

Groundwater is an important part of the national water mix, contributing to the basic water supply and livelihood of more than 50% of communities in thousands of villages and small towns countrywide. The recently completed National Groundwater Strategy provides an important framework and plan of action towards the sustainable use and management of this precious resource.



Background

Since South Africa's democratisation in 1994, groundwater's role has undergone a major change from an undervalued resource with a 'private water legal status' to a source of domestic water and general livelihood to more than 50% of communities in thousands of villages and small towns countrywide as part of the national drive to meet basic water needs.

The Department of Water and Sanitation (DWS) responded to this change with an internal Groundwater Strategy, and took the decision to work towards a national strategy together with wider sectors. The national strategy is required to:

- Let the full role/potential of groundwater unfold towards water security in South Africa
- Establish a framework within which stakeholders at all levels can

become an essential part of 'good groundwater governance' in South Africa.

- Initiate a long-term process of rolling out sustainable groundwater utilisation within water resource management (WRM).

The DWS together with the Water Research Commission established the first edition of a National Groundwater Strategy. This follows widespread consultation during 2016 among stakeholders in the water and related sectors. During the consultation, the sustainable development vision for the resource and the principle of 'local management facilitated nationally' was strongly endorsed.

Need for a national groundwater strategy

Given South Africa's inherent water scarcity, the development of

groundwater resources is crucial for sustaining water security. South Africa's groundwater occurs mainly in hard rock aquifers and, compared to other countries, yields are limited, yet groundwater can still play a useful role as part of the national water mix. South Africa's utilisable groundwater exploitation potential is estimated at 7 500 million m³/a, allowing for factors such as physical constraints on extraction, potability, and a maximum allowable drawdown. Current use is between 3 000 and 4 000 million m³/a.

There are serious warning signals that groundwater use in South Africa is on an unsustainable path at present. Water services to communities, a national priority, are under threat. Many municipal schemes from groundwater have failed or are close to failing.

A key approach for this strategy will have to be to explicitly take into account the unique characteristics of groundwater that have a bearing on its sustainable development and management. Local level management of the shared, vulnerable resource will have to be brought about within this strategy framework, while maintaining the overall approach of integrated water resource management, as set out in the National Water Act (Act no. 36 of 1998).

Fundamental to the strategy will be a

proper valuing of groundwater from a previously neglected resources to a resource that is protected, conserved and used sustainably.

Strategy objectives and principles

The ultimate goal of the National Groundwater Strategy is to ensure sustainable, accessible and cost-effective supplies for human survival and socio-economic development, while maintaining the environmental services that groundwater is supporting, in an integrated development approach.

Several objectives have been set for the strategy, namely:

- To achieve improved rural water supplies for basic and livelihood needs, practicing integrated water resource management at local scale.
- To achieve sustainable small town/village supplies from groundwater, practicing integrated water resource management at local scale.
- To improve water security for urban development from groundwater through a range of conjunctive-use options, integrated with wastewater management.
- To expand irrigation agriculture, especially for small-scale and supplementary irrigation from groundwater, with focus on sustainability and appropriateness and cost-effectiveness of technology.
- To develop new groundwater sources in increasingly complex locations, including brackish water, for industrial/ mining supply in situations of increasing water scarcity.
- To actively pursue the protection and conservation of groundwater resources by all sectors of society,

taking cognisance of its general vulnerability and of the range of essential services, including vital ecosystem services, which the hidden resource can provide.

- To achieve sustainable resource utilisation through appropriate groundwater resource governance resulting in capacitated local participative resource management, enabled and supported by a coordinated national/regional water sector.

From policy to action

To address the groundwater vision and objectives and the present inadequate groundwater management situation in South Africa, a groundwater governance framework for action has been developed. Its concept is based on the Global Groundwater Governance Framework completed in 2015, while its detail has been informed by local context, both by hydrological and by overall governance and macro-economic objectives.

The framework (Figure 1) illustrates that, as local action unfolds, each of the national/regional/basin level strategic actions will be mirrored by corresponding action at the local level

The different strategy themes are highly inter-related. For example, while groundwater resource protection (theme 4) and sustainable groundwater resource utilisation (theme 5) have been addressed separate themes, both will require regulation (theme 3) to become fully effective. Importantly, every aspect of the framework, national and local, has to link to the already existing enabling IWRM policies and legislation. To bring about the challenging 'national facilitation of local actions' approach, will require an ongoing stakeholder will and drive and a national groundwater champion to lead the process.

Besides the existing enabling legislation and strategy, the other critical enablers, namely national groundwater leadership and stakeholder-driven development, need to be established without delay. The essential local actions need to be facilitated by a wide range of actions at national/catchment management level.

A critical role of national groundwater leadership will be to maintain the vertical integration between the different governance levels and to build strong functional linkages to other sectors that are using and/or impacting groundwater.

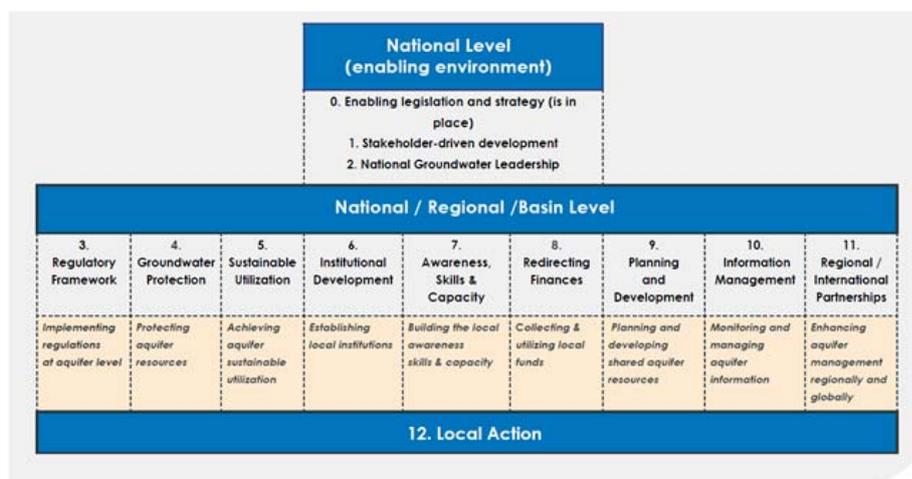


Figure 1. The National Groundwater Strategy Governance Framework

For more information order the report:

National Groundwater Strategy (WRC Project No. TT 714/17) by contacting Publications at Tel: (012) 761-9300 or Email: orders@wrc.org.za or Visit: www.wrc.org.za