



## The Pan-African Groundwater Program (APAGroP) Gains Momentum Towards Realization

*Dr Kevin Pieterse* is an associate at the Institute of Water Studies at the University of the Western Cape; his participation in the workshops was funded by Resilient Waters. Mr James Sauramba is the SADC-GMI Executive Director. Both write in their personal capacity. The article benefitted from contributions from **Dr Hans Beekman** and **Dr Jude Cobbing**

After the launch of the [AMCOW Pan-African Groundwater Program \(APAGroP\)](#) in Nairobi, Kenya, on 1 and 2 October 2019, follow-up [Working Group meetings](#) took place on 22 and 23 February 2020 in Kampala, Uganda. This was followed by groundwater sessions at the [African Water Association Congress and Exhibition \(AfWA 2020\)](#). The meeting was attended by representatives from [Resilient Waters](#) and the Southern African Development Community Groundwater Management Institute ([SADC-GMI](#)).

Globally there have been many cases of groundwater depletion, largely driven by irrigated agriculture, resulting in a [statement](#) by a global group of scientists, practitioners, and experts to use groundwater in a sustainable manner to arrest the decline. However, in [sub-Saharan Africa](#) the current groundwater use of most countries remains under 5% of the national sustainable yield, suggesting that groundwater has the potential to be an appropriate resource to further support irrigated agriculture, ensure urban and rural water security, and to provide drought

resilience across the region.

With this in mind, the APAGroP Working Group meetings established several Action Groups to develop a White Paper for the African Ministers of Water; develop in-country support tools; strengthen groundwater capacity and knowledge management and information sharing; carry out resource assessment; and provide support in the fields of drilling, financing and governance. The [African Water Association](#), which is a professional association of establishments, enterprises and utilities operating in the areas of drinking water, sanitation and environment in Africa, provided an opening to showcase the utility of groundwater at AfWA 2020. Sessions with presentations and panel discussions were held on a wide range of topics:

- Groundwater Governance: AMCOW APAGroP as a catalyst for intra- and cross-country groundwater 'resource-to-tap' management
  - Insights in the adaptation of transition management in order to increase sustainable urban groundwater management
  - Off grid: the opportunities and challenges of safe and sustainable water points
  - Manage, recharge, and protect groundwater for resilient urban water supply
  - Drilling dialogues: a conversation about professionalism, groundwater mapping and off-grid cities
  - Unlocking groundwater: from data to knowledge. What's needed to manage groundwater for society, economy and environment

Based on our participation and our experience in the SADC-region we recommend the following areas where the APAGroP could focus on:

1. At Pan-African level there is a need to develop addendums to existing transboundary water agreements and Memorandums of Understandings (MoUs) to strengthen groundwater management and conjunctive water use. [Draft articles](#), [model provisions](#) and [bilateral and multilateral agreements](#)

have been developed which can guide APAGroP in developing the norms and standards for such addendums. MoUs on specific issues, could include agreements on data sharing, joint monitoring and standards, or other specific and priority mechanisms for shared groundwater governance that should be implemented on a short-term basis and could then be included in a larger package of legal reforms over time towards amending transboundary water agreements.

2. The latent groundwater potential in most parts of Africa provides an opportunity for groundwater expansion. However, the [international discourse](#) on water which has shifted

towards conservation and remediation may present a barrier denying large-scale groundwater use and the associated social and economic benefits derived from groundwater development in Africa.

3. State-centred groundwater governance systems in isolation are inadequate and multi-level (or polycentric) groundwater governance is needed, where centralized rules are standardized broadly, and subsidiarity is adhered to where decisions are delegated to the lowest possible level of governance as groundwater management requires local decisions-making, e.g. wellfield operating rules. The APAGroP needs to facilitate institutional arrangements that are problem-solving towards the development of coping strategies and technical measures.

4. Cities in Africa face unplanned urban growth outpacing economic, social and institutional interventions, and pose many challenges to water planners in ensuring [water security and resilience](#). The role of groundwater in water security is inferred but still poorly recognized in urban areas as illustrated by [mixed messages](#) about groundwater storage, contemporary rates of resource renewability and the wider impacts of uncontrolled aquifer depletion and pollution. The transition to water sensitive cities will require adoption of various groundwater management options such as [managed aquifer recharge](#) (MAR) to build resilient cities.

5. The inability of Water Utilities to provide water services has resulted in communities relying on groundwater through self-supply. [Self-supply is perhaps conveniently overlooked in policy and legislation](#).

6. The assessment of transboundary aquifer systems will require transition from a lithostratigraphic delineation to the use of groundwater-flow systems for the evaluation of the degree of [transboundariness](#).

Water security is fundamental to the sustainable development of each society. This is particularly true for Africa, which faces challenges of widespread poverty, food insecurity, and inadequate and unreliable domestic water supply in both rural and informal urban areas. Increasing aridity and rapid urbanisation further threatens water security, especially in semi-arid and arid regions. Groundwater provides an excellent opportunity to mitigate against dwindling

surface water supplies. We believe that above recommendations will significantly contribute to drought security as part of all water provisions, and resilience to environmental shocks and stresses caused by climate variability and change.