

1. EXECUTIVE SUMMARY

Southern African members of the Technical Advisory Committee (TAC) of AMCOW (African Ministers' Council on Water) have requested an assessment of the status of groundwater resources management in Southern Africa. The purpose of the assessment will be to position the region for a possible piloting of the recent resolutions of AMCOW regarding groundwater resources management in Africa. The Water Research Commission undertook to fund the development of a methodology for this purpose and the testing of the protocol with readily available information for the region. As a follow up, the GTZ of Germany had indicated funding support for a strengthening of the assessment, in particular through a multi-stakeholder workshop in the region.

The approach adopted was to assess the groundwater resources management status in SADC based on available groundwater documents and scientific literature from the area and weigh it up against some form of generally accepted 'best practice', summarized from the international groundwater management literature, to obtain a measure of management status. The key premise for the assessment methodology is that groundwater resources management must take place within an IWRM framework. To achieve this, the IWRM Toolbox developed by the Global Water Partnership was used as scope and content for the assessment under the main headings of 'Enabling Environment', Institutional Development' and 'Management Measures'. A management performance rating of 'good', 'limited' or 'below expectation' was assigned to different elements within this framework, by comparison with the benchmark provided in the best practice analysis.

The assessment took the socio-economic development situation and the status of water resources management in SADC into account to ensure that different aspects of groundwater management were relevant in the area. Context for the assessment for southern Africa was

provided by an introductory overview of major groundwater issues and problems in Africa.

The overarching goal of SADC is 'Regional Integration and Poverty Eradication'. Cooperation in various sectors was initiated by way of protocols to the SADC Treaty. Protocols are instruments in international law. In the case of water, there is the SADC Protocol on Shared Watercourses, which entered into force in 1998 and was revised in 2003. The Protocol fully caters for groundwater. At a planning level, work on a regional strategy for the newly formed water sector was initiated in 1996 and its first 5-year programme became the RSAP-IWRM (1999-2004). One of the components of the integrated action plan is a Groundwater Programme. A comprehensive Regional Water Policy and Regional Water Strategy have been developed since then. An important vehicle for implementing this policy is the existence of well-functioning river basin organizations (RBOs), mandated by the Protocol and operating under sound legislation and systems for planning and stakeholder involvement and embracing IWRM principles.

Integrated or comprehensive approaches are internationally accepted as a basic principle for effective water management throughout the world. They are more readily understood, particularly in the case of groundwater, in terms of managing elements of the hydrological cycle, both quantity and quality, for example surface water and groundwater, waste water and groundwater in urban situations, and groundwater as part of land management and integrated catchment management. Managing groundwater within an IWRM framework will focus the attention on the equally important socio-economic and institutional aspects of water.

Some of the particular challenges to groundwater resources management relate to its resources management. The overriding criteria of equity, environmental sustainability and economic efficiency in water use best express the comprehensive IWRM approach, common pool

nature and its widespread distribution and generally dispersed abstraction points. Because the links between users and the resource are often not apparent, and because many of the benefits associated with groundwater are public goods (such as environmental maintenance, health and poverty alleviation), the overall economic value of groundwater goes largely unrecognized. For this reason, it is critical that the approach to groundwater resource management should be one of 'top-down facilitation of local actions'. This matches IWRM thinking, with one of its key tenets being that traditional top-down approaches to management have to be supplemented by, and indeed partly replaced by, bottom-up strategies to ensure that the water sector is demand-driven and can deliver welfare gains to the whole range of end users. For bottom-up strategies to be effective new institutions are likely to be needed.

Groundwater, despite the hard rock and generally low yield nature of aquifer systems in most parts, has a major development role to play in Southern Africa, particularly in rural development and the servicing of urban fringes. Its potential role, conjunctively with surface water, particularly in drought risk management, has not yet been systematically addressed.

SADC is well placed to address groundwater resources utilization more strategically through the IWRM institutions and processes that are already in place. The groundwater resources management shortcomings that have been identified lie largely at national level. Here you still find a general bias towards surface water resources, except in countries with a strong dependence on groundwater. This is reflected in poor attention to groundwater planning at all levels, in particular macro-planning. It is also obvious in the relatively low priority accorded groundwater in funding commitments, in particular for vital but completely inadequate groundwater monitoring, exploration and data gathering. Of considerable concern is the wide-spread lack of capacity of institutions tasked with the management of groundwater resources, in national as well as new, decentralized institutions, in particular river basin organizations. Evaluated

against international 'best practice', the status of water resources management in SADC was assessed as 'below expectation', using the above-mentioned classification. There appears to be awareness at decision-making level about the importance of groundwater, but this is not yet adequately reflected in national policies and practices.

The international experience is that turning around this type of situation will require strategic action across sector and international boundaries. A number of recommendations are made, based on the study and in line with the AMCOW resolutions, which could precipitate such strategic action in the region. They address a strategic groundwater management framework and action plan at regional level and groundwater management plans at national and river basin organization level. There are also some specific recommendations on how to attract financial resources and ongoing attention for such an initiative.

These recommendations should be confirmed and expanded on at a SADC multi-stakeholder workshop and should be seen as an expansion of the SADC Groundwater Management Programme.

It is felt that the South African capacity for IWRM and, in particular for groundwater resources management, can make a much greater contribution than at present to developments in southern Africa and that the Water Research Commission should strategically position itself for such a role.