

SADC-GMI BACKGROUND:

The SADC Groundwater Management Institute (SADC-GMI) is the implementing agency of the World Bank funded Sustainable Groundwater Management in SADC Member States Project. This funding is secured through the Global Environment Facility (GEF) and the Cooperation in International Waters in Africa (CIWA) trust. The Sustainable Groundwater Management in SADC Member States project has four components, with sub-components under each:

Component A: Operationalising the SADC-GMI;

Component B: Enhancing institutional capacity of governments in SADC Member States and transboundary organisations;

Component C: Improving availability of and access to knowledge, scientific research and data on groundwater; and

Component D: Promoting infrastructure solutions for sustainable groundwater management.

PROJECT OVERVIEW July 2018



PROJECT MANAGEMENT:

It is critical that the project is properly managed to ensure timely delivery of key milestones and also ensure that the project achieves the desired outcomes. The project team from the International Water Management Institute led by Dr. Karen Villholth will be responsible for the day to day activities/deliverables of the project, and report to the SADC-GMI team, led by the Technical Advisor, Mr Brighton Munyai on a monthly basis. Monthly progress meetings will be conducted between IWMI and SADC-GMI to provide progress.

Key summary outputs

- Project Inception Report
- Transboundary Diagnostic Analysis (TDA)
- Issues Paper from the joint stakeholder engagement session
- Joint Strategic Action Plan (SAP) for the Shire river/aquifer system
- Report documenting generally agreed principles for advancing cooperative conjunctive management in the Shire river/aquifer system
- Two reports on research dissemination workshops for Malawi and Mozambique respectively
- Two reports on SADC region level research dissemination workshops
- One report on continental/global level research dissemination

PROJECT TEAM:

- **Dr. Karen Villholth:** Principal Researcher/ Team leader
- **Dr. Girma Ebrahim:** Hydrogeologist/ Geohydrologist
- **Dr Manuel Magombeyi:** Hydrologist
- **Dr. Jonathan Lautze:** Institutional and Governance Expert
- **Prof. Robert Kalin:** Environmental Expert
- **Dr. Barbara van Koppen:** Sociologist
- **Mr. Resego Mokomela:** Documentation and Knowledge Management Expert

CONTACT DETAILS:

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CONJUNCTIVE WATER RESOURCES MANAGEMENT RESEARCH IN THE SHIRE RIVER / AQUIFER SYSTEM (SHIRE ConWat)



THE SHIRE CONWAT BACKGROUND AND PREMISE:

The Shire ConWat project is funded under the Sub-component C3 and obligates the SADC-GMI to contribute to the academic body of knowledge in the field of groundwater management in the SADC region through conducting Research on Groundwater Challenges and disseminating the outcomes thereof.

The project came as a result of lessons learned in the on-going work in the Transboundary Aquifers of Ramotswa (shared between Botswana and South Africa) and Strampriet (shared between Botswana, Namibia and South Africa). It was realized that there is a need to further broaden research knowledge on the management of Transboundary Aquifers in the region. It was also observed that River Basin Organisations in the region do not adequately integrate the management of surface and groundwater. As such the subject of conjunctive management of water resources received high priority on the SADC-GMI's research agenda. To this end the SADC-GMI is undertaking the Conjunctive Water Resources Management Research project In the Shire River Basin (Shire Con-Wat).

The Shire River Basin (~32,000 km² catchment within the lower Zambezi River Basin) and associated aquifer (the Tertiary/Quaternary sedimentary/alluvial Shire Valley Aquifer), shared between Malawi and Mozambique, is a critical area for transboundary water management.

The overarching objective of the Project is to contribute to sustainable water management in the Southern African Development Community (SADC), through transboundary cooperation on shared critical water resources. The specific objective of the Project is to enhance the capacity in SADC and its Member States to manage integrated groundwater and surface water resources, using the Shire River/Aquifer System as a pilot case. The Project will contribute to capacity building of Shire Basin authorities as well as regional representatives.

The project is being implemented by the International Water Management Institute (IWMI) under the strategic guidance of the Southern African Development Community- Groundwater Management Institute (SADC-GMI).

APPROACH AND METHODOLOGY:

Supporting conjunctive cross-border water management in the Shire River-Aquifer system will be pursued through three task areas:

- Transboundary Diagnostic Analysis (TDA):
- Strategic Action Plan (SAP):
- Knowledge Management and Research Results:

The project is expected to last 10 months, from July 2018 through April 2019.

TASKS:

Task 1: Transboundary Diagnostic Analysis (TDA).

The first task area will build comprehensive understanding of the current state of the surface and groundwater resources, their uses, spatial and temporal variability, interactions, and impacts as well as human benefits derived from

various ecosystem services and existing infrastructure. Data will be compiled and synthesized according to relevant themes including water resources and uses, environment, socioeconomics (including gender equity), and institutions. Ultimately, information collected as part of the TDA will be synthesized to reveal a set of critical issues related to achieving water security, with specific attention to the opportunities that can be harnessed and challenges that can be addressed through possible conjunctive approaches

Task 2: Strategic Action Plan (SAP)

The SAP will build on the TDA but will not be limited to issues identified from TDA. The SAP will foster convergence toward a joint vision and framework for the shared resources of the Shire River-Aquifer System. Priority actions that can be jointly pursued will also be identified through an iterative process with stakeholders on both countries. The development of SAP will involve a number of steps which includes, conceptualizing a joint vision and framework for the shared management of the Shire surface-groundwater systems, identify possible interventions that would foster progress towards the shared vision for development and management of the Shire basin, with a focus on conjunctive water management options.

Task 3: Knowledge Management of Research Results.

In order to harvest generic lessons and explore options for out-scaling the findings of the Project, the experience from advancing cooperative conjunctive management in the Shire Basin will be mined and assessed systematically and synthesized into a Framework for Conjunctive Transboundary Management (FCTM). Principles for conjunctive water cooperation will be developed and proposed following documentation and learning from Task areas 1 and 2. Interaction with technical experts and policy makers in both countries and representatives of SADC and its Member States will be key to the elaboration of such principles.

IMPACTS:

The Project is expected to generate short and long-term impacts. In the short-term, the Project should lead to: identification and prioritization of water issues of transboundary relevance to the riparian /aquifer States Malawi and Mozambique, crafting of joint conjunctive water management solutions and strategic investments and infrastructure development across borders that could contribute to strengthening resilience and fostering socioeconomic development, drafting a framework for fit-for-purpose conjunctive transboundary water cooperation, and enhanced capacity in national, transboundary and regional institutions to identify water issues and solutions at various scales, including transboundary, that entail transboundary conjunctive management. In the long-term, the Project is expected to contribute to further strengthening and out-scaling of conjunctive approaches in the SADC region, and further institutionalisation of best practices and transboundary management frameworks that equally consider groundwater and surface water as part of the sustainable development solutions in SADC, which will support the achievement of the Sustainable Development Goals (SDG6).

