



GROUNDWATER MANAGEMENT INSTITUTE

Water Resources Management Research in the Eastern Kalahari Karoo Basin Transboundary Aquifer



BACKGROUND

The SADC Groundwater Management Institute (SADC-GMI) is the implementing agency of the project "Sustainable Groundwater Management in SADC Member States". The project is funded by the Global Environment Facility (GEF) and the Multi Donor Trust Fund Corporation in International Waters in Africa (CIWA) through the World Bank. One of SADC-GMI's mandates is to advocate for joint management of Transboundary Aquifers (TBAs) in the SADC region to ensure equitable, sustainable use and protection of groundwater. SADC-GMI has therefore dedicated part of the project funding to undertake research in the Eastern Kalahari-Karoo Basin Transboundary Aquifer shared between Botswana and Zimbabwe.

The Eastern Kalahari-Karoo Basin Transboundary Aquifer (EKK TBA) consists of Karoo sandstones partially covered by basaltic volcanics with some primary porosity and fractured in places, resulting in confined to semi-

confined aquifers. The aquifer is located on the plateau-like watershed between the Zambezi River to the north and Nata River to the west. The TBA has been classified as "Troublesome" in which some form of international collaboration in monitoring, management and apportionment is needed in order to avoid confrontation in the future should demographics, land use or climate change push governments to embark on groundwater development in the region in order to meet increasing water demand. The EKK TBA supports about 240,000 people and receives less than 500 mm rainfall per year.

OBJECTIVE OF THE PROJECT

The key objective of this project is to provide a basis for enhancing and strengthening the understanding of and establish a platform for joint management of the Eastern Kalahari-Karoo Basin Transboundary Aquifer (EKK TBA).



APPROACH

The project will be implemented through a series of organized activities which include:

UNDERTAKE TRANSBOUNDARY DIAGNOSTIC ANALYSIS

As part of the project implementation, the Transboundary Diagnostic Analysis (TDA) will be undertaken. The main purpose of a TDA is to identify, quantify, and set priorities for environmental problems that are transboundary in nature and to identify appropriate preventive and remedial actions. In this case the TDA will provide technical justification for the development of Strategic Action Plans (SAPs), if absent or the refinement thereof, where they do exist. TDAs have been developed over time in projects on transboundary waters financed by the Global Environment Fund, as the approach provides a framework for a thorough analysis of all issues around transboundary water bodies.

DEVELOPING SAP THROUGH STAKEHOLDER DIALOGUES

The project team will engage in the implementation of Stakeholder

Dialogues to understand relevant issues and forge consensus on the joint conjunctive management of water resources in the system. The stakeholder dialogues will contribute to the recommendations for institutional structures and mechanisms that support the achievement of equitable and sustainable resilience and strengthening of conjunctive water use approaches including joint monitoring and managed aquifer recharge (MAR).

KNOWLEDGE MANAGEMENT OF RESEARCH RESULTS

It is imperative that results of the project are shared with relevant stakeholders including decision makers for effective uptake. Knowledge Management of the Research Results (TDA Report and SAP) of the EKK TBA will be shared with stakeholders as a case study. The aim of knowledge management and dissemination of knowledge is to support decision makers and other stakeholders involved in the governance of transboundary aquifers, with relevant information.



OUTPUTS OF THE PROJECT

The project will have the following key outputs;

A TDA report detailing the status of the Transboundary aquifer, with specific focus on the following;

- Identification and prioritisation of the transboundary problems/challenges/concerns
- An analysis and interpretation of information on the environmental impacts and socio-economic consequences of each problem
- Presentations of solutions to identified problems/challenges and implementing measures that address the transboundary challenges
- A Hydrogeology Report- to provide a common understanding of the transboundary aquifer.
- An understanding potential impacts of climate change on the water resources
- A Joint Strategic action plan for the EKK-TBA,

IMPLEMENTING PARTNERS

The project is implemented by L2K2 Consultants (Pty) LTD based in Cape Town, South Africa, on behalf of the SADC Groundwater Management Institute (SADC-GMI).

CONTACT DETAILS

Physical address:

SADC Groundwater Management Institute
205 Nelson Mandela Drive
Bloemfontein
South Africa

Mr. Brighton Munyai (Project Manager)
brighton@sadc-gmi.org
Tel: +27 63 0936805

L2K2 Consultants (Pty) LTD
Dr Kevin Pietersen (Project Lead)
kpietersen@mweb.co.za
Tel: +27 832907253

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

