

Transboundary Aquifers Groundwater Level Monitoring programme

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The purpose of the monitoring network is to identify temporal and spatial variations of groundwater thus giving status (quality and quantity) of the water resource in line with the National Water Act No. 36 of 1998. The objective of the National Water Act (NWA) is “to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways which take into account amongst other factors” - in a sustainable and equitable manner, for the benefit of all persons. Transboundary Aquifer groundwater monitoring is one of the programmes under the Surface and Groundwater Information monitoring network. The aim of groundwater monitoring in Aquifers is to ensure sustainable management and extraction proximal to the areas to avoid depletion of these resources. In addition to that, it ensures the water management and policies across the countries involved are sustainable, in agreement and aligned with the SDG 6 (Clean Water and Sanitation) and SDG 17 (Partnerships for the Goals) targets on management of our natural water resources across borders.

Transboundary aquifer groundwater monitoring is one of the specialised monitoring programmes, however, there is no active programme running; only monitoring of boreholes that fall within the aquifers are being monitored monthly and/or quarterly as part of the groundwater monitoring programme. Figure 1 shows the geographic location and maps the extent of the Transboundary Aquifers in South Africa and neighbouring countries including the groundwater monitoring stations within the aquifers.

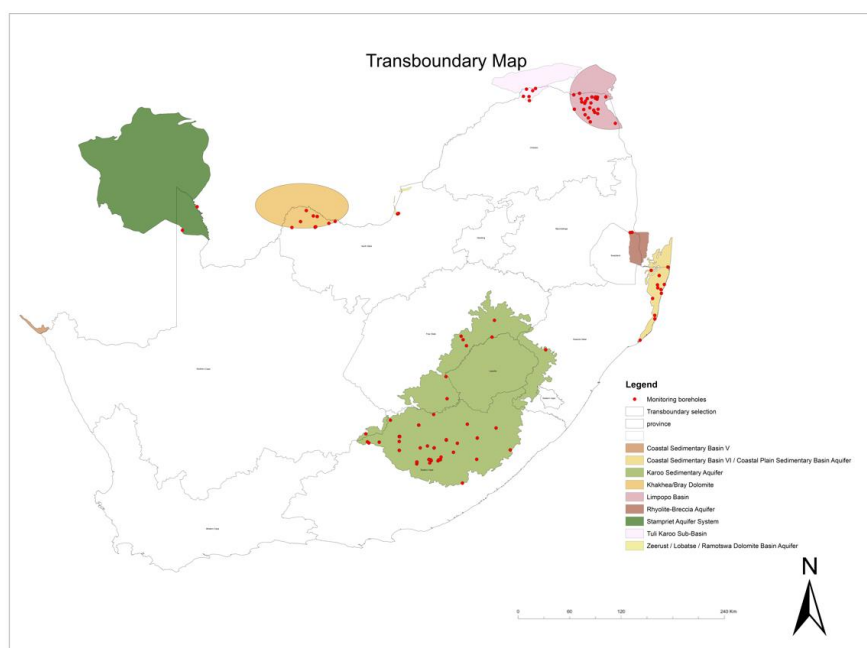


Figure 1: An overview of groundwater monitoring stations in aquifers.

The groundwater monitoring station in Aquifers are monitored daily (hourly readings), monthly, quarterly and bi-annually depending on site and instruments used. Groundwater level data is recorded hourly using monitoring loggers, while manual ground water level readings (statics) are taken monthly using Water Level Meter.

Sustainability and future plans:

Expansion of the network is underway to implement the recommendation made from the Optimisation of the South African Water Resources Monitoring Network project. Secondly there are number of research studies/project happening in most of the transboundary aquifer to develop and manage them.