TRANSBOUNDARY AQUIFER COOPERATION AND MANAGEMENT
LESSONS LEARNED THROUGH THE STAMPRIET AND RAMOTSWA PROJECTS

Resources

GGRETA/STAS:

RAMOTSWA:
1. https://conjunctivecooperation.iwmi.org/systems/

Endnotes

A number of other transboundary investigations have been implemented in SADC or are in the course of implementation: the Shire Transboundary Aquifer shared between Malawi and Mozambique, the Tuli Karoo Transboundary Aquifer shared between Botswana, South Africa, and Zimbabwe, the Eastern Kalahari Karoo Aquifer shared between Botswana and Zimbabwe, the Nata Karoo Basin shared between Botswana, Namibia, and Zambia, the Sand and Gravel Aquifer shared between Malawi and Zambia, and the Limpopo Basin Aquifer shared between Mozambique, South Africa, and Zimbabwe.

The panel comprised of STAS National Focal Points (Botswana, Namibia, and South Africa), SADC-GMI, IWMI, University of Botswana, International Groundwater Resources Assessment Centre (IGRAC), University of the Western Cape, ORASECOM and regional consultants in TBA assessments. In total, the session was attended by 72 participants.

For example, the SADC revised Protocol on Shared Watercourses, and the Draft Articles on the Law of Transboundary Aquifers.
There is no blueprint to developing TBA cooperation. Nevertheless, generic challenges and commonalities in biophysical and developmental context help shape incentives for cooperation and for developing harmonized approaches across diverse countries and various TBAs.

Common threats and the same SADC states sharing multiple TBAs help develop an emerging cooperative practice around targeting, prioritizing and operationalizing cooperation. Common threats include climate change, population growth, and urbanization.

Conjunctive water management approaches are required to put sustainable cooperation around TBAs in place. Most TBAs are either fed by surface water resources, or feed them, and management solutions need to be found through integrated approaches, including unconventional sources like wastewater.

Trust between aquifer states and stakeholders is a key factor in unlocking access to data and data sharing. Joint assessments and diagnoses are ‘seedbeds’ for building trust and developing interest in further data sharing.

Groundwater modelling as a tool for management in TBAs should be promoted, taking cognizance of the data challenges with decisions having to be made on whether to build regional models or a suite of models. Both the STAS and the RAMOTSWA projects have developed numerical models as management tools, and experiences can be drawn from these exercises.

Groundwater quality is an increasingly critical issue, which is usually underemphasized in most TBA investigations. The RAMOTSWA performed pre-feasibility investigations into nitrate pollution in peri-urban water supply, identifying best remediation solutions going forward.

Regional and international water cooperation protocols are inspiring and guiding the work on TBAs in SADC, while formal transboundary treaties have not been put in place yet. Conversely, TBA work in the region should also inform protocols and best practice on TBA cooperation and management going forward.

While there is no blueprint in terms of developing cooperation around TBAs, which our project cooperation and comparison also illustrated, it is clear that some generic lessons can be derived. It is anticipated that this Policy Brief will help inform and guide present and future activities and negotiations around transboundary aquifer cooperation for the water security and resilience of all countries in Southern Africa and beyond.

The STAS and RAMOTSWA projects benefitted strongly from multi-partner collaboration (international development organizations, governments and national authorities, multi-disciplinary research organizations, and local stakeholders) as well as cross-project learning. Concerning capacity development and co-learning with national universities and national partners is crucial. Specific emphasis of learning has to be on international water law, water diplomacy, hydrogeological and environmental assessments, and socioeconomic and institutional analyses.

Cooperation and support to local communities was much appreciated by national and regional partners and should be factored into TBA project design, e.g. as in the RAMOTSWA project, which had components on Agricultural Water Management Solutions, Managed Aquifer Recharge, and aquifer remediation.

Existing River Basin Organizations (RBOs) are critical in institutionalizing TBA cooperation mechanisms, whether formal or informal. Institutional arrangements for cooperation benefit greatly if nested in existing transboundary water management institutions, as shown by the Multi-Country Cooperation Mechanism (MCCM), nested in the existing Groundwater Hydrology Committee (GWHC) in the Orange-Senqu River Commission (ORASECOM), and the LIMCOM Groundwater Committee (LGC), which is nested in the Limpopo Watercourse Commission (LIMCOM) - outcomes of the STAS and the RAMOTSWA Project, respectively.

The capacity of the RBOs to handle transboundary groundwater issues is critical to elevate and sustain cooperation on particular TBAs post-projects. Whereas the ORASECOM, a GWHC was in place, in RAMOTSWA, the Ramotswa Advisory Committee was set up as an interim body to bridge different regional bodies and to hand over project progress to these bodies, until the LGC under LIMCOM was functional.

The STAS and RAMOTSWA projects made a direct response/contribution to the regional water mandate, as expressed in the SADC Regional Strategic Action Plan, phase 4 (RSAP-IV), which is very explicit on the need for financial support to TBA management through Transboundary Diagnostic Analysis (TDAs) and Strategic Action Plans (SAPs).

The TDA and SAP products are highly cooperative outcomes as well as critical joint processes that support the identification of priority focus areas (thematically and geographically) for future attention and investments.

The STAS and RAMOTSWA projects benefitted strongly from high-level political support of SADC and technical and institutional support from the SADC subsidiary Groundwater Management Institute (SADC-GMI).

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This Policy Brief summarizes policy pronouncements derived from the special session and subsequent panel discussion and key findings of the joint IWMI report.

Projects should be demand-driven from the outset and political buy-in from high-level political players in all aquifer states is central to the success of TBA projects.