Water Quality Management (WQM)

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WATER QUALITY MANAGEMENT POLICIES AND STRATEGIES FOR SOUTH AFRICA

NEWSLETTER

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WATER QUALITY MANAGEMENT POLICIES AND STRATEGIES FOR SOUTH AFRICA

PURPOSE OF NEWSLETTER (No. 1 of 4, May 2016)

The purpose of this newsletter is to:

i. introduce the WQM Policy and Strategies project;
ii. update you on progress and inform you about the way forward;
iii. invite you to register as a stakeholder; and
iv. solicit your comments.

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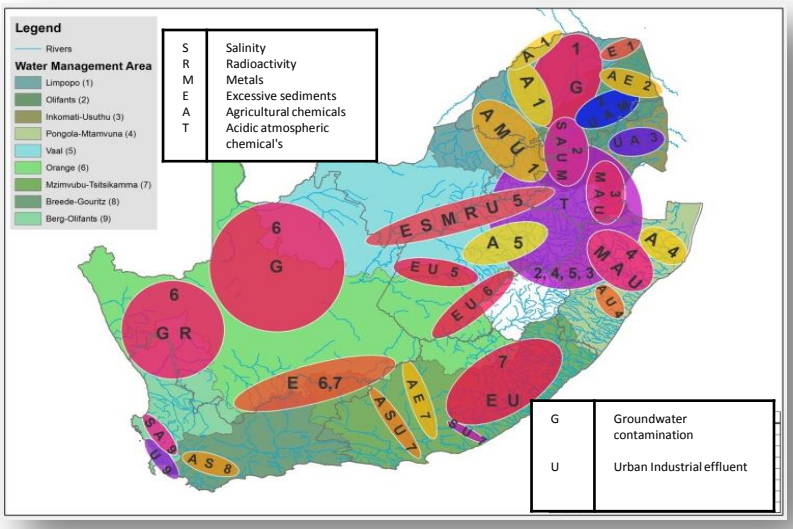
For more information on the project, please refer to the dedicated project website on the Department's website:

www.dws.gov.za/projects/iwqms

"The quality of water and the quality of life in all its infinite forms are critical parts of the overall, ongoing health of this planet of ours. " **Peter Blake**

Sustainable development is critically dependent on assurances of good quality of the country's limited resources. Development must be balanced by an increased supply of water of an appropriate quality to satisfy the human needs. Rapid urbanisation, expansion of the mining industry, increasing use of chemicals in agriculture and destruction of our natural/green infrastructure has undermined the quality of the country's water resources (see figure below). Poor water quality impacts negatively on human health, threatens downstream irrigation areas and food security, increases industrial costs and raw water treatment costs arising from removing pollutants, reduces income generated from recreation and ecotourism, destroys ecosystems and affects biodiversity. The deterioration of water quality is therefore an issue that can affect many national priorities and strategies including strategies for economic development, health management and biodiversity conservation.



Demand for water will continue to grow as the country's population increases as well as social and economic conditions improve in South Africa, hence placing increasing pressure on the country's scarce water resources and concurrently, increasing potential threats to water quality. Therefore, Water Quality Management (WQM) has to be undertaken within these realities of increased socio-economic development and meeting the water user requirements for specific circumstances and matching them with appropriate measures to ensure on-going beneficial and sustainable water use. It is recognised that the existing WQM policy (Water Quality Management Policies and Strategies in the RSA in 1991 and the Resource Directed Management of Water Quality in 2006) whilst innovative at the time of publication, is now in need of revision in order to align with current overarching policy and legislative frameworks, socio-economic trends and emerging global issues.

Key amongst these issues are fundamental changes in governance and institutional frameworks. It is also recognised that whilst there is a myriad of supporting operational policies, strategies and management instruments; the fragmented nature of these have created a challenge for integrated WQM. Therefore, the integration of the WQM Policy and IWQM Strategy with wider national policies provides the opportunity to align the approaches towards managing water quality and ensuring that it is a **national imperative**, and not just the mandate of the Department of Water and Sanitation.

EVOLUTION OF WATER QUALITY MANAGEMENT IN SOUTH AFRICA

The Department and its predecessors has a long history of efforts to address water quality in South Africa:

1919: Early control of water pollution focused on sewage disposal. The *Public Health Act (Act 36 of 1919)* prevented sewage effluent from being disposed into watercourses. The sewage was irrigated during this time.

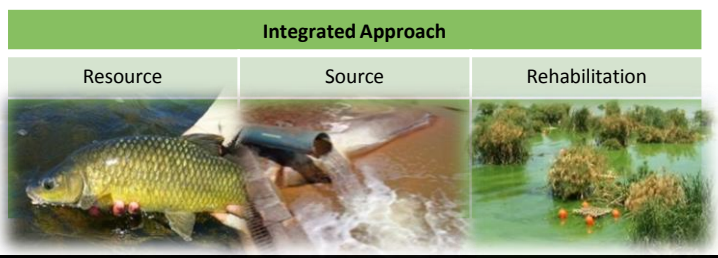
1956: The *Water Act (Act 54 of 1956)* was promulgated to control the industrial use of water and the treatment and disposal of industrial effluent. The Act also required that all effluent be treated and returned to the body of water from which it was abstracted, for re-use.

1984: As mining and industry and their resultant impacts increased, the *Water Amendment Act (Act 96 of 1984)* provided for *Uniform Effluent Standards* (first published in the 1960's) to control pollution came out to control waste water.

1991: *Water Quality Management Policies and Strategies in the RSA*. This policy introduced the receiving water quality objectives approach and the concept of managing the quality of water in water resources such that it does not exceed certain limits. These objectives were primarily designed to protect downstream water users and the environment.

1997: *White Paper on a National Water Policy for South Africa*. In the democratic South Africa, a review of national water policy was imperative in light of the Constitutional right of access to sufficient water (Bill of Rights, Constitution of South Africa, Section 27 (1) (b) and Section 24). The Policy outlined 28 key and foundational principles for water quality and WQM. 1997 also saw the development of the *Water Services Act* that provided the legislative framework for the effective provision of water services, including for basic human needs. The highlighted the spirit of co-operative governance with the emphasis on building capacity at all levels of government.

1998: *National Water Act (Act 36 of 1998) and the Water Services Act (1998)*. The Act protects water resources, bringing together water quality and quantity. The focus is on an integrated resource, remediation and source-directed approach so as to manage the system as a whole.



The country thereafter shifted to developing operational policies and strategies to give effect to the overarching Acts and Policies of 1997 and 1998. These include:

2000: *Policy and Strategy for Groundwater Quality Management in South Africa*. The policy confirmed the concept that an integrated strategy must include integrated water quality management for all resource types.

2004: *National Sanitation Strategy*. Integration in the strategy implies alignment with and influence of water sanitation frameworks. The development of the *National Water Resources Strategy (NWRS)* set out the policies, strategies, guidelines and procedures for the management of water in the country.

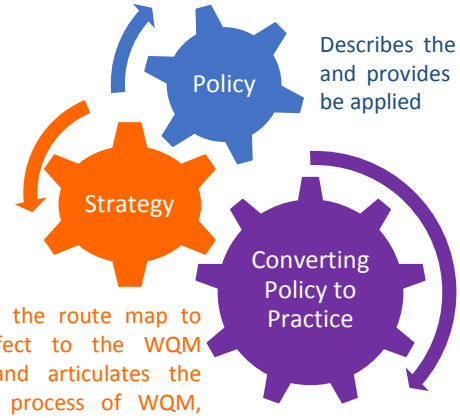
2006: *Resource Directed Management of Water Quality Policy*. The policy was only resource related and did not include a source policy and strategy.

2010/11: *Assessments of water quality* nationally was undertaken, looking at the 330 priority monitoring points and showed that nutrients and salts presented a problem throughout much of South Africa.

2013: *National Water Resource Strategy 2 (NWRS2)* listed eutrophication, salinisation, microbial and metal contamination, toxicants (pesticides) and agro-chemicals as concerns, but did not provide a holistic strategy to address them. The sources of pollution include untreated or poorly treated discharges from waste water treatment works, run-off from unserviced areas, agricultural run-off, industrial wastewater discharges and mining impacts. It was recommended that management instruments be developed to direct the implementation of WQM imperatives.

Current: in 2015, Sanitation once again fell under the mandate of the Department. This initiated the *National Water Policy Review, revision of the Sanitation Policy and legislative framework.*

Next Steps: The Department is in the process of developing a national WQM Policy and accompanying Integrated WQM Strategy to improve and integrate existing water quality related policies and strategies so that they address current WQM challenges; are aligned to recent executive polices and strategies; and meet the needs of the Department, and larger water sector.



Describes the vision for WQM in SA and provides the principles that will be applied

Outlines the pragmatic approach to implementation and clearly articulates roles and responsibilities, resource (financial and human capacity) requirements, Monitoring and evaluation framework and linkages and dependencies between key activities.

Provides the route map to give effect to the WQM policy and articulates the broader process of WQM, describing the financial and institutional arrangements

Water Quality and its Management

Water quality describes the chemical, physical and biological characteristics of water, that are influenced by either dissolved or suspended substances, in respect of the water's suitability for an intended purpose.

Water Quality Management involves the maintenance of the fitness for use of water resources on a sustained basis, by achieving a balance between socio-economic development and water resources protection. From a regulatory point of view the "business" of WQM entails the ongoing process of planning, development, implementation and administration of WQM policy, the authorisation of water uses impacting on water quality, and the monitoring and auditing of the aforementioned.

PROJECT DESCRIPTION

The Water Quality Management Policies and Strategies for South Africa project runs from October 2015 until September 2017, with five phases:

Inception Phase (completed): Define project scope, identify stakeholder groups.

Assessment Phase (completed): This phase will establish the status quo with respect to water quality and water quality management (WQM) practices and challenges in South Africa, institutional arrangements and the current WQM instruments.
International case studies have been reviewed. Possible gaps will be revealed to inform the Policy, Strategy and Implementation Plan.

Policy Phase: Develop a Policy which describes our vision for WQM in South Africa and provides the WQM principles that will be applied.

Strategy Phase: Develop a Strategy that describes the actions required at a national level to achieve the vision of the Policy and to address the gaps.

Practice Phase:
Develop a Sector-Based Implementation Plan which stipulates the priorities for implementation, who must do it, how and by when.
Develop Monitoring and Evaluation Framework to monitor progress in implementation.
The Policy, Strategy and Practice phases will be reported in later newsletters.

INSIGHTS FROM INTERNATIONAL EXPERIENCES

Water quality is high on the international agenda. Water is explicitly addressed in two of the United Nations Sustainable Development Goals (SDGs): Clean Water and Sanitation (Goal 6) and Life below Water (Goal 14), which includes the health of aquatic systems. Water is integral to achieving many, if not most of the other goals, particularly the goals to eliminate poverty and hunger.

South African policies and strategies for water quality management are advanced in terms of international practice, but there are still lessons to be learnt from emerging and innovative approaches elsewhere. An international review was therefore carried out on a range of approaches in both developed and developing countries. The following insights were gleaned in the areas of strategic alignment, coherent instruments and partnerships.

Strategic Alignment

- *Water quality problems are increasingly **shifting to Non-Point Source (NPS)** related to failing infrastructure.*
- *Basin **water quality rehabilitation** / management is a long-term process requiring institutional capacity and financial sustainability, within broader water resources management.*
- *Water resources **crisis provides opportunity** to gain political will and momentum, but needs to be sustained*
- *Catchment water quality management requires a **combination** of technical, regulatory, economic, financial and institutional **interventions.***
- *Influencing **government financing mechanisms** provides a critical means of enabling water quality action*
- *The **SDG indicator process** provides an opportunity to address water quality issues.*

Coherent instruments

- *Regulatory and strategic approaches are increasingly focusing on minimising pollution by being stringent on priority sectors.*
- *Clean technology supported by green economy initiatives and financing mechanisms provides targeted ways of reducing pollution at source.*
- ***Coherent regulatory regimes and strategic institutional approaches** supported by appropriate financial mechanisms and cooperative actions.*
- ***Natural (green) infrastructure is recognised as critical aspect of integrated management** of water quality in urban and rural settings.*
- *Various economic (and financial) approaches have been attempted, the selection of which should be dependant on the **individual context and may be targeted.***
- ***Good water quality monitoring** enables enforcement and compliance, but this can **be incrementally developed and funded.***

Partnerships

- *Government needs to play a **lead role** in driving, coordinating and often financing the remediation – not always just water quality managers.*
- ***Building long-term partnerships** is fundamental to sustained and effective local solutions*
- *Basin institutions lead catchment rehabilitation / protection, through a range of rural and urban measures.*
- ***Alignment and consistency** is an emerging challenge that **requires cooperative governance** and regulatory/strategic approaches (vertical and horizontal).*
- *Private sector has a crucial role to play in minimising its impacts on water resources, and **collaborating through water stewardship partnerships.***

STAKEHOLDER ENGAGEMENT

Consultation and communication with stakeholders form an essential part of the project. During the development of the policy, strategy and implementation plan there will be targeted stakeholder engagements in the form of workshops and focus groups in order to glean inputs. Once the WQM Policy is gazetted for comment in September, wider consultations are planned which includes 9 provincial workshops and a national government workshop. Furthermore, a National Symposium is planned for April 2017 which aims to address implementation of the finalised WQM Policy and IWQM Strategy.

WATER QUALITY MANAGEMENT CHALLENGES

In order to adequately inform the Policy and Strategy, the current and potential future water quality and water quality management challenges need to be understood. The Root Cause and SWOT analyses provided the following insights:

- ***Promote integration** of water quality & quantity in water quality management.*
- ***Formalise cooperative governance structures,** processes and resources for water quality regulatory actions across all government institutions.*
- ***Formally address overlaps of or gaps** between statutory/regulatory/oversight mandates of all government institutions relevant to WQM.*
- ***Formalise an institutional/legal framework** for DWS intervention in municipalities with failing Water and Sanitation functions.*
- ***Develop a Strategy and Plan for Sectoral Partnerships and PPPs** (including NGOs and civil society) in the water quality domain.*
- *The Implementation Plan **must include a mechanism to ensure ongoing engagement** with DWS senior management on water quality management.*
- *The Implementation Plan must **include a mechanism for continuous public and school-level engagement** to promote joint custodianship of the resource.*
- ***Intensify water quality management capacity development** across all technical and administrative levels and across all relevant sectors.*
- ***Overhaul all aspects of water quality monitoring** and data management.*
- ***Intensify all aspects of compliance, monitoring and enforcement** in DWS and other government institutions relevant to water quality management.*
- ***Mobilise funding** of water quality management initiatives external to the DWS Budget.*
- *In **highly sensitive areas** with high environmental or social importance, **no developments** should be considered and these areas should be protected.*
- *An **integrated planning approach should be followed** which spans across sectors and considers all development.*

THE WAY FORWARD

The development of the WQM policy is underway. The first step is to develop a suite of principles which will form the foundation for the WQM Policy itself. This process will also look at the socio-economic impact of the policy itself.

To ensure that you are kept informed of progress with the project and the opportunity to participate, please register on the project's stakeholder database by either emailing the project team, registering on the IWQMS DWS website (www.dws.gov.za/projects/iwqms) or responding to the accompanying reply sheet.