and outside the organization, who worked tirelessly in ensuring that the SADC-GMI’s objective of producing a report that is compliant with international standards was realized.

We would like to acknowledge and thank the SADC Groundwater Management Institute team for their dedication, commitment, and professional approach towards the development of this report. We are fully cognisant of the fact that we faced a mammoth task that required more of our time than we had at our disposal. Special thanks go to Mr. Micah Majiwa, our Governance and Institutional Consultant who worked tirelessly to coordinate the gathering of raw data and ensuring that all activities earmarked towards the development of this report were timely and of sufficient quality.

Heartfelt gratitude is also appropriately extended to our partners, particularly our Board of Directors for their guidance during the compilation of this report. Your continued collaboration and support is always appreciated.

We believe and trust that this report will aid your understanding of our vision, mandate and focus as the Centre of Excellence in the sustainable groundwater management in the SADC region, while also augmenting your appreciation of the strides SADC-GMI accomplished over the past few years of operations.

Compiled and edited by | SADC-GMI Team
Design and production | Editing by Catalyst Communications
Design & Print | Design for development
SADC-GMI VISION

To be the Centre of Excellence in promoting equitable and sustainable groundwater management in the SADC Region.

MISSION STATEMENT

The Vision and mandate are brought to life through the following 6 mission statements:

- Advocate raise awareness and provide technical support in the 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 to build a knowledge base for groundwater in the region.
- 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

Core values which underpin the way in which SADC-GMI operates as an institution are listed below:

- 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 their use will be equitable.
- Accountability and Transparency – Accountability arises from responsible and transparent behaviour. To act as 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 and 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.

STRATEGIC GOALS

During the period under review, SADC-GMI moved from the establishment phase into the next phase of building capacity and developing of legitimacy. In light of this, SADC-GMI pursued two primary strategic goals, namely:

- To be recognised as a centre of Excellence in groundwater management; and
- To be financially sustainable.
GEOGRAPHICAL AREA OF SADC-GMI OPERATIONS

The Southern African Development Community Groundwater Management Institute is located in Bloemfontein, South Africa, and is mandated to operate in the sixteen (16) SADC Member States. Its operation in SADC Member States is made possible through the Focal Persons who provide an invaluable linkage between the Institute and the activities in the respective Member States.

The map below provides the geographic footprint of SADC-GMI activities:
Dear Partners and Stakeholders,

I am excited to present to you the inaugural Annual Report for the Southern African Development Community Groundwater Management Institute (SADC-GMI) covering the 2019/2020 Financial Year, which spans the period 1 April 2019 to 31 March 2020. As this is the inaugural report, it occasionally has encroached on preceding years’ activities to bring perspective to the issues covered in the reporting period.

This report marks a very important milestone in the growth and maturity of the SADC-GMI Brand since commencing full-fledged operations in September 2016. Over the past four years, we recorded phenomenal achievements in asserting ourselves as a well-recognized Centre of Excellence in the field of groundwater management, leading capacity building and knowledge initiatives in the region and becoming the prime repository for groundwater related information.

We fully acknowledge that our mandate demands spreading our human capacity widely across the SADC region as well as feeding into the regional objectives for water security and regional integration and development. To this end, we have continued to grow and leverage on a wide range of active partnerships with various governments, RBOs and knowledge institutes in the region and beyond. During the reporting period at least eight strategic partnerships were concluded, bringing the cumulative number to more than 20.

As a growing brand, we also believe in upholding very high standards of corporate governance. Consequently, after doing a skills audit, the SADC-GMI Board of Directors recruited two additional Independent Non-Executive Board Members. I warmly welcome Mr Michael Marler and Ms Zandile Kabini who joined the SADC-GMI Board of Directors on 27 June 2019 as Independent Non-Executive Directors assisting with Business Development as well as Finance and Operations management respectively. The two Board Members bring a wealth of experience from their fields and we all really look forward to working with them during their tenure of service with SADC-GMI.

I am also proud to report that, as SADC-GMI, we acquitted ourselves exceptionally well in our role as interlocutor between the SADC Secretariat, SADC Member States and a broad range of stakeholders, at play in our niche area of promoting the conjunctive utilisation of surface and groundwater resources to promote water security, and in building resilience from the impacts of climate change especially among the poor rural communities across the SADC region. This aspect of our work led us to undertake transformational and advocacy work to influence the creation of an enabling policy, legal and institutional framework for sustainable groundwater management across the 16 SADC Member States and at regional level.

Such work has also enabled us to develop tools and products that will assist our stakeholders to collect and manage groundwater data to generate essential information necessary for Decision Support Systems which include Early Warning Systems.

We have firmly embraced our role as the convenor of “anything groundwater” in the SADC region. As such, pursuant to our success in 2018, we hosted the second SADC Groundwater Conference in September 2019 in Johannesburg that was graced by nearly 140 groundwater practitioners, researchers, and experts from across the SADC region, the African continent and beyond.
During the reporting period, SADC-GMI continued to demonstrate its project management proficiency through the successful implementation of the World Bank supported Sustainable Groundwater Management in SADC Member States project, funded by GEF and CIWA. All project activities have reached project life cycle maturity with impressive results, that we believe have not gone unnoticed especially favouring prospects for securing funding for a follow-up SADC Groundwater programme after 31 December 2020 when this current project ends.

The reporting period under review also witnessed impressive results on the financial management and reporting front. Due to the increased level of activities, our Annual Operating Expenses rose by almost 66% from USD2,120,295 in the previous Financial Year to USD3,513,948 in the reporting period. This increased volume of activity was capped by an unqualified external audit by Price Waterhouse Coopers.

We have firmly embraced our role as the convenor of anything groundwater in the SADC region.

Despite all the positives that I have highlighted above, the period under review also saw its own challenges. Most prominent of these was the onset of the COVID-19 pandemic which triggered massive lockdowns in all SADC Member States right at the end of this reporting period. This development abruptly halted the many physical infrastructure pilot projects ongoing in the SADC Member States. We anxiously await the end of this unprecedented pandemic to enable us to operate normally again and to continue to achieve our objectives.

As we went about delivering on our mandate, it has become quite apparent that the demand for our services across the region far outweighs the human and financial resources at our disposal. This status quo influenced us to refocus our strategy to boost our internal capacity and secure more funding to implement a new regional groundwater programme aimed at building resilience for socio-economic development.

Lastly, let me take this opportunity to appreciate once more everyone who contributed to making this reporting period the resounding success that it was. We look forward to your continued support into the future.

Dr Patrice Kandolo Kabeya
Chairperson
SADC-GMI Board of Directors
The work of SADC-GMI covers 16 SADC member states.
Abbreviations, Acronyms & Tables

ASIN-Net  Africa Groundwater Network
AMCOW  African Ministers Council on Water
BGR  British Geological Research
BGS  British Geological Survey
CIPC  Companies and Intellectual Property Commission
CWA  Cooperation in International Waters in Africa
COVECOM  Cuvelai Watercourse Commission
CSIR  Centre for Scientific and Industrial Research
DFS  Desired Future State
DST  Department of Science and Technology
EMF  Environmental Management Framework
EMP  Environmental Management Plan
EMSP  Environmental Management and Social Plan
ESG  Environmental Social and Governance
ESS  Environmental Social Safeguards
FSP  Financial Sustainability Plan
GDE’s  Groundwater Dependent Ecosystems
GEF  Global Environment Facility
GESI  Gender Equality and Social Inclusion
GWP  Groundwater Information Portal
GIZ  Deutsche Gesellschaft Fur Internationales Zusammenarbeit (GIZ)
GLA  Grey Literature Archive
GMI  Groundwater Management Institute
GHOWAS  Groundwater System
GWP  Global Water Partnership
HGA  Hydrogeology Analyst
IAH  International Association of Hydrogeologists
IGRAC  International Groundwater Resources Assessment Centre
IGS  Institute for Groundwater Studies
IP  Implementing Progress
IUCN  International Union for Conservation of Nature
IWMI  International Water Management Institute
IWWM  Integrated Water Resources Management
JSAP  Joint Strategic Action Plan
LIMCOM  Limpopo Water Commission
LLP  Lessons Learned Project
LWSC  Lusaka Water and Sewerage Company
MOU  Memorandum of Understanding
NED  Non-Executive Directors
NFPG  National Focal Groups
NFPP  National Focal Point Person
NGIS  National Geoscience Information System
G & M  Operations and Maintenance
OKACOM  Okavango River Basin Water Commission
ORASCOM  Orange Sengu River Commission
PDO  Project Development Objectives
PLI  Policy, Legal and Institutional
QGIS  Quantum Geographical Information System
RBO  River Basin Organisation
RSAP  Regional Strategic Action Plan
SADC  Southern African Development Community
SDG  Sustainable Development Goals
TDA  Transboundary Diagnostic Analysis
ToR  Terms of Reference
TRG  Technical Reference Groups
UNESCO-IHP  United Nations Educational, Scientific and Cultural Organisation – International Hydrological Programme
USAID  United States Agency for International Development
WASH  Water Sanitation and Hygiene
WRC  Water Research Commission
WRTC  Water Resources Technical Committee
YP  Young Professionals
ZAMCOM  Zambezi Watercourse Commission
ZAMWIS  Zambezi Water Information System
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Groundwater is a fundamental resource for social, economic, and environmental sustainability in the 16 Member States of the Southern African Development Community (SADC). Human wellbeing, livelihoods, food production, ecosystems and natural habitats, industries and growing cities across the region are directly reliant on groundwater. All Member States are experiencing a rising demand for water as a result of rapidly expanding populations and economic growth. Climate change is predicted to cause exacerbated water-stress, with greater groundwater drought vulnerability across transboundary aquifers and countries.

It is estimated that 70% of the SADC region’s population of 280 million is dependent on groundwater for their primary livelihoods and socio-economic development, especially in rural communities. As the quality and quantity of surface water declines in the wake of aggravating impacts of climate change and human settlement activities, the importance of conjunctive surface and groundwater resources management intensifies in order to enhance resilience through water security.

The SADC-GMI has the primary mandate of advocating for the sustainable management of groundwater in the SADC region, in line with the SADC secretariat’s Regional Strategic Action Plan (IV) 2016-2020. During the period 2019/20, the SADC-GMI continued with implementing its flagship project, “Sustainable Management of Groundwater in SADC Member States.” The project’s broad objective is to support decision makers, planners, implementers and research communities in Southern Africa to manage present and future groundwater complexities and challenges at national, transboundary and regional levels.

The period 2019/20 saw concerted efforts by the SADC-GMI and its partners, to implement various projects in the areas of Transboundary Aquifer Management through work in Shire Transboundary Aquifer (shared between Malawi and Mozambique). There was also collaboration with the International Water Management Institute (IWMI) on a research project in the Tuli Karoo Transboundary Aquifer shared between Botswana, South Africa and Zimbabwe. Enormous work still needs to be accomplished on Transboundary Aquifers, considering that there are nearly 30 such aquifers in the SADC region. Thus far comprehensive studies have only been completed on three aquifers, namely Stampriet (shared by Botswana, Namibia and South Africa), Ramotswa (shared between Botswana and South Africa) and the Shire River Aquifer System (shared between Malawi and Mozambique).

While acknowledging the growing dependency on groundwater due to surface water security challenges, SADC-GMI is actively advocating for the conjunctive management of groundwater and surface water resources by implementing innovative approaches to integrate groundwater management in the region’s shared River Basin Organisations (RBOs), which have been traditionally conceived and operationalised as surface water management institutions. This approach has seen SADC-GMI entering into formal Memoranda of Understanding with two of the five RBOs and implementing integration measures through the establishment of Groundwater Committees, training and provision of technical assistance on various key groundwater topics.

Inadequate capacity remains one of the challenges hindering groundwater management in the Region. To this end we instituted a number of capacity building initiatives. Our Young Professionals programme was further strengthened during 2019/20. Without adequate good quality data and the prudent management thereof, the generation of decision-making information remains a pipe dream. We therefore used our vantage position and continued to drive towards improved groundwater data collection, management and sharing, in the Members States through a number of projects, one of which culminated in the elaboration of the SADC-wide Framework for Data Collection and Management. It is fully acknowledged that groundwater still remains a relatively unknown resource, and research at national and
regional level needs to be undertaken to unpack the mysteries. During the period under review we commissioned a project, “Assessment of Groundwater Resources Development Priority Intervention Areas in the Southern African Development Community (SADC) Region.” This project aimed to generate key information to guide future groundwater development projects in the region and to ensure that development would take place where it was most needed.

The annual SADC Groundwater conferences have become a permanent feature on our stakeholders’ calendars since the inaugural event held in September 2018. A bigger and better second annual conference was held in September 2019. These conferences confirm our mandate to providing a platform for sharing experiences amongst the groundwater community from the SADC region and from across the globe. Besides growing our brand as a niche leader in our area, we are proud of the platform the conference offers to emerging researchers from the region who are part of the SADC-GMI’s growing alumni.

As we go about fulfilling our mandate, we always ask the pertinent question, “Groundwater for What?” which we have sought to answer through the implementation of community level pilot projects in the Member States, in response to the grassroot livelihood and socio-economic needs. The projects implemented in the SADC Member States range from groundwater monitoring projects, solar powered groundwater supply projects, development of groundwater data storage databases and exploration and characterisation of aquifers. Many lessons have been learnt during the reporting period while implementing these pilot projects. Accordingly, we have set ourselves the task of reviewing the Sub-Grant Manual, which is the guiding document for implementation of pilot projects, so that the lessons learnt and emerging issues are captured for future improvements.

In a bid to strengthen our internal accountability and governance systems, several policy and guideline documents have been developed and approved by the SADC-GMI Board of Directors in the areas of financial management, procurement, and project management. The role of these manuals cannot be underestimated as they accelerate and consolidate SADC-GMI’s endeavour to be weaned from the sole dependency on external policies such as the donors’ and the host institution.

As we look beyond the year 2020, we are currently seized with finalising a study to capture lessons learned and emerging issues from our ongoing engagements to date, and utilising these to inform the formulation of a new 10-year SADC groundwater programme, expected to be implemented in 2021. This exercise has drawn from the wide expertise of our partners and we believe that the new programme will cement the role of the SADC-GMI as a Centre of Excellence for groundwater management in our region. We envisage that the future programme will anchor on previous work, while building resilience for socio-economic development in the region, through institutions, information and infrastructure. The programme will continue to respond to the needs of the region through the application of the Regional Strategic Action Plan V 2021-2025.

Mr James Sauramba
Executive Director
SADC-GMI Board of Directors
SADC-GMI Governance Structure
The SADC-GMI is hosted on behalf of 16 SADC Member States by the University of the Free State, Institute for Groundwater Studies.

1.1 ABOUT INSTITUTIONAL ARRANGEMENTS OF SADC-GMI

SADC-GMI is the brainchild of the SADC Secretariat, Directorate of Infrastructure and Services (Water Division). It was granted subsidiarity status by the Council of Ministers during their 38th meeting held in Windhoek, Namibia in August 2018. The SADC-GMI is hosted on behalf of the 16 SADC Member States by the University of Free State, Institute for Groundwater Studies based in Bloemfontein, South Africa. It is governed through an Independent Board of Directors chaired by the Head of the Water Division of the Directorate for Infrastructure and Services at the SADC Secretariat. The SADC sub-Committee on Hydrogeology is comprised of one representative each from the water ministries, departments or agencies from the 16 SADC Member States. It provides strategic guidance on the implementation of the SADC-GMI’s governance and thematic programmes.

THE DIAGRAM BELOW PROVIDES A SCHEMATIC OVERVIEW OF THE CORPORATE GOVERNANCE STRUCTURE OF THE INSTITUTE
The Sub-Committee on Hydrogeology comprises of representatives appointed by their respective Member States, who also serve as Project Steering Committee Members for the various projects implemented by SADC-GMI from time to time. The Members of the Sub-Committee on Hydrogeology are also the National Focal Point Persons for their respective countries, and they work very closely with SADC-GMI in providing strategic guidance in the implementation of projects and capacity development initiatives in the Member States. The SADC Sub-Committee on Hydrogeology reports to the Water Resources Technical Committee (WRTC), who in turn reports to the Committee of Water Senior Officials with the ultimate responsibility lying with the Committee of Water Ministers. Through this unique steering structure, SADC-GMI has been able to make progress in building its regional brand.
Corporate Governance is one of the critical issues not only for SADC-GMI but for all organizations at large. It is of paramount importance that an organization has legitimate and strong governance structures to inspire transparency and accountability. In the same vein, at SADC-GMI we believe that good corporate governance will promote a thriving environment for all stakeholders including our donors.

SADC-GMI is governed by a ten (10) Member Board of Directors including the SADC-GMI Executive Director. The Republic of South Africa and the host the University of Free State have permanent seats on the Board, whilst the SADC Member States are represented based on the SADC Troika governance structure. Two Independent Non-Executive Directors are also appointed to bridge the skills gap in the Board of Directors.
It is of paramount importance that an organization has legitimate and strong governance structures to inspire transparency and accountability.
02 Operationalisation of SADC-GMI
2.1 BACKGROUND

SADC-GMI is implementing the flagship, “Sustainable Groundwater Management in SADC Member States Project (P127086)” that was launched on 20 September 2016 and funded by the Cooperation for International Waters in Africa (CIWA) and the Global Environmental Facility (GEF) through the World Bank. Component A of this project had the objective to “Operationalise the SADC-GMI as a Centre of Excellence for sustainable groundwater management”.

The SADC-GMI is being operationalised at different levels, such as through the Board of Directors, Project Steering Committee, which doubles as the Sub-committee on Hydrogeology, through active engagement with donors, and through high-level engagement in regional initiatives.

The ensuing sections of this chapter entail the presentation of an overview of the main activities for the period 2019-2020 intended to fully operationalise the SADC-GMI.

2.2 OPERATIONALISING THE SADC-GMI THROUGH THE BOARD OF DIRECTORS AND THE STEERING COMMITTEE

The cooperate governance of the SADC-GMI has steadily grown with the company holding Board meetings in accordance with the South African law, since its launch. The following Committees of the Board were established at the regular meeting of the Board of Directors on 27 June 2019:

- The Audit and Risk Management Committee
- The Business Development Committee

The SADC-GMI through the board, continued to actively engage the SADC secretariat to formalise the hosting arrangements with the Republic of South Africa as a subsidiary of the SADC Secretariat.

The Technical content of the SADC-GMI’s work is overseen by the Sub-committee on hydrogeology (Projects steering Committee) as earlier described in the background sections of this report. During the reporting period the Steering Committee met at least twice annually in formal meetings as prescribed by its Terms of Reference to provide oversight and strategic guidance to the SADC-GMI. Through this set-up, these meetings provided a mechanism of ensuring that the SADC-GMI’s programmes and projects remained responsive to the needs of our client, “the SADC Member States”.

2.3 WORLD BANK PROJECT IMPLEMENTATION SUPPORT MISSIONS

Two implementation support missions were fielded by the World Bank from 18 to 22 March 2019 and from 23 to 27 September 2019. Both missions acknowledged satisfactory implementation of the Sustainable Groundwater Management in SADC Member States project as summarised in Table 1.

The ratings for performance range from “Unsatisfactory to Satisfactory” with interim ratings of “Moderately Unsatisfactory” and “Moderately Satisfactory”.

2.4 REGIONAL ADVOCACY FOR GROUNDWATER MANAGEMENT

In contributing to regional integration through advocacy for sustainable groundwater management at the national and regional levels, the SADC-GMI convened or took part in the following initiatives during the current reporting period:

- Attended WRTC meeting, Sandton, Johannesburg, 28-29 March 2019
- Attended WRTC meeting, Sandton, Johannesburg, 28-29 March 2019
- Supported SADC Infrastructure Directorate’s annual retreat workshop held in Kasane, Botswana, 25-29 April 2019
- Attended Water & Energy Ministers’ Water Senior Officials’ meeting in Windhoek, Namibia, 20-23 May 2019
- Co-organisation with the SADC Water Division of the RSAP (V) Visioning Workshop for WRTC, held in Johannesburg from 19-20 February 2020

Participation at the above events demonstrates SADC-GMI’s commitment to contribute to the regional agenda of the SADC, through high level regional and international engagements.
## PROJECT IMPLEMENTATION SUPPORT MISSION PROJECT RATINGS

<table>
<thead>
<tr>
<th>PROJECT RATINGS</th>
<th>MARCH 2019 MISSION</th>
<th>SEPTEMBER 2019</th>
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<tbody>
<tr>
<td>PDFO</td>
<td>Satisfactory</td>
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<tr>
<td>IP</td>
<td>Moderately Satisfactory</td>
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<tr>
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<td>Component B: Strengthening institutional capacity for the sustainable management of groundwater in SADC</td>
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<td>Component C: Advancing knowledge on transboundary and national groundwater</td>
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<tr>
<td>Component D: Promoting groundwater infrastructure management and development</td>
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<td>Procurement</td>
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Partnerships
3.1 BACKGROUND

We are cognisant of the fact that we cannot “do it alone” to achieve the huge mandate of promoting sustainable groundwater management in the SADC region. The SADC-GMI acknowledges the role that other partners are playing and, in an effort to improve efficiencies, we are continuously seeking partnership with stakeholders operating in the groundwater domain. The reporting period saw the SADC-GMI establish new partnerships with a variety of stakeholders to leverage on existing funding and skills opportunities.

3.2. COLLABORATION WITH OTHER INTERNATIONAL GROUNDWATER INSTITUTIONS

SADC-Groundwater Management Institute (SADC-GMI) acknowledges the need to build partnerships in order to deliver to their existing and new stakeholders in 16 SADC Member States and also enhance its footprint in the region. In this regard, SADC-GMI has forged strong partnerships with national, regional and international partners. Today’s fast-paced environment has demonstrated that a “do-it-alone” approach is an unsustainable strategy for growth.

Collaboration with national, regional and international partners enhanced our service delivery and helped us to provide better and innovative solutions to groundwater challenges in the region. Through our partnerships, we were able to deliver on multiple impactful projects and reached diverse communities in the region to achieve the following milestones: Capacity Building on Groundwater Data Collection and Management in SADC Member States, Policy Legal and Institutional Development for Groundwater Management in SADC Member States, Sub-grant projects in 12 SADC Member States, Conjunctive Water Resources Management Research in the Shire River/Aquifer system, Research in the Tuli Karoo and Eastern Kalahari Transboundary Aquifers, as well as several other Capacity Development initiatives. The success of these initiatives is owed to strong collaborations with implementing partners.

3.3 TRAINING AND INTEGRATION OF GROUNDWATER MANAGEMENT INTO RIVER BASIN ORGANISATIONS (RBO’S)

In 2018, SADC-GMI successfully implemented two English medium training workshops on the, “Integration of Groundwater Management into River Basin Organisations,” with funding from DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE ZUSAMMENARBEIT (GIZ) in Lusaka, Zambia and Pretoria, South Africa. In February 2020, SADC-GMI partnered with the United Nations Educational, Scientific and Cultural Organization – International Hydrological Programme (UNESCO-IHP), AGW-Net and BGR, in offering a training session for French speaking African Nations held in Dakar, Senegal. The SADC-GMI facilitated the participation of candidates from the French speaking SADC Member States of Comoros and the Democratic Republic of Congo. As an institute dependent on donor funding, we
will continue to leverage on various funders and initiatives in the region to build capacity for the conjunctive sustainable use of surface and groundwater resources in the region.

3.4 COLLABORATION AND SUPPORT TO RIVER BASIN ORGANISATIONS (RBO’S)

As a regional institute, the next level to access the grassroot communities is through the River Basin Organisations (RBOs). Consequently, during the reporting period, Memoranda of Understanding were signed with the following RBOs:

- Cuvelai Watercourse Commission (CUVECOM)
- Limpopo Watercourse Commission (LIMCOM),
- Okavango River Basin Water Commission (OKACOM),
- Zambezi Watercourse Commission (ZAMCOM)

We also collaborated with Orange-Senqu River Commission (ORASECOM) through participation in the Groundwater Hydrology Committee.

Through these MoUs, SADC-GMI also provided technical support to the RBOs on various critical issues, including finding solutions to address shared groundwater challenges, data sharing and ensuring mutual benefits from the cooperative relationship. As a result of the MoUs, SADC-GMI is working towards establishing Groundwater Technical Committees with RBOs to further operationalise the partnership. During the reporting period, the first Groundwater Committee (LIMCOM Groundwater Committee) was established in February/March 2019 in Gaborone, Botswana. The Committee is composed of representatives from riparian states responsible for groundwater management and other key partners involved in the management of groundwater in the river basin. The primary objective of these Groundwater Technical Committees is to coordinate and advance groundwater technical management in the different basins.

Going forward SADC-GMI plans to formalize more Groundwater Technical Committees with the remaining River Basin Organizations in the region. Notable events for the reporting period include our active participation in the OKACOM Technical Reference Group (TRG) where we took part in the following key activities:

- Cubango-Okavango River Basin Environmental Workshop 25 February-1 March 2019, Maun Botswana. (The SADC-GMI is leading and coordinating work on the development of a ToR for groundwater assessment and monitoring in the basin)
- Review of the Groundwater Assessment of the Cubango-Okavango River Basin Consultancy Project Inception Report. The SADC-GMI is part of the Technical Reference Group (Hydrogeology) for OKACOM.
04
Capacity Building & Knowledge Management
4.1 SKILLS DEVELOPMENT THROUGH REGIONAL CAPACITY NEEDS ASSESSMENT

It is cardinal that groundwater capacity development initiatives respond to the needs of the region. Without proper assessment, it would be impossible to match capacity development needs and capacity development initiatives suitable for the region. One of SADC-GMI’s focus areas is capacity development in the SADC region, which means providing support to SADC Member States through capacity development initiatives. This forms part of SADC-GMI’s mandate.

In pursuing its mandate of capacity building, in February 2018 SADC-GMI undertook a capacity needs assessment to determine priority challenges for capacity building initiatives in SADC Member States. The assessment also provided a deeper understanding of the state of existing groundwater capacity at national and regional level in order to position groundwater in contemporary water policy and legislation in each state. The exercise revealed the existing groundwater management situation in Member States and identified the capacity development initiatives that had been offered by other institutions in the past. It was concluded that most Member States struggled to fulfil their groundwater management related mandate, due to limited human resources and a lack of funding for groundwater related projects. The assessment also revealed that public sector capacity was unevenly distributed across the region, some Member States had relatively robust groundwater capacity whilst others had weak systems. According to the assessment, it would be crucial to prioritize the building of capacity of the weaker states with respect to groundwater practical skills, in order to promote equal and competent participation in decision-making (BGR 2013).

Another key discovery was that many capacity development initiatives had been developed and offered on groundwater at country level and at Transboundary River Basin level at both academic and technical levels supported by a multitude of international organizations and groundwater networks, but these were conducted in silos, hence there was a need for regional coordinated plan or strategy.

It is important to note that while there have been many programmes and projects related to water resources, the capacity for local individuals and institutions to sustainably implement groundwater projects and programs in SADC has not been given adequate attention or addressed extensively. Capacity, especially in most of the Sub-Saharan African countries, remains a missing element in the process of development (Babu and Sengupta 2005).

This background work culminated in a Regional Capacity Needs Assessment Report which contained a Training Plan, which is currently being rolled out in collaboration with other partners in the region, despite the recent COVID-19 induced interruption.

4.2 SKILLS DEVELOPMENT THROUGH THE YOUNG PROFESSIONALS PROGRAMME (YPs)

At SADC-GMI we are passionate about investing in young talent, we believe that young professionals are the future of the groundwater fraternity. Therefore, we find it imperative to invest in the development of young people to ensure that they are capacitated and ready to take the baton and lead the sector.

Since 2018, SADC-GMI has made it one of their priorities to include Young Professional Internships in some of their projects. During the reporting period, SADC-GMI has empowered approximately 65 Young Professionals across the SADC region who were nominated through the Member States’ National Focal Persons. The Young Professionals went through various skills development programmes including data and information management, as well as international cooperation and knowledge management through communities of practice and networking.

In 2017-2018, SADC-GMI in collaboration with International Groundwater Resource Assessment Centre (IGRAC) implemented the “Capacity Building on Groundwater Data Collection and management in SADC Member States,” project where a total of 22 Young Professionals were engaged; two per Member State and two from the University of
the Free State. They executed these assignments under the supervision of experienced project teams and focal persons from their respective countries.

This was followed in 2019-2020 with two internships involving 43 additional Young Professionals through updating of the SADC Groundwater Information Portal project (SADC-GIP) contracted to IGRAC, and the project for updating the SADC Groundwater Grey Literature Archive Online platform (SADC-GLA) contracted to the British Geological Survey (BGS). The internships provided the young professionals with the opportunity to interact in workshops where they shared information and experiences gained through assignments and from the community of practice with other fellow colleagues in the region.

The Young Professionals programme has also been extended to the SADC Annual Groundwater Conferences. Since 2018, Young Professionals have been accorded a special space to make their oral and poster presentations. At both the 2018 and 2019 Groundwater Conferences, the best oral and poster presentations from the Young Professionals were awarded prizes.

SADC-GMI will endeavour to continue engaging and investing in young people of the region for better and sustainable groundwater management. It is in our planning to focus more on academic postgraduate programmes for this group of professionals who will constitute key alumni to sustain the institute’s brand.

4.3 ESTABLISHMENT OF NATIONAL FOCAL GROUPS IN SADC-MEMBER STATES

The building of the SADC-GMI brand has received extensive support and cooperation from the SADC-Member States through the close cooperation with the Institute, which was facilitated by National Focal Point Persons for Sustainable Ground Water Management who sit on the SADC Sub-Committee on Hydrogeology. This governance structure has made a huge impact on the success of SADC-GMI’s establishment as a Centre of Excellence in Groundwater Management. Coordination of the various SADC-GMI activities at National level have been largely supported by the National Focal Point Persons (NFPP).

In an endeavour to enhance cooperation, guidance and advocacy for sustainable groundwater management as well as the conceptualisation and implementation of groundwater infrastructure projects in the Member States, it was necessary to establish National Focal Groups to provide support to the NFPP. The long-term vision is to provide a platform upon which various stakeholders in Groundwater Management participate to mobilising resources, and to provide expert advice to the
STRENGTHENING GROUNDWATER MANAGEMENT:
OVERVIEW ACROSS ALL MEMBER STATES

Most states have endeavoured to strengthen their policy, legislative and institution regimes with regards to WRM&D but there are still areas for improvement

1. **Policy**
   - Policy instruments insufficiently recognise the importance of the linkages between: GW and SW, GW and wetlands, and the importance of TBAs

2. **Legislation**
   - Need to improve legal recognition of the human right to water & legal tools that facilitate access to GW for livelihoods & small-scale productive uses; strengthen GW monitoring; enable improved management of non-point source pollution

3. **Strategy**
   - Need to strengthen GW focused strategies in terms of the approaches towards ensuring effective conjunctive use of both surface and groundwater

4. **Institutional Framework**
   - Inter-governmental and inter-sectional management / planning need to be strengthened to ensure engagement

**Support Tools / Instruments**

- **GW-PLI Roadmap Development Guideline**
  - based on lessons learnt throughout the project and from Tanzania and the Kingdom of Eswatini process

- **Framework for Institutionalising Groundwater Management in the SADC Region**
  - to provide guidance to strengthen the strategic and operation management of GW resources by institutions at various spatial and administrative scales

- **Building GWM Resilience**
  - strategic approach to managing groundwater and link to building effective socio-economic resilience and outline best practice approaches

- **Strategic Approach to Financing Groundwater Management**
  - explores the range of options and innovative approaches to financing GWM

- **Operation and Maintenance of Groundwater Schemes Guide**
  - pragmatic approaches to O&M
Member States on the implementation of projects which will advocate for the conjunctive management of water resources in the Member States.

SADC-GMI has been in the process of establishing National Focal Groups (NFG’s) in at least five Member States, since mid-March 2020. Once established, the NFG’s will be provided with training on relevant areas identified through a training needs assessment to capacitate them to provide support to the NFPP.

The National Focal Groups will be composed of decision makers/planners, groundwater practitioners, researchers, contractors, and other relevant stakeholders engaged in National Groundwater issues in each respective Member State. The overarching objective of establishing the NFG’s is to provide advocacy for sustainable groundwater management in the Member States. We anxiously await the outcome of this very important exercise which was sub-contracted to Oneworld Consultants until October 2020. This is a critical first phase which will inform the roll-out to the remaining 11 SADC Member States that have not yet been reached. However, the nature of this assignment necessitates physical meetings in the respective Member States, a requirement that is not currently feasible due to COVID-19 pandemic-induced travel restrictions. It is hoped that the substitution of physical meetings with virtual engagements will still enable the consultants to complete the assignment as planned.

4.4 CREATING AN ENABLING ENVIRONMENT FOR GROUNDWATER MANAGEMENT

In the past decade, the water sector in the SADC Region has received tremendous support from Donors and Cooperating Partners, who have implemented Water Sector Reforms which emphasised Integrated Water Resources Management (IWRM). The sixteen SADC Members States adopted and are at various stages of the implementation of integrated water sector reforms. The implementation of IWRM revolutionised the management of the water sector in the region and new policies, legal regulations and institutional setup of the sector began to emerge.

Consecutive droughts during the past decade caused a paradigm shift with and estimated 70% of the rural population becoming dependent on groundwater resources, and even the urban population to a large extent depending on groundwater resources as surface water systems failed to cope with demand. New challenges of over-exploitation of groundwater resources and the lack of a requisite policies, legal frameworks, and institutional development to regulate the sector is a potential threat to groundwater resources.

4.4.2 Scope of the GMI-PLI project.

The GMI-PLI project scope was extensive and well-sequenced, involving the production of an Inception Report, followed by the development of a Desired Future State (DFS) which was a knowledge product based on best practice. Armed with the DFS knowledge product, an extensive stakeholder consultation process was conducted with the assistance of in-country experts who liaised closely with the National Focal Point Persons in each Member State. The scope of the project also involved identifying gaps at national level and in regional protocols. National and regional benchmarking as well as action planning, culminated in the implementation of an intensive advocacy programme, training, and development of up to five identified guidelines/blueprints/manuals to assist effective groundwater management and development.

In July 2019, the scope of the project was extended to include development of a Gap Analysis and Action Plan for the Comoros, the development of a Legal and Institutional Development Roadmap for the Kingdom of Eswatini, and developing an Operation and Maintenance (O&M) framework for Groundwater Management.

4.4.3 Lessons learnt from the Gap Analysis and Action Plans

The policy, legal and institutional development operating environment in the Member States differs from state to state and mostly depends on the progress made with the implementation of the Water Sector Reforms. However, the Gap Analysis and Action Plans revealed that the problems and challenges regarding the creation of an enabling environment are
similar from one Member State to the other. The diagram on page 34, shows the major gaps that were identified through the Gap Analysis process.

**4.4.4 Knowledge Products**

In August 2019, to increase consultations and validation of the five guidelines which were produced through this consultancy, a workshop was held at the Fire and Ice Menlyn, in Pretoria, South Africa. The workshop was attended by more than 20 participants drawn from the 16 Member States. The workshop marked the first dissemination of knowledge products to the Member States to assist in the creation of an enabling environment for sustainable management of groundwater resources. The diagram on page 34 (previous pages) shows the five knowledge products produced from this project.

**4.5 HOSTING OF INTERNATIONALLY RECOGNISED SADC-GMI GROUNDWATER CONFERENCE (2018 AND 2019)**

The hosting of an annual SADC Groundwater Conference was a significant and successful milestone that SADC-GMI accomplished in 2018 and 2019. The event was a collaboration between SADC-GMI and other key regional and international partners. The Conference became recognised as one of the premier events in the region, attracting key players from the water sector and beyond. The primary objective of the conference is to provide a platform for the advancement of knowledge sharing on sustainable management of groundwater at national and transboundary levels across SADC Member States, while supporting the SADC-GMI Financial Sustainability Plan (FSP) developed in 2018.

In September 2018, SADC-GMI hosted its inaugural conference under the theme, “Adapting to Climate Change in the SADC Region through Water Security – A Focus on Groundwater”. The first event registered more 120 participants and well acclaimed speakers while ten prominent regional and international organizations exhibited their products at the conference. Technically the conference also attracted a high standard of papers under each sub-theme. The recommendations of the 2018 conference were taken up by the African Ministers Council on Water (AMCOW) in conjunction with the African Union Commission in the meeting (Toward Achieving Water Security and Safely Managed Sanitation for Africa) held on 29 October– 2 November 2018 in Libreville, Gabon.

In September 2019, SADC-GMI hosted the second conference at the Southern Sun Hotel, OR Tambo International Airport, Johannesburg, South Africa, under the theme “Groundwater’s Contribution to the Achievement of Sustainable Development Goals (SDGs) in the SADC region”. The conference presented another opportunity to reflect and discuss the contributions of groundwater in attaining the Sustainable Development Goals (SDGs), in particular SDG 6 that sets out to “ensure availability and sustainable management of water and sanitation for all” as promulgated in the Agenda 2030 of the United Nations. The conference attracted participants from across the region and beyond with renowned key speakers who contributed immensely to the theme of the conference and to the body of knowledge.

The region is now looking forward to the 3rd SADC Groundwater Conference which is set to take place virtually under the theme, “Enhancing Water and Food Security through Sustainable Groundwater Development in the SADC Region”, organized in collaboration with the Namibian Government (Ministry of Agriculture, Water, Land and Reform) and other key regional and international partners.

The SADC Groundwater Conference has over the past two years achieved great success in many distinct and notable ways, enhancing and elevating the SADC-GMI brand as a “Centre of Excellence” in the region, through the monies generated from registration fees and sponsorships from partners the conference also contributed to the Financial Sustainability Plan of the organization. Through the conferences, SADC-GMI can lead, promote and serve as an interlocutor for regional groundwater initiatives, and also establish strong networks of partnerships in the SADC region and beyond. The SADC Groundwater Conference has been able to successfully create a platform for key players in the water sector, specifically in groundwater to collectively share knowledge, success stories and groundwater challenges that impact the region and the continent at large, while ensuring that the groundwater resource management is elevated to promote adaptation to the worsening impacts of Climate Change.

**123 participants from 26 countries**

17% NGO
18% Private Sector
22% Research/academia
43% Public sector/ govt.

**63 | South Africa**
**9 | Zimbabwe**
**8 | Botswana**
**3 | Zambia + Malawi**
**2 | Sweden + Germany**
**21 | Others**
**4 | Netherlands**
**4 | Mozambique + Namibia**

**38 presentations**
7 keynote presentations
2 panel discussions
1 round table discussion
Advancing Knowledge of Transboundary & National Groundwater
The SADC-GMI views availability of and access to greater knowledge and information on groundwater across the SADC region, as the pillar for attaining sustainable development. With more relevant and accurate information, various stakeholders such as water resources planners, academic researchers, mining companies, commercial farmers and technical staff in Member States could make more informed decisions and engage in greater dialogue on shared groundwater. In an endeavour to fulfill our mandate in this area, we have instituted the following projects during the reporting period:

5.1 CONJUNCTIVE WATER RESOURCES MANAGEMENT

The SADC-GMI implemented its first Transboundary Aquifer (TBA) research project in the Shire in 2018. The Shire TBA is shared between Malawi and Mozambique. The project was unique in that it brought the concept of conjunctive management of groundwater and surface water within the framework of transboundary aquifers. A Shire Transboundary Diagnostic Analysis (TDA) report and Shire Joint Strategic Action Plan (JSAP) were delivered from the project. The latter identified six priority intervention areas:

- The establishment of a Joint Shire River Basin Committee
- The identification of areas for joint study and research
- The development of an MoU on data sharing between Mozambique and Malawi within the framework of ZAMCOM’s protocol on data sharing
- The development of a data sharing portal in sync with the ZAMWIS
- The promotion of joint proposals to mobilise funds for specific projects within the Shire River Basin for activities related to sustainable catchment and natural resources management
- The training of personnel involved in data collection and research related to surface water and ground water and water quality issues.

Implementation of these priority areas constitutes rallying points for the two Member States to work together to jointly and conjunctively manage the shared water resources.

5.2 BIG DATA AND TRANSBOUNDARY WATER COLLABORATION IN SADC REGION

“Big data” and emerging computational capabilities are changing the way transboundary water managers collaboratively manage shared waters. Tasks that were in recent years accomplished through guesswork and trial and error are now performed and accomplished due to the existence of robust, verifiable, and mutually agreed upon data sets. While this data-driven approach to water management has been instrumental in transforming the management of surface waters in critical transboundary basins around the world, these emerging tools have yet to be applied to the fullest possible extent in the arena of transboundary groundwater.

The SADC-GMI went into a collaboration agreement with the United States Agency for International Development (USAID), United States Geological Survey, Sustainable Water Partnership (USGS SWP), International Business Machines Corporation (IBM), the South African

Tasks are performed and accomplished due to the existence of robust, verifiable, and mutually agreed upon data sets.
Department of Science and Technology (DST) and the Water Research Commission (WRC) to implement a regional project: “Big Data and Transboundary Water Collaboration in Southern Africa”.

This collaboration sought to pilot machine learning to apply different models on the rich dataset from USAID’s Ramotswa aquifer project, complemented by existing data from other sources and magnified by the computational capabilities of the IBM Watson platform. The objective was to pilot the ability to model the Southern Africa region’s groundwater resources, expand our understanding of aquifer recharge and depletion rates, and significantly enhance our ability to integrate sustainable groundwater management into regional water management. The outcome of this study, which runs until December 2020, is intended to generate knowledge for potential roll-out to other TBAs in the SADC region.

To further strengthen the role of the SADC GMI in knowledge generation for transboundary and national groundwater management, the following projects were initiated during the reporting period:

• Water Resources Management Research in the Eastern Kalahari Karoo Basin
  Transboundary Aquifer
• Assessment of Groundwater Resources Development Priority Intervention Areas in the Southern African Development Community (SADC) Region
• Groundwater Dependent Ecosystems mapping and assessment in the Khakhea Bray/Dolomite aquifer

These projects are at their infancy phase, but we believe there will be completed later in 2020.
Groundwater Data Management & Information Sharing
Groundwater management needs to be underpinned and informed by data, without which management cannot sensibly take place.

6.1 ESTABLISHMENT OF THE SADC GROUNDWATER INFORMATION PORTAL (GIP)

While groundwater is an abundant resource in the region, its potential remains subdued with limited access to and sharing of data being one of the contributing factors. Since its inception the SADC-GMI has sought to improve access to groundwater data both at the national and transboundary aquifer level. In June 2017, the SADC-Groundwater Information Portal (SADC-GIP) was launched as a web platform to store groundwater related information for SADC region and to make this information easily available.

From September 2017 to January 2019, the SADC-GMI initiated a project to assist SADC Member States in capacity building on groundwater data collection and management. The project focused on capacity building and training at the level of ministries, departments, and agencies responsible for groundwater in the respective Member States. Capacity building on the Groundwater Data Collection and Management Project included the following deliverables:

- Regional situational analysis on groundwater data collection and management for 12 SADC Member States
- Development of a SADC-wide Framework for groundwater data collection and management

However, the project completed on the SADC-GIP in 2019 also identified shortcomings that needed to be addressed, in order to make the SADC-GIP an attractive one-stop centre for timely access to groundwater data both at the national and transboundary aquifer level. In June 2017, the SADC-Groundwater Information Portal (SADC-GIP) was launched as a web platform to store groundwater related information for SADC region and to make this information easily available.

SADC-GMI plans to be the sole custodian of the SADC-GIP, being responsible for the maintenance and hosting, further development and content management. As Administrator of the SADC-GIP, SADC-GMI will be responsible for carrying out all tasks, such as authorization of new users, upload of layers or creation of maps. In the previous version of the SADC-GIP, some of these tasks had to be executed by IGRAC.

Two pilot studies will be implemented to provide dedicated support to one national groundwater department and one RBO in improving groundwater data sharing. The pilot studies will also provide valuable information on the feasibility of upsizing nested groundwater data portals for the whole region. The selected pilots are the (ground)water department of Malawi and ZAMCOM.

6.2 SADC-GREY LITERATURE ARCHIVE (GLA)

In the quest to make groundwater literature more accessible across the SADC region, the SADC Secretariat, with support from the British Geological Survey, established a Grey Literature Archive (GLA) containing documents such as research theses, conference papers, government reports, consulting reports and any other hydrogeological reports that are not in major scientific journals or commercially available literature. The Department of Water and Sanitation in South Africa contributed to the Grey Literature Archive project by making their hydrogeological reports available in PDF format on the GLA. The SADC-GMI wanted to build upon this effort and expand the content of the GLA.

To achieve this, the SADC-GMI initiated a project to update the SADC Grey Literature Archive (SADC-GLA), to make it a fully functional online
archive of groundwater literature for the SADC region. The project started in February 2020 and was expected to be completed in June 2020. The British Geological Survey (BGS), in collaboration with the International Groundwater Resources Assessment Centre (IGRAC) won the tender to implement the project.

The three key project work packages are:

- Reviewing the current data and system
- Improving the functionality of the GLA to meet the needs identified in above within the time and budget constraints of the project
- Training users in the SADC region and develop a long-term strategy to ensure the system is updated and maintained beyond the end of project

6.3 NATIONAL AND REGIONAL GROUNDWATER MONITORING

Groundwater management needs to be underpinned and informed by data, without which management cannot sensibly take place. It is for this reason that SADC must move towards an integrated region-wide approach to groundwater monitoring and evaluation. This approach will inform management decisions through identification of trends and critical tipping points such as the onset of drought or cross border impacts of over abstraction and pollution.

The importance of the proposed programme of work to provide the basic monitoring network for the SADC Region cannot be overstated. The economics of the region at present are such that it cannot self-fund all the programmes that are needed to support economic growth and wellbeing within SADC and the region looks to the donor community to assist in supporting these requirements. Consequently, during the reporting period, 2019/20 the SADC-GMI continued to seek funding to establish a regional monitoring network. Several donors were approached, and the organisation anticipates making a breakthrough in the next year.

While the SADC-GMI seeks to obtain funding for the regional monitoring network, progress has been made in monitoring groundwater in the region, largely due to initiatives reported in section 6.1 and in other Member States through monitoring networks financed through the sub-grants scheme as reported in Chapter 7.

The notion of groundwater monitoring has also significantly featured in the work done in Transboundary aquifers (TBAs) i.e. Ramotswa, Stampriet, Shire and the Tuli Karoo. The Joint Strategic Action Plan (JSAP) of the TBAs studied to date, have pointed to the need for joint monitoring in these TBAs. In the foreseeable future, the SADC-GMI will continue to advocate for the expansion of the monitoring networks at the national and regional levels.

The GIP can be accessed at the following URL: sadc-gip.org
07
Promoting Groundwater Management Infrastructure Projects
A grant amounting to USD 1,842,777.00 million was obligated to 14 projects in 10 SADC Member States during the 2019-2020 financial year.

7.1 SUB-GRANT SCHEME

One of SADC-GMI’s greatest accomplishments for the reporting period was facilitating access for its sub-grantees to financial resources, plus providing extensive technical support and capacity building, to implement pilot groundwater infrastructure projects in the SADC Member States.

Funding to the tune of USD1 850 000.00 was made available for the Sub-Grant Scheme under the Sustainable Groundwater Management in SADC Member States project funded by GEF and CIWA through the World Bank.

In order to operationalise the Sub-Grant Scheme, a Sub-Grant Manual was developed and approved by the World Bank in December 2017. The purpose of the Sub-Grant Scheme was to support infrastructure for improved groundwater utilization, management and protection. Member States representatives were fully orientated on the sub-grant cycle and the funding requirements including concept note and proposal write-up, as illustrated in the diagram below.

During the financial year 2019-2020 a grant amounting to USD 1,842,777.00 Million was obligated to fourteen projects in 10 SADC Member States of which USD 1,235,923.35 was spent, thus translating to 67% absorption as at 31 March 2020. Despite the inherent project start up challenges such as late implementation, lengthy in-country procurement processes, and inadequate administrative systems, the 67% burn rate was made possible because of strong in-country leadership, sustained team engagements and partnerships.

Looking forward, we are determined to meet rising expectations of capacity building in the Member States through the National Focal Groups in order to enhance the effectiveness and efficiency in the conceptualization and implementation of sub-grant projects.

![SADC-GMI SUB-GRANT CYCLE Diagram](image)

**SADC-GMI SUB-GRANT CYCLE**

- Call for Concept Note
- Call for Technical & Financial Proposals
- Evaluation of Proposals
- Award
- Organisational Capacity Assessment
- Reporting & Monitoring

**SUB-GRANT FINANCIAL PERFORMANCE**

- **Budget**
- **Obligated**
- **Liquidated**
7.2 Infrastructure Projects

Under the Sub-Grants Scheme explained in section 7.1, the following categories of projects were at various stages of implementation in the different Member States during the reporting period. Fourteen (14) sub-grant projects, piloting innovative solutions for sustainable groundwater infrastructure development: “Learning by Doing” were initiated.

7.2.1 Groundwater Monitoring Networks

Upper Manyame Sub-Catchment Council – Zimbabwe

The Zimbabwe Groundwater Monitoring Pilot Project seeks to establish a comprehensive Groundwater Monitoring Network for Greater Harare. The project addresses two key challenges: groundwater depletion and groundwater quality deterioration for the benefit of groundwater users and water managers.

The project involves the characterisation of the Greater Harare aquifers, both on the quantity and quality aspects, determining the available groundwater resources, flow patterns, aquifer dimensions, storage, flow properties, quality dynamics as well as recharge and discharge processes. The project aims to catalyse improved groundwater management for the benefit of the diverse stakeholders in the Upper Manyame Sub-catchment Council and Nyagu Sub-catchments. Through this project, approximately 3600 community members and local institutions are currently benefiting.

Lesotho

The project in Lesotho aims to expand the existing groundwater monitoring network to form a comprehensive nationwide system for the support and guidance of groundwater management activities in Lesotho. The project benefits the water sector and the Basotho Nation in general.

As part of the implementation the following activities are undertaken to achieve the project objective: conducting a desktop study on the existing groundwater monitoring network, geophysical investigations and siting drilling points in target areas identified during the desktop study, drilling additional monitoring boreholes, calibration and installation of data loggers in selected boreholes, and training of the Department of water Affairs personnel. The project is being implemented in collaboration with a wide range of stakeholders in the water sector who are also direct beneficiaries of the project.

The Kingdom of Eswatini

Approximately 400 000 people in Eswatini are still without clean and safe drinking water, children are being deprived good education due to lack of access to clean water, sanitation and hygiene. In addressing the water challenge facing the Kingdom, SADC-GMI in collaboration with the Government of Eswatini, is implementing a pilot project on groundwater monitoring and renewable energy application on ten (10) and (4) selected sites respectively. The sites are distributed over four River Basins; the Lomati, Nkomati, Mbuluzi and Lusutfu.

The project, implemented by WaterAid as the sub-grantee, includes the following activities within the Lomati, Nkomati and Mbuluzi River Basins: monitoring of existing selected wells (10 sites); development of new wells and installation of solar powered pumps at selected sites. Three micro-solar pumping systems at selected schools will be installed; and one micro-solar energy driven rural community energy supply scheme. Approximately 66,708 people including men, women and children are directly benefiting from the project.

7.2.2 Groundwater Database Integration

Botswana

Sharing of groundwater data between the Botswana Department of Water and Sanitation and other key stakeholders such as decision makers, policy makers and other institutions who have interest in groundwater management, has been a challenge due to lack of digital integrated systems to facilitate the sharing thereof. In addressing the data sharing challenge, the Government of Botswana, through the Department of Water and Sanitation, collaborated with the SADC-GMI in implementing the “Integrated Groundwater Resources Data Management System project.

The overarching objective of the project was to integrate the National Geoscience Information (NIGIS) database model with the HydroGeo Analyst (HGA), and to have one web-based system accessible to the Department of Water and Sanitation staff and other stakeholders who have vested interest in groundwater information. One benefit of the project is the contribution to water security, as water practitioners using the integrated platform are able to plan for sustainable water resource management to ensure that people have access to acceptable quantity and quality of water for health, livelihood and production. At an institutional level, all institutions that require and utilize groundwater data/information are beneficiaries of the project.

7.2.3 Deep Aquifer Exploration and Monitoring

Malawi – Chimbiya Project

Water scarcity in Chimbiya, Malawi was a huge challenge, affecting livelihoods of more than 15,000 people living in the area. The situation exposed vulnerable community members of women and children who travelled long distances to access safe water for drinking and domestic use, possibly having to endure harassment and violence. To meet the growing water demand of the Chimbiya community, the SADC-GMI supported the implementation of the Chimbiya pilot
project, which explored deep aquifers, and supplied ten communal-style water distribution points with water coming from 100m borehole. The objective of this project, which was executed by Water Mission-Malawi on behalf of the Malawian Government, was to promote the systematic and sustainable utilization, protection and management of groundwater in the Chimbiya Trading Centre. The project complimented the Government of Malawi’s agenda of providing safe potable water to the citizens. The project also provided a basis for understanding deeper wells and hydro-geological analyses of the groundwater of the area, for recommendation of appropriate abstraction models for human use and consumption. 15 000 community members benefited from the project.

7.2.4 Aquifer identification and Development for Urban Groundwater supply

ZAMBIA

Over the years, Chongwe Township has been expanding at a rapid pace, resulting in the need to meet the increasing water demand for various socio-economic needs. Climate change and variability has aggravated the decline in the available surface water resources as typified by the low water levels in the Chongwe River and dam.

In view of the recurrent water shortages experienced in Chongwe district, SADC-GMI and the Zambian Government embarked on the Groundwater Mapping and Development project using the Sub-grant scheme facility. The overarching objective of the project that is being executed by the Zambian Ministry of Water, is to identify and characterize a local aquifer in the Chongwe area with sufficient productive capacity to be used for settlement level water supply, and to develop a well field to supplement the existing wellfield developed by the Lusaka Water and Sewerage Company (LWSC). Through the project, three additional boreholes were drilled to augment existing water reticulation system supplying clean water to 137,461 Chongwe inhabitants. 2000 people are expected to benefit directly from the project while 250 000 are expected to benefit indirectly.

TANZANIA - KIMBIJI AQUIFER PROJECT

The Project in Tanzania supports drilling of five boreholes to monitor water levels in the Kimbiji Aquifer near Dar es Salaam, spread out across the predicted drawdown areas. The project also supports the establishment of a Groundwater Abstractions Register and Database for the project area that indicates industrial and commercial uses to facilitate proper monitoring of groundwater abstraction. The register will be regularly updated and maintained to allow the licensing and regulatory body WamiRuvu Basin Water Board (WRWBO) to track groundwater usage and potential operations that could interfere with the planned wellfield operations.

In order to establish surface and groundwater interaction within the project area, the project also supports a comprehensive wetland monitoring which entails a wetland mapping program to:

• delineate wetland pockets in the Nguva and Mbezi River catchments
• describe their ecological characteristics
• describe their socio-economic value for local communities

ANGOLA - CAIMBAMBO PROJECT

The project aims to achieve the hydrogeological characterization of the municipality of Caimbambo, including the complete registration of all surface and groundwater resources in the region. This project makes it possible for the formulation of supply and planning of
emergency actions in times of drought. Through the project the National Institute of Water Resources and SADC-GMI are rehabilitating the existing boreholes to increase the amount of water to meet the increasing water demand of people living in Caimbambo. The project which will benefit 57000 people from five different villages, is expected to achieve the following results:

- Hydrogeological characterization of the region
- Inventory of water points
- Water flow tests and pumping tests for hydrodynamic characterization of the aquifers present in Caimbambo region
- Improvement of existing wells
- Execution of production tests to verify efficiency of the wells and determine the productive capacity of the aquifer
- Training and awareness programmes

7.2.5 Solar Powered Groundwater Supply

ZIMBABWE – DITE & WHUNGA

SADC-GMI partnered with World Vision Zimbabwe to facilitate the implementation of the project entitled, “Rehabilitation of the pilot projects to supply water to communities and institutions in Dite and Whunga areas of Beitbridge district”. The project sought to resuscitate and rehabilitate the water infrastructure of the pilot project which was implemented by SADC Secretariat and World Bank between 2007-2011, under the SADC Groundwater and Drought Management Project. The project had two objectives: to rehabilitate the infrastructure and provide communities with water through piloting drought intervention and innovative strategies, and to re-establish nutrition gardens and provide accessible water supply system within the gardens. This project is being implemented by World Vision Zimbabwe as the sub-Grantee.

This is another intervention by the SADC-GMI to ensure that rural and vulnerable communities in the SADC region have access to safe drinking water, more particularly in the face of climate change.
As part of the implementation the following accomplishments were achieved:

- Borehole drilling and capacity testing
- Water quality testing
- The installation of the solar water reticulation systems
- Training of community members in operation and maintenance of the solar water reticulation system
- Establishment of one-hectare community garden
- Training of communities on Participatory Health and Hygiene Education.

BOTSWANA – GOBOJANGO & TSETSEBJWE

The project sought to resuscitate and rehabilitate the water infrastructure of the pilot project implemented by the SADC Secretariat and partners between 2007 – 2011 through the World Bank funding. The projects are being implemented by Kalahari Conservation Society as the sub-grantee at Tsetsebjwe and Gobojango in the Bobirwa District. Through the implementation, boreholes are being drilled and solar systems for water reticulation with standpipes installed in both sites. The communities will also be trained on the maintenance and operation of the system and provided with an easy to understand Manual to ensure the sustainability of the project.

The project will allow the communities in Tsetsebjwe and Gobojango to have access to safe and adequate water for horticultural purposes, better and healthier diets, and improved income generated from the horticultural produce. In Tsetsebjwe 2,246 people will benefit from the project, while in Gobojango 4,848 people will benefit. This is another intervention by the SADC-GMI to ensure that rural and vulnerable communities in the SADC region have access to safe drinking water, more particularly in the face of climate change.

MOZAMBIQUE – MUCHOCOLATE PROJECT

SADC-GMI in collaboration with the Mozambican Government are implementing the water supply project in the village of Muchocolate in the PA of Catembe Simbe in the Matutuine District. The project entails replacing a handpump with the submersible pump powered by a solar panel and constructing a 12-meter high tower on top of which two 10,000 litre tanks will be installed to supply water to about 2,000 people. Four different villages will benefit from the project. Water will be distributed via underground pipelines. There will be a tap in each village to reduce the distance locals have to travel to access water. The project will alleviate water challenges, especially for girls and women who bear the brunt of the water shortage. The project will improve water security in the recipient villages, improve livelihoods and promote health and good hygiene, especially as the world is trying to curb Covid-19 pandemic which requires the regular washing of hands.

7.2.6 Hydrogeological Map

NAMIBIA

The main objective of the project is to review and update the Hydrogeological Map of Namibia (The Map) and to integrate/merge with
the National Groundwater Database (GROWAS II). The project is using the present Hydrogeological Map of Namibia (completed in 2001) which is being revamped and upgraded through the updating of recent project findings and newly available data from GROWAS II. An ongoing link has been established between the active Groundwater Level Network and “The Map”. The updating of the Namibian Hydrogeological Map goes a long way towards providing an understanding of the nature and occurrence of the groundwater resources, using current information and technology, and disseminate this data to the stakeholders. The project is expected to deliver an updated Hydrogeological Map and Information booklet, to provide an explanation for the Hydrological Map of Namibia. The project will benefit key stakeholders who are dependent on groundwater in Namibia.

7.3 GUIDELINES TO SUPPORT INFRASTRUCTURE PROJECTS

7.3.1 Operation & Maintenance (O&M)

Under component D of the Sustainable Groundwater Management in SADC Member States project, provision was made for operational support for groundwater infrastructure development to Member States. This involved developing and disseminating manuals for infrastructure solutions that could improve groundwater management for small infrastructures such as sand dams, infiltration banks and shallow wells and guidance tools for siting of wells and/or mapping and siting of water buffering systems, cost effective well drilling, as well as technical assistance in applying manuals and guidance tools.

The poor Operation and Maintenance of water infrastructure is a widespread problem throughout the SADC region, largely due to investment gaps in water storage and ageing water infrastructure, poor governance and poor management systems. Underperforming operations and bad maintenance contribute significantly to Africa’s water crisis, especially in the larger urban areas. During the reporting period SADC-GMI in collaboration with key partners developed an Operation and Maintenance Training Manual (O&M) for groundwater related infrastructure. A training course was offered, based on the manual, to technical groundwater practitioners, students and decision-makers from SADC Member States.

7.3.2 Writing Project Proposals

The shortage of financing is a key constraint to groundwater development all over SADC (Groundwater Governance, 2016). There is also a dependency on external funding from the majority of SADC Member States, which has important bearing on groundwater development. Donor funded Groundwater projects are usually short term, with little sustainable hydrological monitoring built into the projects. In order to assist Member States in elaborating on bankable project proposals that would enable them to successfully access funding for groundwater infrastructure development from potential financiers, SADC-GMI developed a Training Manual for the Preparation of Proposals to Access Funding for Groundwater-related Infrastructure Projects. The Manual is used within the scope of the assignment to offer one training event to stakeholders from SADC Member States.
Groundwater
Resilience & Economic
Development
8.1 LESSONS LEARNED

The SADC-GMI is approaching the end of the implementation of its flagship "Sustainable Groundwater Management (SGM) in SADC Member States Project", funded by GEF and CIWA through the World Bank. The SGM Project commenced in 2014 and will be concluded in June 2021. During the period under review SADC-GMI commissioned a project: "Consultancy Services for Capturing Lessons Learned and Designing a New SADC groundwater programme", in order to capture lessons learned from the previous SGM project and to develop a new regional groundwater programme. The objectives of the SADC-GMI Lessons Learned Project (LLP) are two-fold. Firstly, it aims to prepare a background document on the emerging issues and lessons learned from implementation of the SGM Project, and secondly, it aims to develop a ten-year (split into two five-year periods) bankable project proposal document for the implementation of a new SADC groundwater programme from 2021 to 2031.

Although the review and consultation with key stakeholders is still underway, some of the key emerging issues in the regional groundwater discourse identified so far are:

- Planning for and managing the multi-faceted enabling policy, legal and institutional capacity constraints for national and transboundary aquifer management;
- The dire need for integrated time-series data collection and management to generate information for decision support systems; and
- The potential positive socio-economic impact of scalable innovative groundwater infrastructure projects in SADC Member States.

The SADC-GMI envisions to continue leading the groundwater management discourse and infrastructure interventions, through the following interventions emanating from emerging issues:

- Building Capacity of National and Regional Groundwater Institutions
- Generating knowledge through collaboration and Research Studies
- Building Resilient livelihoods through Sustainable Groundwater Management.

These key themes are briefly elaborated in the ensuing sections.

8.2 BUILDING CAPACITY OF NATIONAL AND REGIONAL GROUNDWATER INSTITUTIONS

Institutional capacity building remains a huge need in the SADC region on all levels of the regional water framework. To address these issues, it is critical that SADC-GMI focuses on the following goals:

- Enhance capacity of SADC-GMI to support national and transboundary institutions to improve groundwater-based resilience and economic development
- Improve capacity of SADC Secretariat, RBOs and Member State National Departments to include groundwater management for economic development in their programmes
- Develop technical and vocational skills among stakeholders at local, national and transboundary level in the SADC region for effective groundwater-based resilience and economic development.

Planning for and managing the multi-faceted enabling policy, legal and institutional capacity constraints for national and transboundary aquifer management

The dire need for integrated time-series data collection and management to generate information for decision support systems

The potential positive socio-economic impact of scalable innovative groundwater infrastructure projects in SADC Member States

KEY EMERGING ISSUES IDENTIFIED SO FAR
8.3 GENERATING KNOWLEDGE THROUGH COLLABORATION AND RESEARCH STUDIES

Data is the currency of the future, and SADC-GMI is well-placed to leverage off its access to integrated data sets and stakeholders with data to generate revenue from commercial and institutional partners. To do this successfully, SADC-GMI has to focus on the following intervention areas:

- Generating and disseminating knowledge to institutions
- Generating and providing timely access to knowledge to local stakeholders and water users
- Generating and providing timely access to knowledge for planners and decisionmakers

8.4 BUILDING RESILIENT LIVELIHOODS

Private investors, funders, donors, and other stakeholders are increasingly motivated by demonstrated excellence in environmental, social and governance (ESG) performance when considering support to non-profit initiatives. Most recently, the ‘S’ in ESG has received increased attention as COVID-19 and its public health and economic consequences exposed deep inequality globally. Donors are increasingly demanding that programmes demonstrate positive social impact in a quantifiable manner and that programmes are implemented in a way that uphold ESS standards. SADC-GMI has an opportunity to design (and ultimately implement) its new programme with high levels of ESG excellence by implementing the following key recommendations:

- Answer the question ‘Groundwater for what?’ with a systematic, well designed programme that can demonstrate the logical pathway from strategic objectives to impact in a succinct and focused manner
- Be responsive to current issues such as gender imbalances, land-use, food security, WASH programmes and vulnerable people in the design and implementation of programmes
- Adopt a bottom-up approach to support livelihoods, by acknowledging that farmers and communities, on the ground are already adapting to climate change and food security challenges

This will be achieved through the following intervention areas:

- Pilot and upscale the implementation of innovative and ESS-compliant infrastructure projects promoting sustainable groundwater management practices for socioeconomic development
- Build capacity of communities in SADC Member States to improve resilience and socio-economic development through groundwater use
- Design and install groundwater monitoring networks in national and transboundary aquifers to support the equitable and sustainable use of groundwater for socioeconomic development.
Cross-Cutting Issues
9.1 PROMOTING GENDER EQUALITY AND SOCIAL INCLUSION (GESI)

SADC-GMI acknowledges the fact that the absence of safe water and sanitation services impacts variably across the social and gender demographics especially among the poor rural communities where groundwater is predominantly the main, if not the only source of water supply. Beyond diarrheal diseases, unsafe water contributes to malnutrition, burdens healthcare systems, and restricts opportunities for economic growth. It is therefore one of the SADC-GMI’s primary priorities to address issues of GESI within all of its programmes.

Through the implementation of the ongoing fourteen groundwater management and development sub-grant projects in ten SADC Member States through the sub-grant scheme, SADC-GMI ensured that the Sub-Grant Manual that was approved by the World Bank in December 2017, contained a compulsory requirement that all projects include aspects of gender, such as participation of women, development of sector specific gender indicators and accountability processes to ensure equal access to water and sanitation services. The sustainability of SADC-GMI projects will also be enhanced. However, SADC-GMI’s enforcement of these clauses has been inadequately enforced due to the absence of the appropriate GESI skills within the organization to first develop the necessary tools to measure the compliance and to subsequently follow-up with the respective project implementers. Be that as it may, in the last 12 months, SADC-GMI has been engaging with the USAID-funded Resilient Waters Programme for support with fielding a GESI Consultant to assist with the development of the necessary tools that will foster compliance with the provisions of the sub-Grant Manual as well as enhance SADC-GMI’s eligibility to access additional donor funds.

SADC-GMI training programmes, including the Young Professionals programme, have deliberately made an effort to offer equal opportunities for males and females as well as to be inclusive of the youths as part of knowledge transfer and succession planning. Statistics for beneficiaries in these programmes bear testimony to a sincere drive to achieve gender equality and social inclusion.

Looking ahead to the next reporting period, The SADC-GMI will work tirelessly to ensure adequate technical skills on the team to develop and implement necessary tools to help achieve the expected high standards in this regard. This will include the development of a GESI Strategy and Implementation Plan.
As a Centre of Excellence and an interlocutor for national, regional and international groundwater initiatives, it is important that the SDAC-GMI takes the lead in regional discourse.

9.2 ENVIRONMENTAL SOCIAL SAFEGUARDS

The SADC-GMI project was classified by the World Bank as an Environmental Category B under the World Bank Safeguard Policies. This rating identifies the project as a comparatively moderate risk of potential adverse environmental and social impacts. It was therefore a requirement that the sub-grant projects being implemented by the grant, follow the guidelines prescribed in the simplified Environmental Management Framework – Environmental Management Plan (EMF-EMP). The guideline requires that a risk assessment of potential environmental impacts be undertaken, and mitigation measures identified, implemented, monitored, and reported in the progress reports.

It is against this background that SADC-GMI appointed SRK to develop Environmental and Social Safeguards Reports for each project concept note or proposal submitted by the SADC Member States. SRK carried out compliance review against the requirements of in-country legislative requirements, the existing EMF-EMP, SADC protocols and strategic plans and the current World Bank environmental and social safeguards.

In addition to this, the SADC Member Countries were required to appoint an Environmental Consultant who would compile an Environmental and Social Management (ESMP) setting out potential environmental impacts and mitigation measures identified.

9.3 SADC-GMI HELPING TO MEETING SUSTAINABLE DEVELOPMENT GOALS (SDG’S)

The sixth Sustainable Development Goal, or SDG6, is summarised by the United Nations (UN) as ensuring, “availability and sustainable management of water and sanitation for all.” It looks to address how water scarcity, flooding and lack of proper wastewater management hinder social and economic development. Water and sanitation drive the overall Sustainable Development Goals because they impact on all the other issues relating to the SDGs. You need to have a healthy population for economic growth.

As a key player in the regional water sector, the SADC-GMI is given a mandate to make sure that there is sufficient water for the well-being of all citizens to be productive for economic benefit. The organisation sees itself as the “make or break” in the fulfilment of the SDGs, especially considering that almost 70% of the region’s rural inhabitants are dependent on groundwater. Found in aquifers underneath the earth’s surface, groundwater is more resilient to the devastating effects of climate change, and as such contributes to the resilience of the region.

All SADC-GMI activities ensure that groundwater makes pivotal contributions to the achievement of SDG 6. Through its groundwater infrastructure development pilot projects implemented in SADC Member States, the organisation has been able to bring clean and safe drinking water to communities that did not have access to safe water for drinking, agriculture and other use. The SADC-GMI implemented 12 projects in ten SADC Member States. One such project was successfully completed in Chimbiya, Malawi where 100m deep borehole was drilled into an aquifer and infrastructure was installed to supply potable water to an estimated 15000 inhabitants in the village. A similar project was completed in Mucholate village, Mozambique.

The SADC-GMI is cognisant of the fact that reaching the SDG 6 and sustainable utilisation for groundwater resources occurs within a conducive policy, supported by legal and institutional frameworks. As a result, the organisation implemented the Policy, Legal and Institutional Development for Groundwater Management in SADC Member States (GMI-PLI) project to create the desired environment across the 16 SADC Member States. The project identified existing gaps in policies and frameworks, at national and regional levels. In support of the Sustainable Development Goals, and the contribution groundwater...
is making in the achievement of the SDGs in the region, the SDAC-GMI hosted its 2nd SADC Groundwater Conference under the theme, “Groundwater’s Contribution to the Achievement of the SDGs in the SADC region”. The conference was themed in a manner to unravel the pivotal benefits one can draw from this resource, and to map strategies that would inform how the Member States can sustainably manage their groundwater resources for the future generations.

The conference provided another opportunity to reflect and discuss the contribution of groundwater in attaining the Sustainable Development Goals (SDGs), in particular SDG 6 that sets out to “ensure availability and sustainable management of water and sanitation for all,” as promulgated in the Agenda 2030 of the United nations. During the conference deliberations it was evident that the potential of groundwater to enhance the attainment of SDG 6, has been inadequately, acknowledged especially now when there are serious concerns on the widening gap between water demand and availability and the increasing dependency of nations on groundwater in the wake of the worsening impacts of climate change and water insecurity.

As a Centre of Excellence and an interlocutor for national, regional and international groundwater initiatives, it is important that the SDAC-GMI takes the lead in regional discourse.

Goal 6.5: Integrated water resources management:

Under Sustainable Development Goals 6, where countries pledge to ensure availability and sustainable management of water and sanitation for all, Target 6.5 is the only one that specifically references the need for transboundary cooperation. During the reporting period SADC-GMI made notable and significance strides in contributing towards transboundary cooperation. A study was undertaken on the Shire River/Aquifer System (shared between Malawi and Mozambique), Tuli Karoo Transboundary Aquifer (shared between Botswana, South Africa and Zimbabwe), and we are currently conducting a study on the Eastern Kalahari Karoo transboundary Aquifer (shared between Botswana and Zimbabwe).

As a regional institute the SADC-GMI will ensure that it fulfils its mandate and helps to build a water secure environment for the 280 million inhabitants of the SADC.
9.4 DEVELOPMENT OF POLICY DOCUMENTS

Policies and procedures are an essential component of any organisation - policies address pertinent issues, such as what constitutes acceptable behaviour while procedures clearly define a sequence of steps to be followed in a consistent manner by employees and other parties that interact with the body. Organization policies and procedures also help to streamline its activities while enhancing accountability in support of the organization’s vision.

As such SADC Groundwater Management Institute developed a number of policies and procedures during the reporting period to solidify its governance practices and accountability.

Business Plan & Financial Sustainability Plan

The SADC-GMI was established to provide capacity and support to SADC countries in addressing groundwater management challenges in the region. To do so effectively, the SADC-GMI needed a sound strategic business plan and a well thought through financial sustainability plan. During the reporting period SADC-GMI developed two major documents to guide its operations: Business Plan and the Financial Sustainability Plan. The Business Plan sets out the Strategic Business Plan for the SADC-GMI for the period 2018/9 – 2022/23. It outlines the SADC-GMI's, vision, mission, key objectives, and the key actions to be taken in the next five years. The Financial Sustainability Plan quantifies the probable sources and quantum of income against the projected operational cost of SADC-GMI over the five-year financial period, to illustrate that it could operate independently from the current World Bank funding.


During the reporting period SADC-GMI also developed a Financial Management Policies and Guidelines Manual, that describe financial systems and procedures of the organization. In order to remain relevant and achieve the SADC-GMI objectives, the Financial Management Policies and Guidelines were developed in line with the SADC-GMI’s Strategic Plan. SADC-GMI has incorporated financial management policies and guidelines which meet best practice and International Accounting Standards acceptable by Donors, Cooperating Partners, and other similar organisations comparable to itself and that represent its uniqueness and identity.

Procurement Manual

During the reporting period SADC – GMI developed a procurement manual, intended to provide operational guidance on procurement procedures to all staff members involved in the various stages of procurement.

Human Resources Policies and Procedure

SADC-GMI is currently developing a Human Resources Policies and Procedures Manual to serve as a guiding document for employees and management on how to handle a range of employment related issues. The document will provide consistency and transparency for employees and managers, helping to enhance the psychological contract and create a positive organizational culture.
Policies and procedures are an essential component of any organization, policies address pertinent issues.

**IT Policy**

One of the milestones for SADC-GMI during the reporting period was the development of the Information Technology (IT) Policy. The aim of the policy is to ensure that SADC-GMI has the correct infrastructure, systems and processes to enable information within the organization to flow freely and securely. Through this policy and standards, we seek to create an effective, professional, legal, ethical and equitable IT usage environment across the organization.

**Disaster Recovery and Business Continuity Plan**

During the reporting period SADC-GMI was able to develop the Disaster Recovery and Business Continuity Plan. The overarching object of the continuity plan is to minimise loss, continue to provide service to staff members and other stakeholders, remain in compliance with applicable laws and regulations, and reduce damage to the organization, in the event of any disasters.

This Disaster Recovery and Business Continuity Plan applies to the following functions, operations, and resources necessary to ensure the continuation of SADC-GMI’s essential functions in the event its normal operations in Bloemfontein are disrupted or threatened with disruption.

**Enterprise Risk Assessment Matrix**

During the reporting period, a Risk Assessment Matrix was developed. This was meant to allow the identification and prioritization of the most severe risks that SADC-GMI is bound to face. Without this robust analysis, it may not be possible to have a clear view of the risk environment and the factors that may significantly disrupt operations.

This matrix assists with identifying the residual risk as well as inherent risk. Inherent Risk is typically defined as the level of risk in place in order to achieve an entity’s objectives and before actions are taken to alter the risk’s impact or likelihood. Residual Risk is the remaining level of risk following the development and implementation of the entity’s response.
10.1 AUDITORS REPORT TO MANAGEMENT

PWC reported that there were no current year end findings for the 2019/2020 Financial Year.

Southern African Development Community Groundwater Management Institute
(Registration number 2011/011724/08)
Annual financial statements for the year ended 31 March 2020

General information (continued)

Preparer

The annual financial statements were independently compiled by:
Perle du Plessis (Public officer)

Bankers

ABSA Bank Ltd
Standard Bank Ltd
Southern African Development Community Groundwater Management Institute  
(Registration number 2011/011724/08)  
Annual financial statements for the year ended 31 March 2020

General information

Country of incorporation and domicile  
South Africa

Nature of business and principal activities  
To ensure the equitable and sustainable use and protection of groundwater as well as being a centre of excellence in the area of groundwater management

Directors

Name  
Prof. Petrus Daniel Vermeulen  
Mr. Trevor Mduduzi Shongwe  
Ms. Maria Amakali  
Mr James Sauramba  
Mr. Eelco Lucas  
Prof. John Cantius Mubangizi  
Mr Michael William Marler  
Ms. Zandile Matilda Kabini  

Appointment date  
(7 April 2016)  
(17 February 2017)  
(17 February 2017)  
(1 April 2017)  
(11 December 2018)  
(11 December 2018)  
(26 June 2019)  
(26 June 2019)

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Postal address

P O Box 339  
Bloemfontein  
9300

Auditors

PricewaterhouseCoopers Inc.  
Registered Auditors

Company registration number

2011/011724/08

Level of assurance

These annual financial statements have been audited in compliance with the applicable requirements of the Companies Act of South Africa.
Southern African Development Community Groundwater Management Institute (Registration number 2011/011724/08)
Annual financial statements for the year ended 31 March 2020

Directors' Responsibilities and Approval

The directors are required in terms of the Companies Act of South Africa to maintain adequate accounting records and are responsible for the content and integrity of the annual financial statements and related financial information included in this report. It is their responsibility to ensure that the annual financial statements present the state of affairs of the company as at the end of the financial year and the results of its operations for the period then ended, in conformity with the accounting policy as determined by the company. The external auditors are engaged to express an independent opinion on the annual financial statements.

The annual financial statements are prepared in accordance with the accounting policies of Southern African Development Community Groundwater Management Institute and are based upon appropriate accounting policies consistently applied and supported by reasonable and prudent judgements and estimates.

The directors' acknowledge that they are ultimately responsible for the system of internal financial control established by the company and place considerable importance on maintaining a strong control environment. To enable the directors to meet these responsibilities, the directors set standards for internal control aimed at reducing the risk of error or loss in a cost effective manner. The standards include the proper delegation of responsibilities within a clearly defined framework, effective accounting procedures and adequate segregation of duties to ensure an acceptable level of risk. These controls are monitored throughout the company and all employees are required to maintain the highest ethical standards in ensuring the company's business is conducted in a manner that in all reasonable circumstances is above reproach. The focus of risk management in the company is on identifying, assessing, managing and monitoring all known forms of risk across the company. While operating risk cannot be fully eliminated, the company endeavours to minimise it by ensuring that appropriate infrastructure, controls, systems and ethical behaviour are applied and managed within predetermined procedures and constraints.

The directors are of the opinion, based on the information and explanations given by management that the system of internal control provides reasonable assurance that the financial records may be relied on for the preparation of the annual financial statements. However, any system of internal financial control can provide only reasonable, and not absolute, assurance against material misstatement or loss.

The external auditors are responsible for independently auditing and reporting on the company's annual financial statements. The annual financial statements have been examined by the company's external auditors and their report is presented on pages 5 to 7.

The annual financial statements and additional schedules set out on pages 9 to 18, which have been prepared on the going concern basis, were approved by the directors on 23 July 2020 and were signed on its behalf by:

Dr P Kabeya
(Chairperson: SADC-GMI Board)

Ms ZM Kabini
(Chairperson: SADC-GMI Audit Committee)
Independent auditor’s report
To the Members of Southern African Development Community Groundwater Management Institute

Our opinion
In our opinion, the financial statements of Southern African Development Community Groundwater Management Institute (the Company) for the year ended 31 March 2020 are prepared, in all material respects, in accordance with the basis of accounting described in note 1 to the financial statements and the requirements of the Companies Act of South Africa.

What we have audited
Southern African Development Community Groundwater Management Institute’s financial statements set out on pages 9 to 14 comprise:
- the statement of financial position as at 31 March 2020;
- the statement of surplus or deficit for the year then ended;
- the statement of changes in equity for the year then ended; and
- the notes to the financial statements, which include a summary of significant accounting policies.

Basis for opinion
We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor’s responsibilities for the audit of the financial statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence
We are independent of the Company in accordance with the sections 290 and 291 of the Independent Regulatory Board for Auditors’ Code of Professional Conduct for Registered Auditors (Revised January 2018), parts 1 and 3 of the Independent Regulatory Board for Auditors’ Code of Professional Conduct for Registered Auditors (Revised November 2018) (together the IRBA Codes) and other independence requirements applicable to performing audits of financial statements in South Africa. We have fulfilled our other ethical responsibilities, as applicable, in accordance with the IRBA Codes and in accordance with other ethical requirements applicable to performing audits in South Africa. The IRBA Codes are consistent with the corresponding sections of the International Ethics Standards Board for Accountants’ Code of Ethics for Professional Accountants and the International Ethics Standards Board for Accountants’ International Code of Ethics for Professional Accountants (including International Independence Standards) respectively.

Emphasis of Matter – Basis of Accounting
We draw attention to note 1 to the financial statements, which describes the basis of accounting. The financial statements are prepared in accordance with the company’s own accounting policies to satisfy
the financial information needs of the company’s members. As a result, the financial statements may not be suitable for another purpose. Our opinion is not modified in respect of this matter.

Other information
The directors are responsible for the other information. The other information comprises the information included in the document titled “Southern African Development Community Groundwater Management Institute Annual Financial Statements for the year ended 31 March 2020”, which includes the Directors’ Report as required by the Companies Act of South Africa. The other information does not include the financial statements and our auditor’s report thereon.

Our opinion on the financial statements does not cover the other information and we do not express an audit opinion or any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the directors for the financial statements
The directors are responsible for the preparation of the financial statements in accordance with the basis of accounting described in note 1 to the financial statements and the requirements of the Companies Act of South Africa, for determining that the basis of preparation is acceptable in the circumstances and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Company’s ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Auditor’s responsibilities for the audit of the financial statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:
10.3 PREPARATION OF THE FINANCIAL STATEMENTS

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

- Conclude on the appropriateness of the directors’ use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company’s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor’s report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Company to cease to continue as a going concern.

We communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

PricewaterhouseCoopers Inc.
Director: CJ Hertzog
Registered Auditor
Bloemfontein
04 August 2020
Directors’ Report

The directors submit their report for the year ended 31 March 2020.

1. Incorporation

The company was incorporated in South Africa as a non-profit company.

2. Main business and operations

The company is established to ensure the equitable and sustainable use and protection of groundwater and to be a centre of excellence in the area of groundwater management.

3. Review of activities

The operating results and state of affairs of the company are fully set out in the attached annual financial statements and do not in our opinion require any further comment.

Net surplus of the company was R 24 977 920 (2019: R 5 124 921 deficit).

4. Going concern

The annual financial statements have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business. The Worldbank granted funding towards the sustainable use and protection of groundwater i.e. the main project(P127086) from the 2014 -2020 financial years. The University of the Free State was appointed as the implementing agency. The Company is dependent on those future fundings from the Worldbank in order to continue with its operations. The Worldbank granted extension on the project till Dec 2020 but due to the COVID-19 pandemic, additional extension until June 2021 is considered.

5. Dividends

The company is incorporated as non-profit, thus no dividends are payable.

6. Directors

The directors of the company during the year and to the date of this report are as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Appointment date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Petrus Daniel Vermeulen</td>
<td>7 April 2016</td>
</tr>
<tr>
<td>Mr. Trevor Mduduzi Shongwe</td>
<td>17 February 2017</td>
</tr>
<tr>
<td>Ms. Maria Amakali</td>
<td>17 February 2017</td>
</tr>
<tr>
<td>Mr James Sauramba</td>
<td>1 April 2017</td>
</tr>
<tr>
<td>Mr. Eelco Lucas</td>
<td>11 December 2018</td>
</tr>
<tr>
<td>Prof. John Cantius Mubangizi</td>
<td>11 December 2018</td>
</tr>
<tr>
<td>Mr Michael William Marler</td>
<td>26 June 2019</td>
</tr>
<tr>
<td>Ms. Zandile Matilda Kabini</td>
<td>26 June 2019</td>
</tr>
</tbody>
</table>

7. Auditors

PricewaterhouseCoopers Inc. will continue in office in accordance with section 90 of the Companies Act of South Africa.
## Statement of Financial Position as at 31 March 2020

<table>
<thead>
<tr>
<th>Notes</th>
<th>2020</th>
<th>2019</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>2</td>
<td>14,023</td>
<td>30,582</td>
<td>252,161</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>3</td>
<td>1,291,470</td>
<td>96,351</td>
<td>23,223,472</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>1,305,492</strong></td>
<td><strong>126,933</strong></td>
<td><strong>23,475,634</strong></td>
<td><strong>1,852,763</strong></td>
</tr>
<tr>
<td><strong>Equity and Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retained income</td>
<td></td>
<td>1,187,494</td>
<td>(248,290)</td>
<td>21,353,766</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade and other payables</td>
<td>4</td>
<td>117,998</td>
<td>375,224</td>
<td>2,121,868</td>
</tr>
<tr>
<td><strong>Total Equity and Liabilities</strong></td>
<td><strong>1,305,492</strong></td>
<td><strong>126,933</strong></td>
<td><strong>23,475,634</strong></td>
<td><strong>1,852,763</strong></td>
</tr>
</tbody>
</table>
## Statement of Surplus or (Deficit)

<table>
<thead>
<tr>
<th>Notes</th>
<th>2020</th>
<th>2019</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Revenue</td>
<td>7</td>
<td>4,903,657</td>
<td>1,746,421</td>
<td>71,954,611</td>
</tr>
<tr>
<td>Other income</td>
<td>8</td>
<td>46,076</td>
<td>33,786</td>
<td>683,406</td>
</tr>
<tr>
<td>Operating expenses</td>
<td></td>
<td>(3,513,948)</td>
<td>(2,120,295)</td>
<td>(47,660,097)</td>
</tr>
<tr>
<td>Operating surplus/(deficit)</td>
<td>1,435,785</td>
<td>(340,088)</td>
<td>24,977,920</td>
<td>(5,124,921)</td>
</tr>
<tr>
<td>Surplus/(deficit) for the year</td>
<td>1,435,785</td>
<td>(340,088)</td>
<td>24,977,920</td>
<td>(5,124,921)</td>
</tr>
<tr>
<td>Other comprehensive income</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total surplus or (deficit) for the year</td>
<td>1,435,785</td>
<td>(340,088)</td>
<td>24,977,920</td>
<td>(5,124,921)</td>
</tr>
</tbody>
</table>
Statement of Changes in Equity

<table>
<thead>
<tr>
<th></th>
<th>Retained income</th>
<th>Total equity</th>
<th>Retained income</th>
<th>Total equity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Balance at 31 March 2017</td>
<td>(488,038)</td>
<td>(488,038)</td>
<td>(6,654,755)</td>
<td>(6,654,755)</td>
</tr>
<tr>
<td>Surplus for the year</td>
<td>579,836</td>
<td>579,836</td>
<td>8,155,521</td>
<td>8,155,521</td>
</tr>
<tr>
<td>Other surplus or (deficit)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total surplus or (deficit)</td>
<td>579,836</td>
<td>579,836</td>
<td>8,155,521</td>
<td>8,155,521</td>
</tr>
<tr>
<td>Balance at 31 March 2018</td>
<td>91,797</td>
<td>91,797</td>
<td>1,500,767</td>
<td>1,500,767</td>
</tr>
<tr>
<td>Surplus/(Deficit) for the year</td>
<td>(340,088)</td>
<td>(340,088)</td>
<td>(5,124,921)</td>
<td>(5,124,921)</td>
</tr>
<tr>
<td>Other surplus or (deficit)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total surplus or (deficit)</td>
<td>(340,088)</td>
<td>(340,088)</td>
<td>(5,124,921)</td>
<td>(5,124,921)</td>
</tr>
<tr>
<td>Balance at 31 March 2019</td>
<td>(248,290)</td>
<td>(248,290)</td>
<td>(3,624,154)</td>
<td>(3,624,154)</td>
</tr>
<tr>
<td>Surplus/(Deficit) for the year</td>
<td>1,435,785</td>
<td>1,435,785</td>
<td>24,977,920</td>
<td>24,977,920</td>
</tr>
<tr>
<td>Other surplus or (deficit)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total surplus or (deficit)</td>
<td>1,435,785</td>
<td>1,435,785</td>
<td>24,977,920</td>
<td>24,977,920</td>
</tr>
<tr>
<td>Balance at 31 March 2020</td>
<td>1,187,494</td>
<td>1,187,494</td>
<td>21,353,766</td>
<td>21,353,766</td>
</tr>
</tbody>
</table>
Accounting Policies

1.1 Basis of preparation
The annual financial statements have been prepared in accordance with an entity specific basis accounting policy. The annual financial statements have been prepared on the historical cost basis, and incorporate the principal accounting policies set out below. They are presented in South African Rands and American Dollars.

1.2 Foreign currency translation
1.2.1 Functional and presentation currency
Items included in the financial statements of the company are measured using the currency of the primary economic environment in which the company operates ("the functional currency"). The financial statements are presented in South African Rand (R), which is the company’s functional and United States Dollars ($) ("the presentation currency").

1.2.2 Transaction and balances
Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of comprehensive income.

1.3 Furniture and equipment
Furniture and equipment is expensed in the year of acquisition.

1.4 Trade payables
Trade payable are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. It is classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities. Trade and other payables are initially recognised at fair value and subsequently it is measured at amortised cost using the effective interest method.

1.5 Provisions
Provision are recognised when the company has a current statutory or constructive obligation as a result of a past binding occurrence which probably will lead to an outflow of resources in the form of economic benefits to meet the obligation and when a reasonable estimate of the amount of the obligation can be made. Provisions are measured at the present value of the expected future expenditure to meet the obligation, discounted at a pre-tax discount rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Provisions are not recognised for future operating losses.

1.6 Revenue
1.6.1 Grants
Grants are recognised as income once it is received.

1.6.2 Interest
Interest is recognised when it is received
Notes to the Annual financial statements for the year ended 31 March 2020

Accounting Policies

1.6 Revenue (continued)

1.6.3 Other income

Other income comprise of income from conference fees, training income and project administration fees and is recognised when the results of the transactions can be measured reliably.

1.7 Expenses

Expenses are recognised on the date that it is incurred.

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Accounts receivable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input VAT receivable from South African Revenue Services(SARS)</td>
<td>13,840</td>
<td>28,074</td>
<td>248,877</td>
<td>409,781</td>
</tr>
<tr>
<td>Sundry debtors</td>
<td>183</td>
<td>2,508</td>
<td>3,285</td>
<td>36,610</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14,023</strong></td>
<td><strong>30,582</strong></td>
<td><strong>252,161</strong></td>
<td><strong>446,391</strong></td>
</tr>
<tr>
<td>3. Cash and cash equivalents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USD Bank Account</td>
<td>524,053</td>
<td>5,571</td>
<td>9,423,631</td>
<td>81,315</td>
</tr>
<tr>
<td>Absa Rand Account</td>
<td>708,551</td>
<td>87,271</td>
<td>12,741,312</td>
<td>1,273,848</td>
</tr>
<tr>
<td>Absa Credit Card Account</td>
<td>-</td>
<td>(78)</td>
<td>-</td>
<td>(1,133)</td>
</tr>
<tr>
<td>Standard Bank Rand Account</td>
<td>58,865</td>
<td>3,586</td>
<td>1,058,530</td>
<td>52,341</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,291,470</strong></td>
<td><strong>96,351</strong></td>
<td><strong>23,223,472</strong></td>
<td><strong>1,406,371</strong></td>
</tr>
</tbody>
</table>

Cash and cash equivalents comprise of cash on hand. These are initially and subsequently recorded at fair value.

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Trade and other payables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade payables - University of the Free State</td>
<td>-</td>
<td>98,863</td>
<td>-</td>
<td>1,443,040</td>
</tr>
<tr>
<td>Accruals and other liabilities</td>
<td>83,921</td>
<td>187,661</td>
<td>1,509,077</td>
<td>2,739,176</td>
</tr>
<tr>
<td>Provision for audit fee</td>
<td>3,901</td>
<td>4,316</td>
<td>70,150</td>
<td>63,000</td>
</tr>
<tr>
<td>Other trade payables</td>
<td>30,177</td>
<td>84,383.81</td>
<td>542,641</td>
<td>1,231,701</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>117,998</strong></td>
<td><strong>375,224</strong></td>
<td><strong>2,121,868</strong></td>
<td><strong>5,476,917</strong></td>
</tr>
</tbody>
</table>

5. Income tax expense

No provision has been made for 2020 tax as the organisation falls within the classification as an exempted entity for taxation purposes in terms of section 10(1)(cN) of the Income Tax Act.

6. Going concern

The annual financial statements have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business. Worldbank will provide funding to the company until 2021 financial year. The Company is mainly dependent on those future fundings from Worldbank in order to continue with its operations.
Accounting Policies

7. Grants received

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Grant income was received from different funders and is recognised when it is received</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World bank grant</td>
<td>4,903,657</td>
<td>1,652,874</td>
<td>71,954,610</td>
<td>24,126,030</td>
</tr>
<tr>
<td>GMI GIZ Training Grant</td>
<td>-</td>
<td>93,546</td>
<td>-</td>
<td>1,365,442</td>
</tr>
<tr>
<td></td>
<td><strong>4,903,657</strong></td>
<td><strong>1,746,420</strong></td>
<td><strong>71,954,610</strong></td>
<td><strong>25,491,472</strong></td>
</tr>
</tbody>
</table>

8. Other income

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Conference fees</td>
<td>27,627</td>
<td>19,066</td>
<td>411,527</td>
<td>278,293</td>
</tr>
<tr>
<td>Interest</td>
<td>13,803</td>
<td>1,375</td>
<td>203,127</td>
<td>20,063</td>
</tr>
<tr>
<td>Project administration</td>
<td>2,946</td>
<td>12,648</td>
<td>42,666</td>
<td>184,621</td>
</tr>
<tr>
<td>Training income</td>
<td>1,701</td>
<td>697</td>
<td>26,087</td>
<td>10,181</td>
</tr>
<tr>
<td></td>
<td><strong>46,076</strong></td>
<td><strong>33,786</strong></td>
<td><strong>683,406</strong></td>
<td><strong>493,158</strong></td>
</tr>
</tbody>
</table>

9. (Loss) / Surplus for the year

The surplus R24,977,920 for the year is explained by grant income exceeding operating expenses for the period that was actually received by the funder in 2020. In 2019, a loss, R5,124,921, was recorded as grant income actually received was less than the operating expenses.

10. Subsequent event: COVID-19

The effect of the COVID-19 pandemic on the financial sustainability and operations of the company was considered. The event is considered to be an adjusting event as the first positive case in Southern Africa was only reported on 5 March 2020, in the Republic of South Africa, however, through management's assessment, no adjustment is considered necessary. It is expected that the foreign exchange losses will increase in 2020, due to the devaluation of the Rand. The company has sufficient reserves in grant funding to accommodate the foreign exchange losses. The going concern assumption is still considered to be appropriate as the principal funder, Worldbank engaged with the company to extend the contract period to 30 June 2021, due to the COVID-19 pandemic. The company is limited to move to SADC member states, as countries have imposed lockdown regulation to fight the pandemic.
Southern African Development Community Groundwater Management Institute  
(Registration number 2011/011724/08)  
Annual financial statements for the year ended 31 March 2020

**Detailed Income Statement**

<table>
<thead>
<tr>
<th>Notes</th>
<th>2020</th>
<th>2019</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants received</td>
<td>7</td>
<td>4,903,657</td>
<td>1,746,421</td>
<td>71,954,611</td>
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<tr>
<td>Other income</td>
<td>8</td>
<td>46,076</td>
<td>33,786</td>
<td>683,406</td>
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<tr>
<td><strong>Total Revenue</strong></td>
<td></td>
<td>4,949,733</td>
<td>1,780,207</td>
<td>72,638,017</td>
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<tr>
<td><strong>Operating expenses</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auditors remuneration</td>
<td>3,402</td>
<td>4,368</td>
<td>61,660</td>
<td>63,755</td>
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<td>Accommodation</td>
<td>182,748</td>
<td>139,725</td>
<td>2,673,252</td>
<td>2,039,490</td>
</tr>
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<td>Advertisements</td>
<td>48,485</td>
<td>10,918</td>
<td>703,325</td>
<td>159,368</td>
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<tr>
<td>Bank charges</td>
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<td>4,983</td>
<td>130,682</td>
<td>72,728</td>
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<td>Board sitting allowances</td>
<td>11,572</td>
<td>6,234</td>
<td>168,829</td>
<td>91,000</td>
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<tr>
<td>Computer equipment and expenses</td>
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<td>4,860</td>
<td>16,900</td>
<td>70,941</td>
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<td>Conference expenses</td>
<td>24,792</td>
<td>99,832</td>
<td>366,630</td>
<td>1,457,182</td>
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<tr>
<td>Consultation fees</td>
<td>910,904</td>
<td>1,106,885</td>
<td>13,858,589</td>
<td>16,156,553</td>
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<tr>
<td>Cleaning</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Employee costs</td>
<td>292,561</td>
<td>203,302</td>
<td>4,352,080</td>
<td>2,967,484</td>
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<tr>
<td>Entertainment and refreshments</td>
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<td>1,948</td>
<td>6,707</td>
<td>28,437</td>
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<tr>
<td>Foreign exchange (gain)/loss</td>
<td>280,442</td>
<td>1,543</td>
<td>-987,323</td>
<td>183,381</td>
</tr>
<tr>
<td>Insurance</td>
<td>9,562</td>
<td>6,681</td>
<td>145,705</td>
<td>97,517</td>
</tr>
<tr>
<td>Legal fees</td>
<td>10,933</td>
<td>10,574</td>
<td>161,380</td>
<td>154,348</td>
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<tr>
<td>Office alterations</td>
<td>1,669</td>
<td>266</td>
<td>24,776</td>
<td>3,885</td>
</tr>
<tr>
<td>Postage and courier</td>
<td>532</td>
<td>-</td>
<td>7,757</td>
<td>-</td>
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<tr>
<td>Printing and stationary</td>
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<td>10,957</td>
<td>115,596</td>
<td>159,931</td>
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<td>Professional services-UFS</td>
<td>71,108</td>
<td>74,097</td>
<td>1,081,326</td>
<td>1,081,550</td>
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<tr>
<td>Professional services-Other</td>
<td>383,480</td>
<td>73,466</td>
<td>5,686,435</td>
<td>1,072,340</td>
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<td>Small equipment</td>
<td>6,130</td>
<td>2,362</td>
<td>90,825</td>
<td>34,471</td>
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<td>Subscriptions and newsletters</td>
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<td>999</td>
<td>188,951</td>
<td>14,589</td>
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<td>Subgrant projects</td>
<td>973,899</td>
<td>75,103</td>
<td>14,829,600</td>
<td>1,096,235</td>
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<tr>
<td>Telephone &amp; Internet</td>
<td>12,126</td>
<td>2,717</td>
<td>183,542</td>
<td>39,656</td>
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<td>Training costs</td>
<td>2,115</td>
<td>5,068</td>
<td>29,384</td>
<td>73,972</td>
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<tr>
<td>Travel cost (Flight and car hire)</td>
<td>256,874</td>
<td>273,405</td>
<td>3,763,488</td>
<td>3,990,738</td>
</tr>
<tr>
<td><strong>Total Operating expenses</strong></td>
<td></td>
<td>3,513,948</td>
<td>2,120,295</td>
<td>47,660,097</td>
</tr>
<tr>
<td><strong>(Loss) / Surplus for the year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,435,785</td>
<td>(340,088)</td>
<td>24,977,920</td>
<td>(5,124,921)</td>
</tr>
<tr>
<td><strong>Other comprehensive income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total comprehensive (loss) / income for the year</strong></td>
<td></td>
<td>1,435,785</td>
<td>(340,088)</td>
<td>24,977,920</td>
</tr>
</tbody>
</table>
## Project Components & Activity Descriptions

<table>
<thead>
<tr>
<th>Activity Description</th>
<th>Expenditure for the year ending 31 March 2020 (USD)</th>
<th>Total Project to 31 March 2020 (USD)</th>
<th>Total Committed (USD)</th>
<th>Variance: Actual spend vs Committed (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Component A. Operationalising the SADC Groundwater Management Institute</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1.1 Office installations, tools and equipment acquisition, operation and maintenance, software</td>
<td>773,452</td>
<td>3,077,701</td>
<td>3,710,000</td>
<td>632,293</td>
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<tr>
<td>A1.2 Project Launch</td>
<td>584,468</td>
<td>2,146,106</td>
<td>2,146,000</td>
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<tr>
<td>A1.3 Internal Project set up and implementation support (interim Director)</td>
<td>5,164</td>
<td>21,235</td>
<td>21,235</td>
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<tr>
<td>A2.1 Payroll, professional services rendered in SADC-GMI</td>
<td>288,611</td>
<td>1,078,000</td>
<td>1,078,000</td>
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<tr>
<td>A2.2 Payroll, professional services rendered in SADC-GMI</td>
<td>28,321</td>
<td>106,900</td>
<td>106,900</td>
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</tr>
<tr>
<td>A2.3 Payroll, professional services rendered in SADC-GMI</td>
<td>128,114</td>
<td>488,412</td>
<td>488,412</td>
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<tr>
<td>A2.4 Payroll, professional services rendered in SADC-GMI</td>
<td>2,431</td>
<td>9,938</td>
<td>9,938</td>
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</tr>
<tr>
<td>A2.5 Payroll, professional services rendered in SADC-GMI</td>
<td>244,087</td>
<td>912,959</td>
<td>912,959</td>
<td></td>
</tr>
<tr>
<td>A2.6 Payroll, professional services rendered in SADC-GMI</td>
<td>32,000</td>
<td>120,000</td>
<td>120,000</td>
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<tr>
<td>A2.7 Payroll, professional services rendered in SADC-GMI</td>
<td>21,955</td>
<td>80,400</td>
<td>80,400</td>
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<tr>
<td>A2.8 Payroll, professional services rendered in SADC-GMI</td>
<td>21,649</td>
<td>80,000</td>
<td>80,000</td>
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</tr>
<tr>
<td>A2.9 Payroll, professional services rendered in SADC-GMI</td>
<td>49,968</td>
<td>192,541</td>
<td>192,541</td>
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</tr>
<tr>
<td>A2.10 Payroll, professional services rendered in SADC-GMI</td>
<td>33,716</td>
<td>135,000</td>
<td>135,000</td>
<td></td>
</tr>
<tr>
<td>A2.11 Payroll, professional services rendered in SADC-GMI</td>
<td>21,802</td>
<td>80,000</td>
<td>80,000</td>
<td></td>
</tr>
<tr>
<td>A2.12 Payroll, professional services rendered in SADC-GMI</td>
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<td>380,000</td>
<td>380,000</td>
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<tr>
<td>A2.13 Payroll, professional services rendered in SADC-GMI</td>
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<td>48,000</td>
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</tr>
<tr>
<td>A2.14 Payroll, professional services rendered in SADC-GMI</td>
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<td>912,959</td>
<td>912,959</td>
<td></td>
</tr>
<tr>
<td>A2.15 Payroll, professional services rendered in SADC-GMI</td>
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<td>120,000</td>
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</tr>
<tr>
<td>A2.16 Payroll, professional services rendered in SADC-GMI</td>
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<td>80,400</td>
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</tr>
<tr>
<td>A2.17 Payroll, professional services rendered in SADC-GMI</td>
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<td>80,000</td>
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</tr>
<tr>
<td>A2.18 Payroll, professional services rendered in SADC-GMI</td>
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<td>192,541</td>
<td>192,541</td>
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</tr>
<tr>
<td>A2.19 Payroll, professional services rendered in SADC-GMI</td>
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<td>135,000</td>
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</tr>
<tr>
<td>A2.20 Payroll, professional services rendered in SADC-GMI</td>
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<td>80,000</td>
<td>80,000</td>
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<tr>
<td>A2.21 Payroll, professional services rendered in SADC-GMI</td>
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<td>380,000</td>
<td>380,000</td>
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<td>A2.22 Payroll, professional services rendered in SADC-GMI</td>
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<td>48,000</td>
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<tr>
<td>A2.23 Payroll, professional services rendered in SADC-GMI</td>
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<td>912,959</td>
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<td>A2.24 Payroll, professional services rendered in SADC-GMI</td>
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<td>120,000</td>
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<tr>
<td>A2.25 Payroll, professional services rendered in SADC-GMI</td>
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<td>80,400</td>
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<td>A2.26 Payroll, professional services rendered in SADC-GMI</td>
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<td>A2.27 Payroll, professional services rendered in SADC-GMI</td>
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<td>192,541</td>
<td>192,541</td>
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<tr>
<td>A2.28 Payroll, professional services rendered in SADC-GMI</td>
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<td>A2.29 Payroll, professional services rendered in SADC-GMI</td>
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<td>80,000</td>
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</tr>
<tr>
<td>A2.30 Payroll, professional services rendered in SADC-GMI</td>
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<td>380,000</td>
<td>380,000</td>
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</tr>
<tr>
<td>A2.31 Payroll, professional services rendered in SADC-GMI</td>
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<tr>
<td>A2.32 Payroll, professional services rendered in SADC-GMI</td>
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<td>912,959</td>
<td>912,959</td>
<td></td>
</tr>
<tr>
<td>A2.33 Payroll, professional services rendered in SADC-GMI</td>
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<td>120,000</td>
<td></td>
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<tr>
<td>A2.34 Payroll, professional services rendered in SADC-GMI</td>
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<td>80,400</td>
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<tr>
<td>A2.35 Payroll, professional services rendered in SADC-GMI</td>
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<td>80,000</td>
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<tr>
<td>A2.36 Payroll, professional services rendered in SADC-GMI</td>
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<td>192,541</td>
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<tr>
<td>A2.37 Payroll, professional services rendered in SADC-GMI</td>
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<tr>
<td>A2.38 Payroll, professional services rendered in SADC-GMI</td>
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<tr>
<td>A2.39 Payroll, professional services rendered in SADC-GMI</td>
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<td>380,000</td>
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</tr>
<tr>
<td>A2.40 Payroll, professional services rendered in SADC-GMI</td>
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<td>48,000</td>
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</tr>
<tr>
<td>A2.41 Payroll, professional services rendered in SADC-GMI</td>
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<td>912,959</td>
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</tr>
<tr>
<td>A2.42 Payroll, professional services rendered in SADC-GMI</td>
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<td>120,000</td>
<td>120,000</td>
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<tr>
<td>A2.43 Payroll, professional services rendered in SADC-GMI</td>
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<tr>
<td>A2.44 Payroll, professional services rendered in SADC-GMI</td>
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<tr>
<td>A2.45 Payroll, professional services rendered in SADC-GMI</td>
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<td>192,541</td>
<td>192,541</td>
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<tr>
<td>A2.46 Payroll, professional services rendered in SADC-GMI</td>
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<td></td>
</tr>
<tr>
<td>A2.47 Payroll, professional services rendered in SADC-GMI</td>
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<td>80,000</td>
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</tr>
</tbody>
</table>