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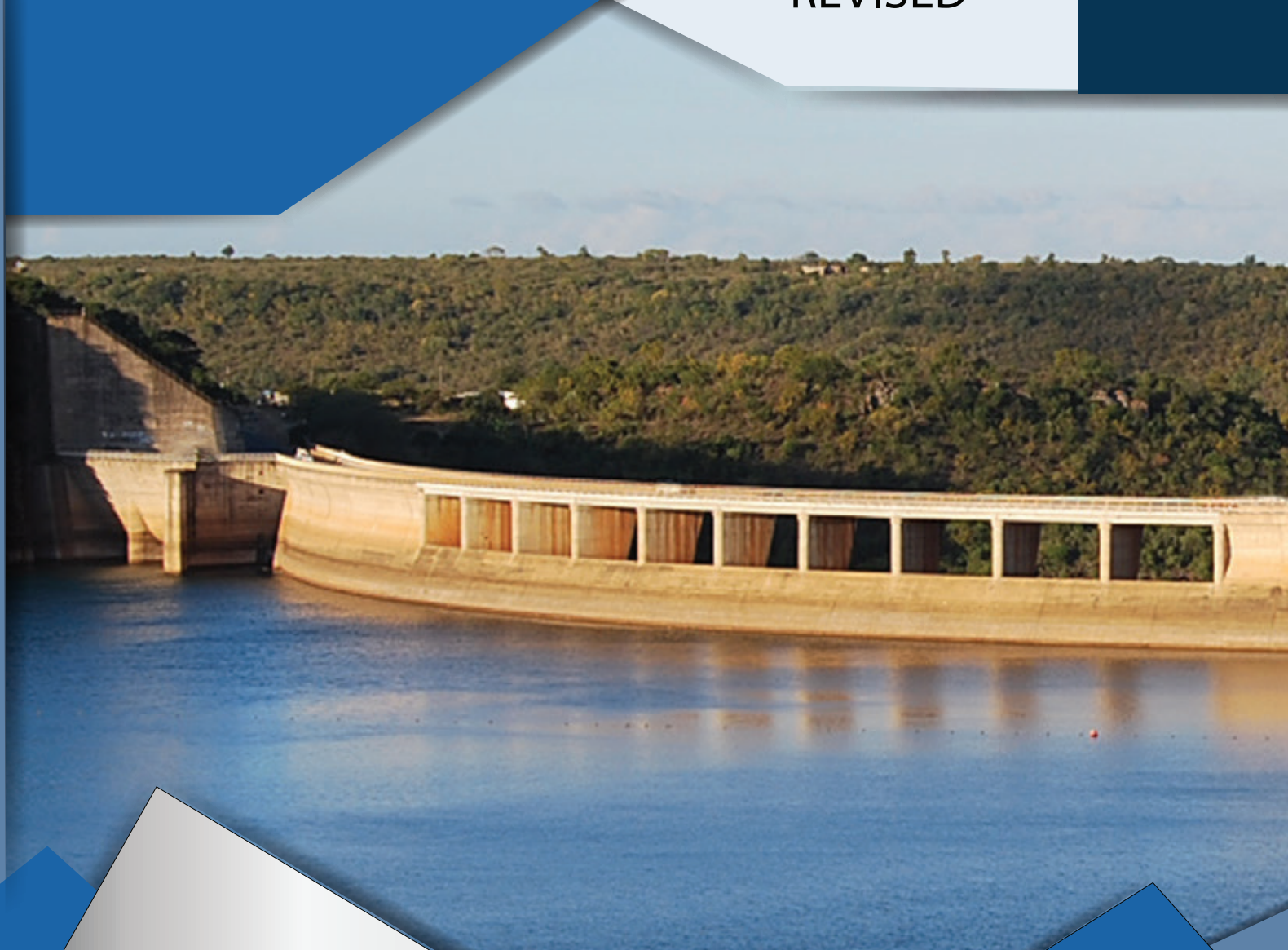


STRATEGIC PLAN

FOR THE FISCAL YEARS

2020/21 to 2024/25

Contents

Executive Authority Statement

FOREWORD BY THE MINISTER

The Department of Water and Sanitation (DWS) is entrusted with two of the fundamental needs which every sector of the society in our country is depended upon – supply of clean, running water and to provide access to sustained sanitation services. This responsibility is enshrined in the Bill of Rights of our Constitution which affirms everyone's right to receive basic services.

Through the mandates derived from the National Water Act (NWA), the Water Services Act (WSA) and the Water Research Act (WRA), which also emanate from the constitutional imperatives, the DWS carries the responsibility to ensure that the population of our country is supplied with water, our farmers have sufficient supply of water to produce agricultural products, our mines are able to produce precious metals, and that all industries have equitable share and use to sustain our economy, but most importantly, ensure that we manage the water resources efficiently.

To this extent, we have made strides in establishing a Regulator Commission to create a degree of independent oversight over the regulation work of the Department and to create a degree of separation between the policy, regulation, and implementation functions of the Department. The establishment of the Regulator Commission is in line with the National Development Plan (NDP 2030), which identified the need to establish an Independent Economic Regulator to oversee all water trading services. The Regulator Commission oversees and guides the regulation work of the Department. Further, it enables a degree of independence and autonomy to be introduced to the setting of the water tariffs, which will in turn ensure that as a sector, we continuously and sustainably provide water in an equitable manner.

In an endeavour to carry out our mandate effectively, we have undertaken the process of institutional reforms to capacitate the Department and reviewing of water boards in as far as their mandates are concerned and ensuring that they serve municipalities in terms of the District Development Model (DDM). These processes are at an advanced stage.

A new departmental organisational structure has been approved and it includes increased capacity for supporting municipalities with the provision of water and sanitation services as well as additional staff for the processing of water use license applications.

As committed in the 2022/2023 Annual Performance Plan (APP), the Department implemented a comprehensive turnaround plan to streamline the process for water use license applications. The target was to clear the backlog of applications by June 2022 and to process 80% of all applications within 90 days during the 2023/2024 financial year.

Thus far, the implementation of the turnaround plan for processing water use license applications has been nothing but a success. By December 2022, 99% of the backlog of long overdue water use licenses had been eradicated. The Department is on track to have processed approximately 70% of new applications within 90 days during the 2022/2023 financial year. This is an improvement over the 2021/2022 financial year when it only processed 60% of applications within 90 days, and notably this is proving to provide much needed relief to our water users.

The turnaround plan has included business process reengineering, training of staff, and improvements to IT systems. With the approved structure in place, additional staff are being employed to process water use license applications, which will result in the target of processing 80% of water use license applications within 90 days being met during 2023.

The Department has had several large national water resource augmentation projects which have been delayed in previous years. We are now focusing on getting these projects back on track.

We are also working with the water boards and municipalities to fund and implement water services infrastructure projects, either using grants (the Regional Bulk Infrastructure Grant and Water Services Infrastructure Grant) or through private sector financing based on off-take agreements between the water boards and the municipalities. This collaboration is meant to ensure sustainable water supply in all the municipalities across the country.

The energy crisis that is affecting every aspect of our livelihoods in the country has not spared the water sector, this is compounded by the infrastructure challenges at the water supply operations systems. Many of our citizens have complained that their municipal water and sanitation services provision are deteriorating, which is also confirmed by the results of the Department's Green and Blue Drop reports.

During 2023/2024, one of our key priorities as a Department is to initiate a review of the institutional and financial arrangements for municipal water and sanitation services in the country, in consultation with COGTA, SALGA and other stakeholders. The aim of the review will be to explore possible reforms to put municipal water and sanitation services on a stable and sustainable financial footing, and to run them more professionally while ensuring that access of these services remain a basic human right to all citizens as enshrined in our constitution.

MR SENZO MCHUNU (MP)
MINISTER OF WATER AND SANITATION

MESSAGE FROM THE DEPUTY MINISTER

The current heavy rains across the country are translating to immense disaster and regrettably we note the loss of lives and serious destruction of people's homes and other infrastructure such as roads, bridges connecting towns and schools in KwaZulu Natal, Mpumalanga, Gauteng and Limpopo Provinces. These disasters came at a time when as a country after being directed by President through his State of the Nation Address of 09 February 2023, are posturing to implement radical recovery plans aimed at reigniting our economy through sustaining the power grid and stabilizing ESKOM. Load shedding adversely contributes and/or impedes economic growth of our country and many businesses have been affected and Water and Sanitation we are unable to abstract and pump water as many of our plants are dependent on power supply from ESKOM.

The security of water supply is paramount socio-economic development. We must always plan for climate change. The challenges posed by climate change, water, nutrients, and energy are converging. About twelve million hectares of land becomes degraded each year. Droughts and floods are becoming more frequent and larger. For a host of reasons Africa is at the eye of this storm.

The global importance of water cannot be overstated; it is crucial for all life and important for human socio-economic wellbeing; hence its value is seen from the context as an environmental, social and economic good. The well-being of human society through the ages has been dependent on secure sources of water; conversely, its absence has seen the demise of often well-established societies.

The fact that SADC countries share similar climate, hydrological and water resources governance provide a compelling case to create a water–energy -food nexus platform to support regional planning. For example, Mozambique, Zambia and Zimbabwe share the Zambezi water basin, while South Africa supplies energy to several countries such as Zimbabwe, Botswana, and Swaziland.

Over the past few years our infrastructure planning and implementation has experienced poor planning, inadequate budgeting, delays in execution, poor maintenance of infrastructure, corruption in procurement, and lack of technical engineering capacity. We will improve our capacity including recruitment of young professionals within the sector.

The World Toilet Week held in Nigeria last year in the month of November has once again reminded us of our legal mandate of restoring the dignity of our people through ensuring that they receive descent sanitation. We are enjoined to ensure all South Africans receive dignified sanitation services. This is notwithstanding ours being a water-scarce country. In this regard, there is a great need to look into and raise awareness that in our situation of water scarcity, there is absolute need for the introduction and use of alternative and new sanitation technologies. It will be most critical that sufficient buy-in is received in this regard.

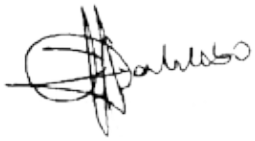
It is important to raise the point that whilst as a department we continue to deliver on the planning, and delivery of bulk services, these need to translate to the actual betterment of the lives of all South Africans.

Protection of the water resources remains critical especial due to high levels of deteriorating water quality caused by infrastructure failure by many of the municipalities who are Water Services Authorities, mines and industries. The main sources of this pollution include uncontrolled discharge of mine-affected water, dysfunctional wastewater treatment systems, runoff from agricultural lands, and runoff from settlements lacking sanitation or proper refuse management.

Our world-class water resource planning has been neglected over the past few years as we concentrated on providing basic water supply to our people. We will re-invigorate our long-range planning capabilities. To do this, we will build on the technical skills still available within the sector. We need to investigate opportunities to leapfrog to alternative pathways for delivering on water security and managing water and sanitation services.

Cooperation between all levels of Governments and strengthening of governance systems therefore become imperative and are critical success factors in addressing water resources and associated issues and challenges.

We can and must build on these small developments. The path is clear. But we all need to work together and walk together to get to the destination we seek.



M D MAHLOBO (MP)
DEPUTY MINISTER OF WATER AND SANITATION

MESSAGE FROM THE DEPUTY MINISTER

The submission of the Department of Water and Sanitation 2022/23 – 2024/25 Annual Performance Plan comes when our country is experiencing high demand of water and sanitation. The population and the economy are growing, and inefficiency exacerbates supply problems in a country that is already water scarce, receiving less than half the average level of rainfall around the world.

Load shedding-related electricity disruptions has severe consequences for the continuous treatment and supply of water services. The consequences of electricity outages for potable water are so severe that in extreme cases disrupting water supply completely and compromising water quality.

Section 27(1)(b) of the Constitution of the Republic of South Africa, 1996 (Constitution) guarantees everyone the right of access to sufficient water and requires the state to adopt reasonable legislative and other measures to progressively realise this right within its available resources. Although section 27 of the Constitution addresses the right to water, it does not explicitly provide for the right to sanitation. The right to sanitation can, however, be derived from other sections in the Constitution such as environment, health, and dignity.

There are various challenges that are threatening our compliance to constitutional imperatives, and they include amongst others:

- The poor construction and/or maintenance of water and sanitation infrastructure in homes and communities, which led to a lack of access to services.
- A lack of monitoring of the completion and quality of service delivery projects tasked to external contractors that were paid for their services.
- The lack of ongoing maintenance, upgrading and expansion of bulk infrastructure to meet the needs
- Poor or a lack of maintenance of water treatment and wastewater treatment infrastructure.
- Degraded water-related ecosystems, water scarcity caused by climate change.
- Underinvestment in water and sanitation.

To accelerate efforts towards meeting water related challenges, the united nation assembly has declared 2018-2028 as an international decade for action.

In 2016, the United Nations (UN), adopted the Sustainable Development Goals (SDGs), which are aimed at ending poverty, eradicating inequality and injustice and fighting climate change within agreed timeframes. The predecessor to the SDGs were the Millennium Development Goals (MDGs), which in 1990, set 25-year global development targets for signatory states. One of the MDGs required States to “halve the proportion of people without sustainable access to safe drinking water and basic sanitation.

Water is clearly central to the economic growth and sustainable development of a nation. However, water and its management cannot be regarded as being simply a national matter; there are also regional issues to consider. South Africa, like many other countries, shares a substantial proportion of its water resources with its neighbours.

Management arrangements and development proposals therefore need to take this relationship into account. Given the complex array of interrelated factors in the water sector, there is an urgent need to draw together insights from different perspectives and disciplines. These should serve as an input into any decision making on ensuring water security in South Africa and in the Southern African region.

A theoretical sequence might start with planning and institutional development, yet there is substantial, pressing problems on the ground that must be addressed at an early stage. It is therefore prudent to draft an immediate programme of investment that would be coupled with and inform planning and institutional development, in the following respects:

From a water resource perspective, better planning of investment in, and operation of, services at either municipal or regional utility level is needed. This is essential for providing timeous estimates of future demands for water, to guide water resource planning and investment, as well as identifying hotspots for investment in wastewater interventions. Planning should address ongoing operational activities, as investment without consideration of operational implications will lead to suboptimal expenditure.

Water resource planning and development planning need to be better integrated at all levels. This will ensure that water will support development in other sectors; that interventions for water resource development reflect broader development priorities; and that development opportunities offered by water resources are taken up.

The capacity of local governments needs to be improved so that they can ensure efficiency in water supply and use and prevent extensive water pollution. In this context, an institutional option that needs to be investigated is the extent of decentralisation and possible regional approaches to water supply and sanitation. A successful review might imply that constitutional reform is needed for a regional option to be successful. The alternative is to consider interventions that would enable local governments to operate more effectively. This option would also apply to improving the quality and reliability of drinking water supply.

The delay in the finalization of transformation charter is affecting the transformation agenda of the department. There is a need to finalize and implement the charter during the 2023/24 financial year.

In promoting community participation, protection, use, development, conservation, management, and control of the water resources, we should finalise the configuration of Catchment Management Areas as well as Water Users Associations as a matter of extreme urgency.

MS J.(N- TSHABALALA) (MP)
DEPUTY MINISTER OF WATER AND SANITATION

MESSAGE FROM THE DIRECTOR GENERAL

The Department of Water and Sanitation through its various programmes will continue to effectively manage the country's water resources to ensure equitable and sustainable socio-economic development and universal access to water and dignified sanitation. The planned activities for the 2023/24 medium term can be summarised as follows:

Within the administration programme, the Department has plans in place to comply with the corporate governance prescripts. This includes fighting corruption in the water and sanitation sector at all government levels through collaboration with law enforcement agencies to inter alia recover funds from previous years' irregularities. Significant progress has been made to address historical improper expenditure challenges that affected the Department in the previous years. For the 2023/24 financial year, plans are in place to continue implementing the financial and recovery plan. Also, the Department plans to improve its procurement by implementing an infrastructure procurement strategy. Another priority is to improve the billing and revenue collection across the water value chain.

Plans for the water resource management include planning and implementing several water resources infrastructure projects to ensure the security of water supply for the country. Also, the Department plans to diversify the water mix through guiding and developing other water sources (e.g. groundwater) to reduce the significant reliance on surface water.

For the 2023/24 financial year, the Department plans to strengthen regulatory interventions to address the pollution of the environment and communities from wastewater. The regulatory interventions also include the continuous efficiency of water use license turnaround times whilst also promoting the transformation of water use.

Another priority for the Department is to establish and / or transform water resource institutions (e.g. transformation of irrigation boards to water user associations).

Within the water services management programme, the Department plans to strengthen its role in regulating, supporting and intervening in municipalities where water and sanitation services are deteriorating. Poor service delivery and the published 2022 Green Drop Report and Blue Drop Risk Rating Report emphasised the need to prioritise support to municipalities that are failing. Also, water use efficiency as well as demand and conservation management are other priorities for the Department to address non-revenue water within the municipal level. The reconfiguring the water boards' operating areas to support the Department in implementing its mandate is another important priority for the upcoming financial year.

DR SD PHILLIPS
DIRECTOR-GENERAL

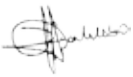
Official Sign-Off

It is hereby certified that this Strategic Plan:

Was developed by the management of the Department of Water and Sanitation under the guidance of Mr S Mchunu (MP);

Takes into account all the relevant policies, legislation and other mandates for which the Department of Water and Sanitation is responsible.

Accurately reflects the impact, outcomes and outputs which the Department of Water and Sanitation will endeavor to achieve over the period 2020/21 – 2024/25.

Ms ONV Fundakubi DDG: Corporate Support services	
Ms FLNW Lusenga DDG: Provincial & Entity Governance and International Cooperation	
Ms D Mochotlhi DDG: Water Resource Management	
Mr L Manus Acting DDG : Infrastructure Management	
Mr XC Zwane DDG: Regulation, Compliance and Enforcement	
Mr RP Mathye DDG: Water and Sanitation Services Management	
Mr F Moatshe Chief Financial Officer	
Dr SD Phillips Director-General	
M D Mahlobo (MP) Deputy Minister of Water and Sanitation	
Ms J.(N- Tshabalala) (MP) Deputy Minister of Water and Sanitation	
Mr S Mchunu (MP) Minister of Water and Sanitation	

PART A: MANDATE

1 LEGISLATIVE AND POLICY MANDATES

The legislative mandate of the water and sanitation sector seeks to ensure that the country's water resources are protected, used, developed, conserved, managed, and controlled through regulating and supporting the delivery of effective water supply and sanitation.

1.1 Legislative mandate

The Department and the sector draw their primary mandate from the following legislation:

1.1.1 The National Water Act, 1998 (Act No 36 of 1998) as amended

The National Water Act seeks to ensure that the country's water resources are protected, used, developed, conserved, managed, and controlled in a sustainable and equitable manner for the benefit of all people.

The Act assigns the national government as the public trustee of the water resources. Acting through the Minister, it has the power to regulate the allocation, use, flow, and control of all water in the Republic. It also identifies the need to establish suitable institutions to achieve its purpose. In addition, it provides for the development of the National Water Resources Strategy (NWRS) which must be regularly reviewed and the requirement of each Catchment Management Agency (CMA) to develop a catchment management strategy for the water resources within its jurisdiction.

1.1.2 The Water Services Act, 1997 (Act No 108 of 1997)

The Water Services Act prescribes the legislative duty of municipalities as water service authorities to supply water and sanitation according to national norms and standards. In addition, it regulates Water Boards as important water service providers.

The Act compels the Minister to maintain a National Water Services Information System and to monitor the performance of all water services institutions, as well as providing for the monitoring of water services and intervention by the Minister or the relevant Province when necessitated.

With reference to a "right to basic sanitation", this is the primary legislation relating to sanitation in South Africa. It further defines basic sanitation as: 'The prescribed minimum standard of services necessary for the safe, hygienic and adequate collection, removal, disposal or purification of human excreta, domestic wastewater and sewerage from households, including informal households. Further regulations, norms and standards pertaining to sanitation can be found in the Housing Act (No.107 of 1997).

It acknowledges that although municipalities have authority to administer water supply services and sanitation services, all government spheres are required to works towards this object, within the limits of physical and financial feasibility.

1.1.3 The Water Research Act, 1971 (Act No 34 of 1971)

The Water Research Act establishes the Water Research Commission and the Water Research Fund, and thus promotes water related research and the use of water for agricultural purposes, industrial purposes, or urban purposes. The Minister appoints members of the Water Research Commission (WRC), and thus exercises executive oversight over the Commission.

1.2 Policy framework

1.2.1 National Water Policy Review (2013): the policy review determined unintended oversight and gaps in the existing water policies to provide amendment to address the following:

(a) Use-it or Lose-it: *Any authorised water use (including existing lawful use) unutilised for a specified period should be reallocated to the public trust. This water will be reallocated to address social and economic equity*

(b) No water trading: No form of temporary or permanent trading between authorised water users. The obligation for any holder of an entitlement to use water; if it is no longer utilised, is to surrender such use to the public trust.

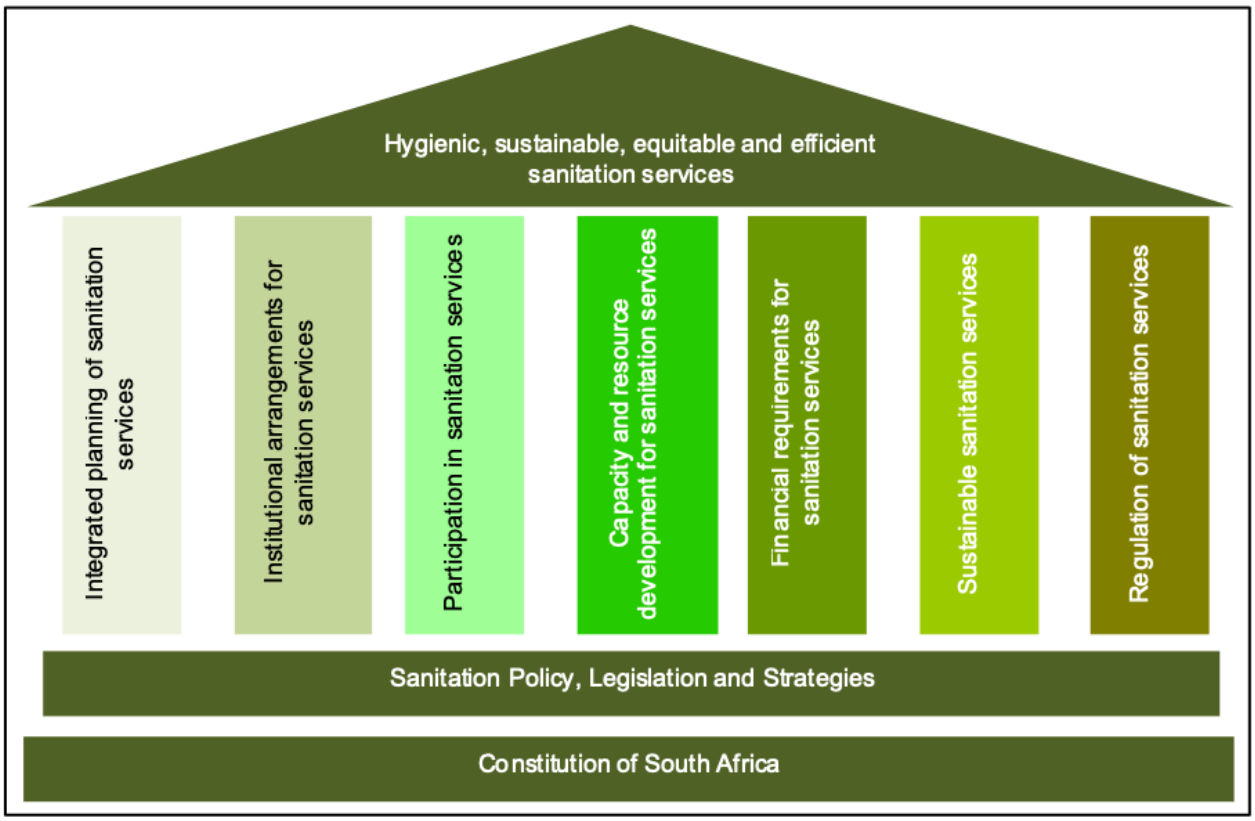
(c) Prioritising social and economic equity**:** The ddecision making will have equity as the primary consideration. Priority will be accorded to water use authorisation applications that meet the equity requirement, as provided in the regulatory instruments.

(d) Multiple water use approach in planning**:** A multiple water use approach incorporating all water uses in an area including water supply, must be adopted in planning of bulk water infrastructure. This approach will also have equity and transformation as a priority

(e) Access to basic water supply**:** A water service authority (WSA) should work progressively or incrementally towards providing higher levels of a sustainable water supply to all households and public institutions, including rural areas. When planning, a WSA must consider a basic water supply which addresses current domestic and productive use requirements, as well as future growth in these requirements

(f) Free basic water supply to indigent households**:** Free basic water supply will be provided to indigent households only.

1.2.2 **National Sanitation Policy (2016):** the policy review addresses the entire sanitation value chain (namely the collection, removal, disposal or treatment of human excreta and domestic wastewater, and the collection, treatment, and disposal wastewater). The figure below indicates the categories under the seven (7) pillars of the policy



1.2.3 Other water and sanitation policies and strategies include the following:

(g) White Paper on Water Supply and Sanitation (1994)

(h) White Paper on National Water Policy for South Africa (1997)

(i) White Paper on Basic Household Sanitation (2001)

(j) Strategic Framework for Water Services (2003)

(k) National Water Resources Strategy, Second Edition (2013)

(l) Water and Sanitation Climate Change Policy (2017)

1.3 Legislative and policy mandates for cross cutting priorities

1.3.1 Employment Equity Act 55 of 1998: section 20(1).

1.3.2 Preferential Procurement Policy Framework Act 5 of 2000.

1.3.3 The Broad-Based Black Economic Empowerment Act 53 of 2003.

1.3.4 National Youth Policy 2015-2019

1.3.5 Youth Accord Pillars: (Youth Employment Accord April 2013)

1.3.6 South African National Policy Framework for Women Empowerment and Gender Equality (NPFWEGE), 2000.

1.3.7 Job Access Strategic framework for recruitment, employment and retention of people with disabilities (2006 – 2010).

1.3.8 Spatial Planning and Land Use Management Act of 2013

1.3.9 White Paper on the Rights of People with Disabilities in South Africa 2016.

2 INSTITUTIONAL POLICIES AND STRATEGIES OVER THE FIVE-YEAR PLANNING PERIOD

The National Development Plan (NDP) predicts that before 2030, all South Africans will have affordable, reliable access to sufficient safe water and hygienic sanitation[1].

The Industrial Policy Action Plan (IPAP) also sets out the intentions of South Africa in terms of expanding the manufacturing sector, which will increase water demand. To balance requirements and supply, South Africa will therefore need to reduce water demand, as well as increase supply for a growing population and economy to ensure water security.

2.1 Joint National Wetland Management Policy: The policy recognises that wetlands are a critical source of water and for the natural biodiversity. For a semi-arid country like South Africa that receives below average rainfall of approximately 497mm, far below the world average of 860mm), wetlands become critical water factories and their protection is therefore priceless. Between 2016 and 2018 the DWS developed the Draft Wetland Policy from the 2016 Position Paper. After consultations, it was recommended that a Joint National Wetland Policy between the DWS and the Department of Forestry, Fisheries & Environment and the Department of Agriculture, Land Reform and Rural Development. The sustainable management of wetlands has also been recognised as a key activity that contributes towards achieving various national and international commitments, goals and priorities, including the National Development Plan (NDP)'s goal for an environmentally sustainable and resilient country, the 2030 Sustainable Development Goals (SDGs), the African Agenda 2063, international and national Climate Change mitigation and adaptation goals and the post 2020 Agenda set by the Convention on Biological Diversity, amongst others.

2..2 Integrated Water Quality Management policy: the policy seeks to develop an intergovernmental water quality management approach which would facilitate an integrated response to address water quality management challenges in the country. The policy would strengthen the existing integrated water quality management strategy that identified priority programmes to be implemented country wide.

2.3 National Water Act Amendment Bill: The amendment to the National Water Act is progressing and the intention is to request Cabinet approval to publish the Bill for public comments before the end of March 2023.

2.4 Water Services Amendment Bill: The amendment of the Water Services Act is to be delayed slightly due to the Minister's increased focus on municipal water services and the DWS is engaging other stakeholders to strengthen the DWS' role in regulating, supporting and intervening in municipalities regarding water services. DWS is currently working with WRC to carry out a detailed research on possible amendments to the Water Service Act to enable the strengthened role, which might include measure such as licensing of the Water Service Providers. Therefore, to avoid a piece meal approach to amendments, the Water Services Amendment Bill will be delayed until towards August 2023 to finalize such a process.

1 *Source: National Development Plan 2030, National Planning Commission (2012: 178)*

2.5 **National Water Resource Strategy third edition (NWRS-3):** (NWRS) provide the framework for the protection, use, development, conservation, management and control of water resources for the country as a whole: the NWA requires the review of the NWRS at intervals of not more than five (5) years and this is the third edition of National Water Resources Strategy (NWRS-3).

2.6 **Review of the water pricing strategy:** The strategy review seeks to improve the financial viability of government's bulk raw water business to ensure that this scarce resource is valued by all citizens. One of the major changes of the review is to replace the Return on Asset to Future Infrastructure Built Charge over 10 year rolling period.

2.6 **National Water and Sanitation Master Plan:** National Water and Sanitation Master Plan: The National Water and Sanitation Master Plan (NW&SMP) was launched by the Minister of Water and Sanitation on 28 November 2019. The NW&SMP operationalizes the National Water Resource Strategy (NWRS) and focuses on mobilising the commitment and efforts of all role players and stakeholders in the water and sanitation sector towards achieving the desired future state of the sector, as defined by the Government's vision, goals and targets until 2030 (NDP, SDGs, MTSF and other key drivers). The NW&SMP provides a critical overview of the present state in the sector and outlines the key challenges the sector is currently facing, together with a consolidated plan of actions required to enable the achievement of the set targets. The plan of actions includes a detailed schedule of consolidated and prioritised interventions, actions, investments, projects, and initiatives. For each action, the plan defines specific intermediate and final targets, the parties responsible for their achievement, the deadlines for delivery and the estimated costs or other required resources. The achievements are monitored and evaluated annually by the DWS. The NW&SMP is a living document, parts of which are regularly updated to accommodate changes in the water sector.

Relevant court rulings

Constitutional Court Case: Mazibuko and others vs. City of Johannesburg and Others (CCT 39/09) (2009) ZACC. In this case the Constitutional Court recognised that water is life and that everyone has the right to sufficient water.

PART B: STRATEGIC FOCUS

VISION, MISSION VALUES AND IMPACT STATEMENT

1 Vision

Equitable and sustainable water and sanitation that support socio-economic growth and development of the wellbeing of current and future generations.

2 Mission

To ensure the universal access of all South Africans to equitable water resources and sustainable water and sanitation services, by:

- Protecting, developing, conserving, managing, and regulating water resources.
- Managing, regulating, and providing efficient and effective water and sanitation services.
- Providing strategic leadership and evidence-based policy direction to a coordinated water and sanitation sector for improved sector performance and service delivery.
- Building the skills and capabilities of the sector and enhancing information management to inform decision making; and
- Enhancing communication and stakeholder partnerships with communities and sector constituencies to advance the national development agenda.

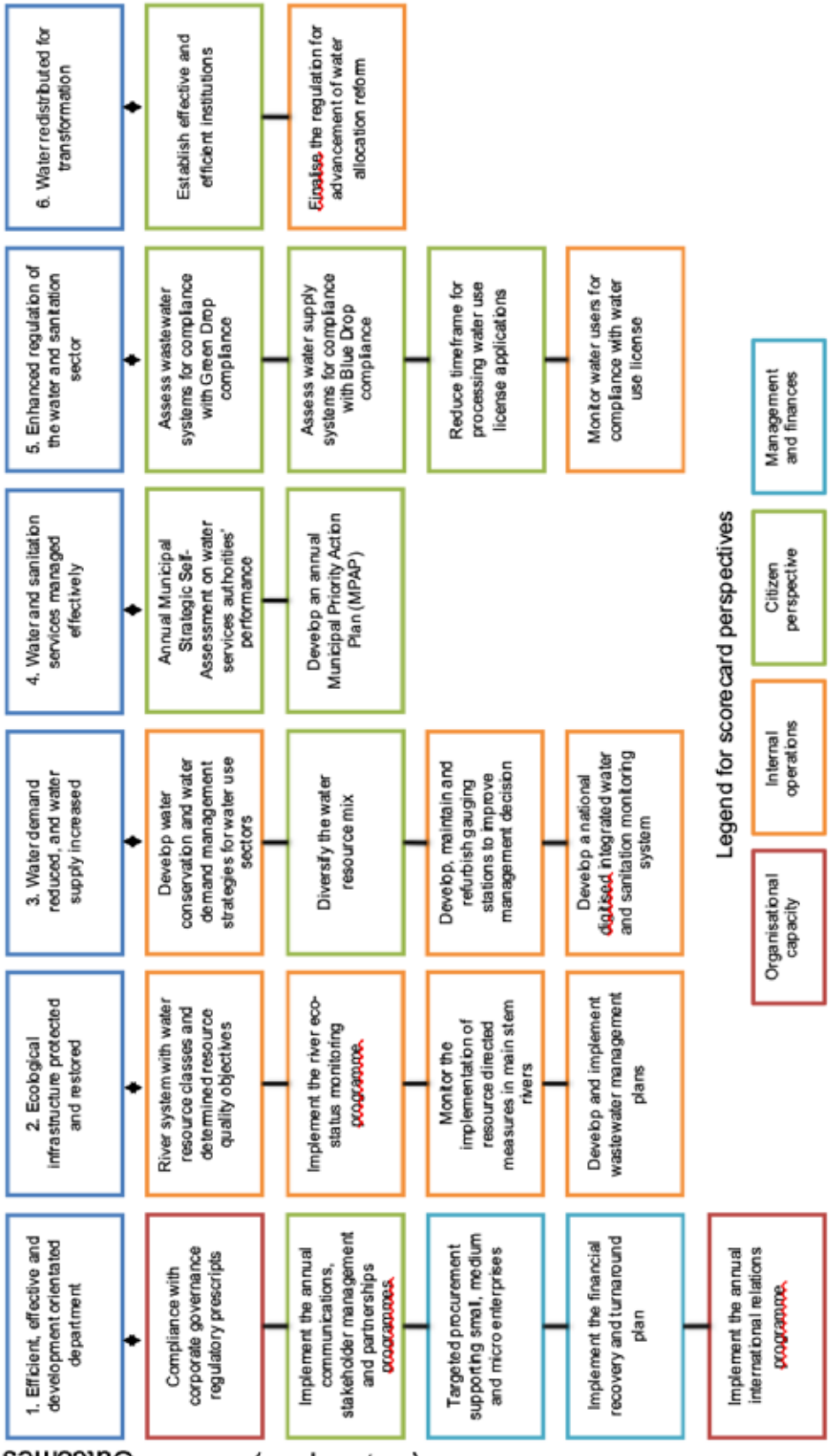
3 Values

- Providing services impartially, fairly, equitably and without bias.
- Utilising resources efficiently and effectively.
- Promoting and maintaining high standards of professional ethics.
- Responding to people's needs; citizens are encouraged to participate in policymaking.
- Rendering an accountable, transparent, and development -oriented public administration.

4 Impact statement

Water resources that are protected, used, developed, conserved, managed and controlled in a manner that supports ecologically sustainable economic and social development that transforms access to water to redress racial imbalances.

5 Strategy map of the Department



6 Updated situational analysis

Freshwater system creates and sustains diverse ecosystems on which life depends. Freshwater ecosystems such as rivers, lakes, wetlands, aquifers however, accounts for less than one percent of the earth's water [2].

6.1 External environment

There is a probability of water crises in South Africa due to insufficient investment in water infrastructure; poor maintenance in existing water infrastructure; recurrent droughts driven by climatic variation; inequities in access to water and sanitation; deteriorating water quality, and a lack of skilled water engineers. These water crises are exacerbated by poor performance of wastewater treatment works and climate change which continues to present changes in temperature, precipitation and extreme weather events having a detrimental effect on both local and international confidence. The persistent challenges related to water security in South Africa are summarised below:

6.2 Increasing water demand and declining supply

Water, its quality, quantity, and availability, underpins all areas of life and the environment in South Africa. Water in South Africa has a link not only to all aspects of the physical environment, but to poverty reduction, sustainability, equity, and economic development (Knight, 2019). Water mediates all aspects of health and sanitation, agriculture and food, ecosystems and biodiversity, and many other aspects of life and the environment (Rockström et al., 2014; Ziervogel et al., 2014).

South Africa has an arid to semi-arid climate, with a mean annual rainfall of approximately 500 mm which is well below the world average of 860mm. This rainfall produces a total annual runoff of approximately 49 000 million m^3/a. About 65% of South Africa has a mean annual rainfall of less than 500 mm. The country therefore experiences severe and prolonged hydrological droughts, which may last for up to 10 years at a time. Ultimately, only 9% of the rainfall that reaches the ground surface eventually becomes runoff into the South African river systems (WRC, 2015). Due to high temperatures, there is also a high rate of evaporation; as a result, the country's water resources are extremely limited.

Over the years, South Africa has built several dams to store water, however with the growing economy and growing population, there is a need for more dams. There are limited available sites to build those additional dams, and this will include a need for more funding. While great strides have been made to provide water services to households, several households remain without reliable water supply.

2 Source: Bending the curve of global freshwater biodiversity loss: An emergency recovery plan. BioScience, Volume 70, Issue 4, April 2020, Pages 330-342, https://doi.org/10.1093/biosci/biaa002

Water security is one of the biggest issues/challenges facing South Africa and the world in the 21st century. Based on projections, if no substantive action is taken the water deficit by 2030 could be between 2,7 and 3,8 billion m^3/a - a gap of about 17% of available surface and ground water. The growing requirements of neighbouring states for water from the shared river basins could further impact on water availability for South Africa.

The Department has over the years established eleven national water monitoring programmes (both quantity and quality) for water resources. The review and rationalisation of these programmes has been completed and the implementation plan is being actioned in partnership with various stakeholders such as River Basin Organisations, Catchment Management Agencies, Research Institutions, etc. As funding is limited, these partnerships create platforms for resource mobilisation and addresses challenges of vandalism by creating ownership of monitoring stations, speedy increase in spatial distribution to address gaps and adapting to new monitoring technologies and data management.

The eastern half of the country, characterised by summer rainfalls, has received significantly above-normal rainfall in the past two hydrological years (2020/21 and 2021/2022) as presented in Figure 1. This has resulted in a decrease in the number of areas in the country experiencing drought conditions over the past four hydrological years., An observation was made that a strip on the southwestern coastline of the Western Cape Province has received below normal (<75%) rainfall in the last hydrological year, affecting the Berg Olifants and Breede-Gouritz water management areas.

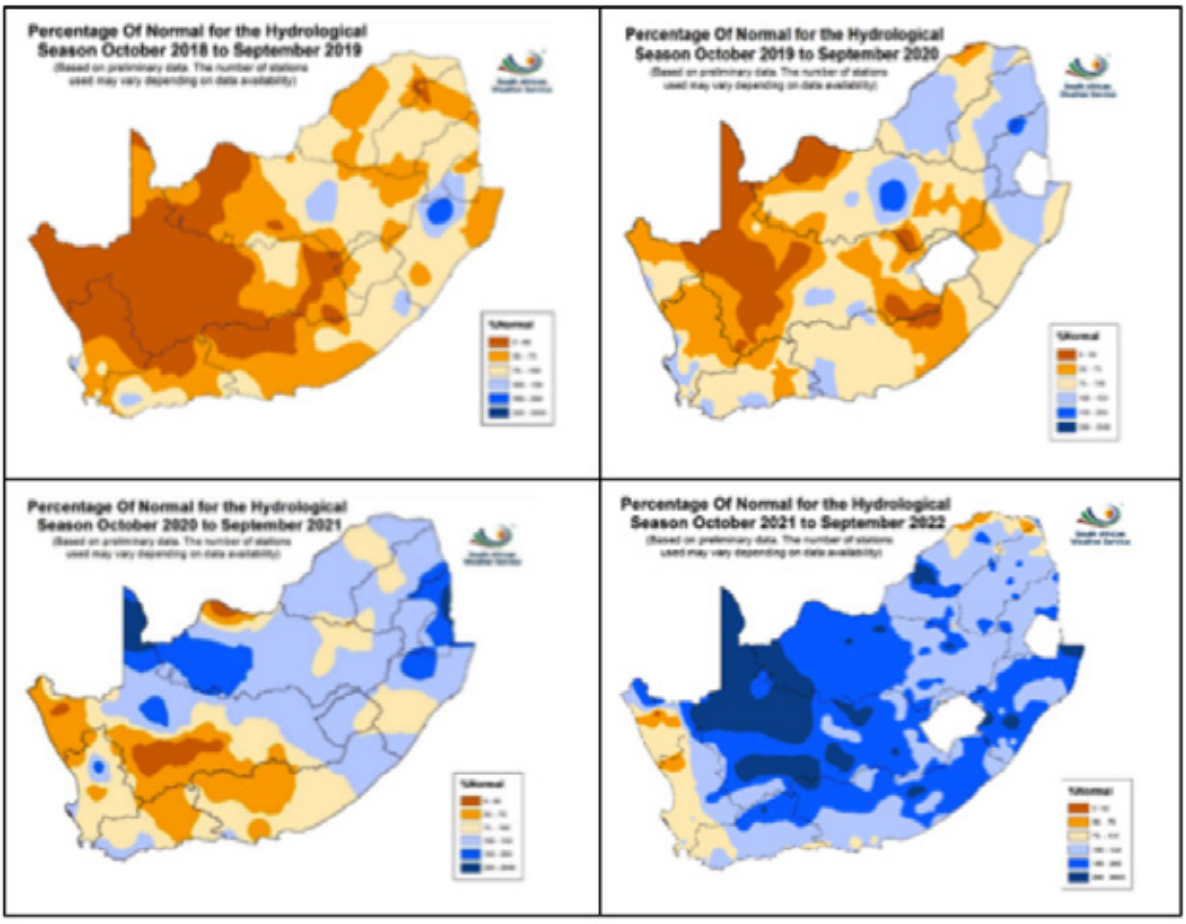


Figure 1 Rainfall % anomalies for the past three hydrological years in comparison to 2021-2022. Blue shades are indicative of above-normal rainfall, and the darker yellow shades of below-normal rain ((Source: SAWS https://www.weathersa.co.za/home/historicalrain)

The Nelson Mandela Bay, Sarah Baartman, Sekhukhune, Namakwa, City of Cape Town, Eden, Overberg, West Coast, and the Cape Winelands Districts Municipalities have been affected by meteorological drought in the last 24 months and require close monitoring and interventions.

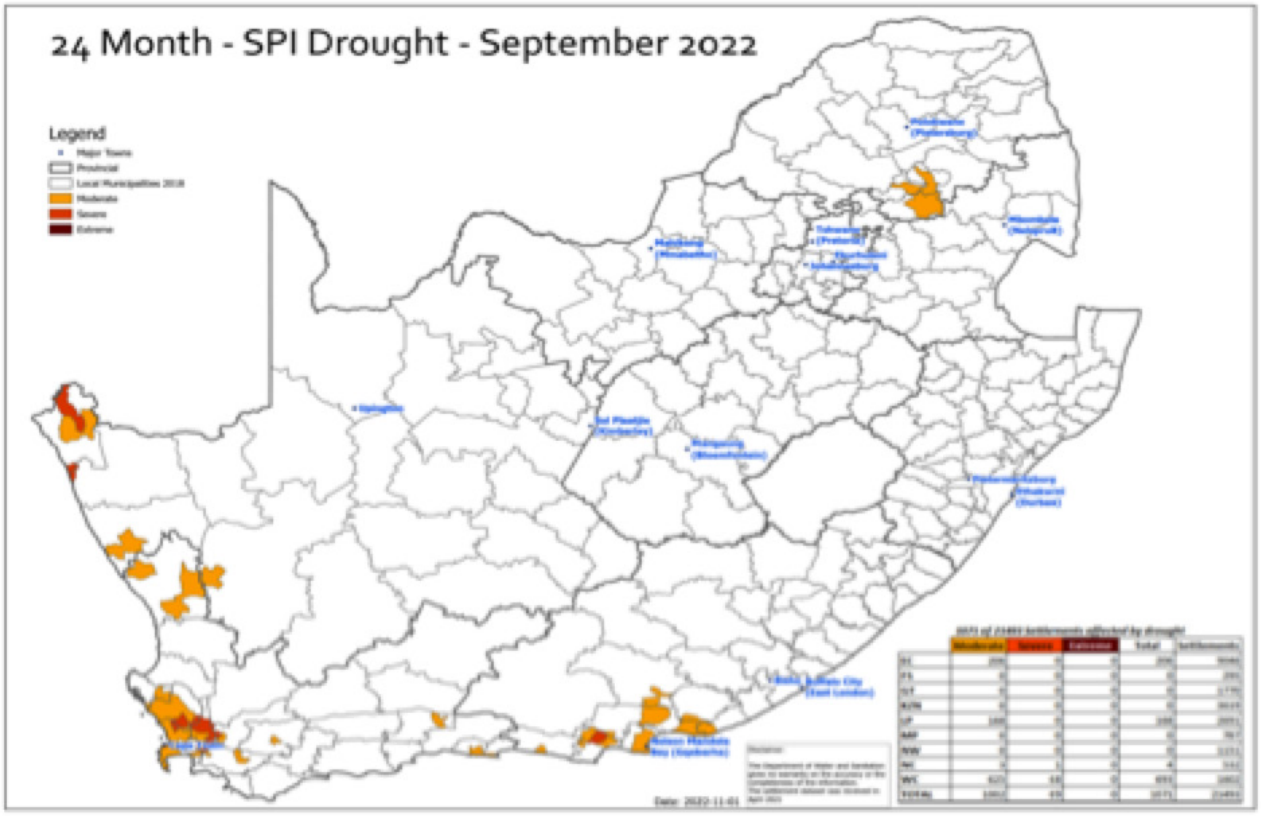


Figure 2: Twenty-four months Spatial Precipitation Index – September 2022 (DWS - NIWIS - Disaster Management - (dwa.gov.za)

River systems (mostly surface water storage) are the common surface water expression of water availability in South Africa, with others being lakes, ponds, and pans. South African river systems and catchments are characterized by a spatial variation in rainfall, as well as variations in catchment sizes and physical properties. These result in different river patterns and dynamics within catchments and further in Water Management Areas, which have implications for water resource availability.

Aquifer storage is another expression of water availability in the country, where an increased groundwater utilization in the country's water mix has been observed in the past decade, due to the significant potential of the groundwater resources in adaptation to climate change and augmenting conventional surface water supplies. A streamflow anomaly map displayed in Figure 3 shows the deviation of streamflow in the 2021/22 hydrological year from the median (median period of 1981-2010). The map shows that of the 21 strategic stations displayed, four stations experienced below normal streamflows, while eight stations were just above normal during the reporting period. Much-below to below normal streamflows were observed on the Tugela River at Mandeni; Gamtoos River; Grootvis River; Olifants River in Mpumalanga; and the Olifants River in the Western Cape province.

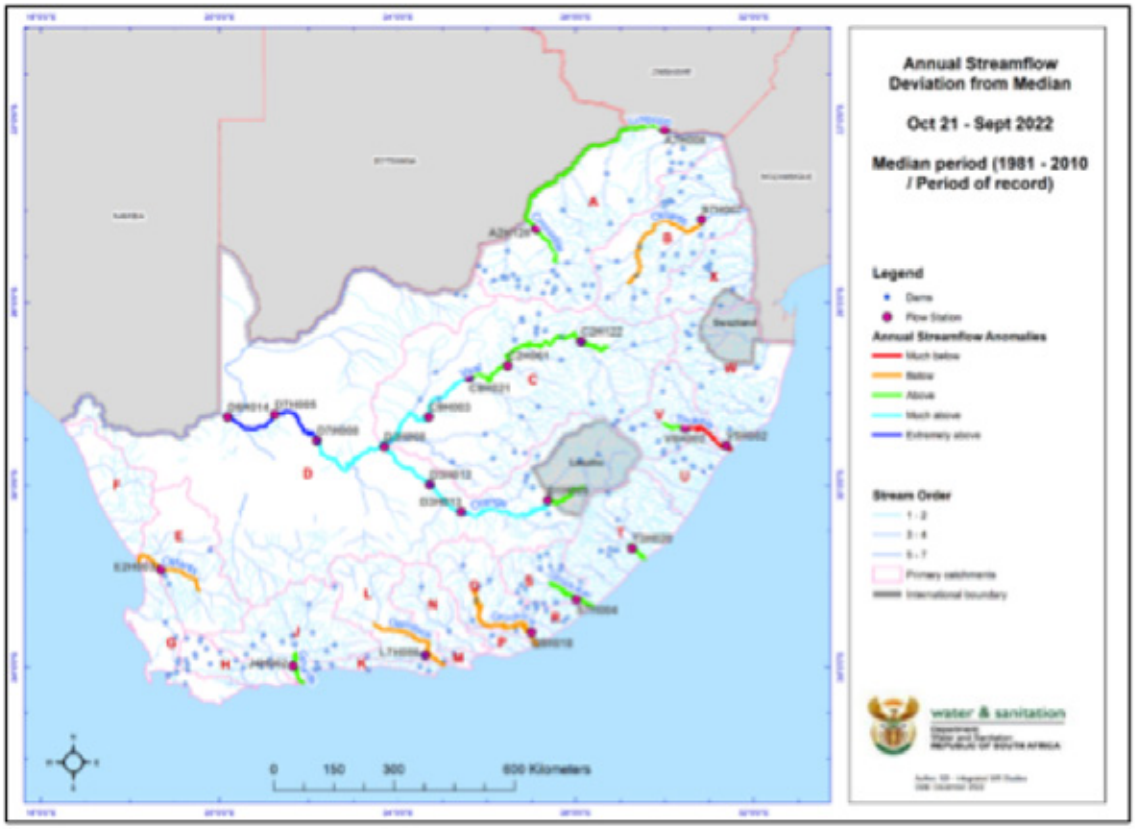


Figure 3 Annual streamflow anomaly for strategic river flow monitoring stations

An observation is made that flows in the Orange and Vaal Rivers were above normal for most of the time in the past year. The country's water security is mainly reliant on fresh surface water, with ground water and return flows underutilised. There are currently 5 569 registered dams with a total gross storage capacity of over 33 291 [3] million m³. Of these registered dams, 4 310 are small serving farms and municipalities. These smaller dams play a critical role in local water security and climate resilience. The total national potential for accessible groundwater, on the other hand, is approximately 4 500 million m³/a; of which between 2 000 and 3 000 million m³/a, is being utilised.

The surface water storage volume is expressed as a percentage of a combined volume: full supply capacity (FSC) of 221 dams being monitored nationally. The national dam levels for the past five hydrological years are presented in 4 below. The national dam storage levels for the past two hydrological years - 2020/21 and 2021/22, have been the highest for most of the months in the past five hydrological years. This was true, especially after the beginning of summer rainfalls received between December and April 2022 for the eastern parts of the country

At the end of the hydrological year (September 2022), approximately 4% of the dams were at critical storage levels, 11% were at risk, and over 85% were either spilling or at optimal storage levels. Most of the dams that were at critical storage conditions at the end of the reporting period were in the Eastern Cape, Limpopo, and Western Cape – all-year rainfall region/winter rainfall region

3 *Note: The total gross storage capacity is not an indication of the dam's current level but the design storage capacity when the dam is full (i.e. 100% storage).*

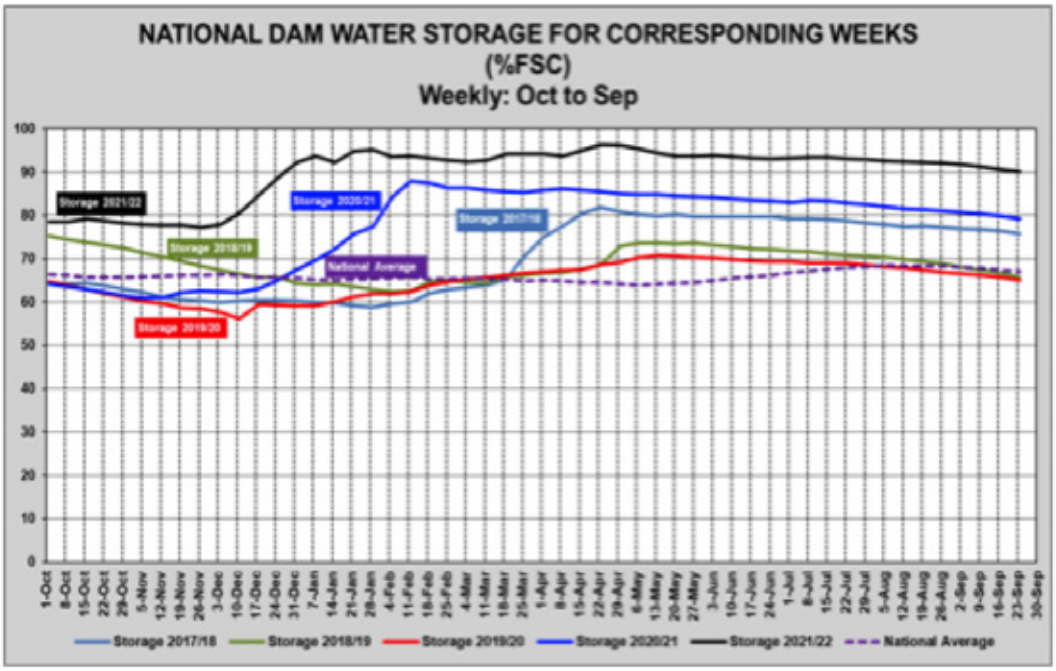


Figure 4 National Dam storage levels for the past five years compared to a national average

The long-term median storage (1978 – 2022) for each province compared to the last two hydrological years is presented in Figure 5. For the hydrological year 2021/22, 50% of the time, the dam levels for all provinces were above the long-term median storage levels. An increase or recovery to above the long-term median from last year is notable for the Eastern Cape and Kwa-Zulu Natal provinces.

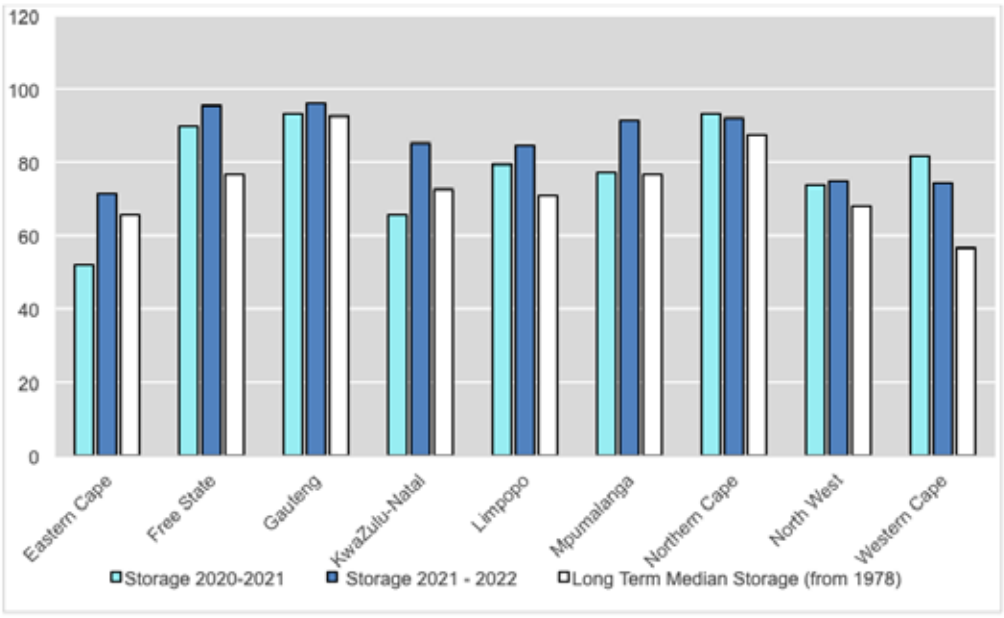


Figure 5: The storage situation in each province during 2021 - 2022, compared with the previous hydrological year and the media

The department has established a monitoring programme for monitoring groundwater levels. Groundwater level fluctuations can be because of human-induced recharge, groundwater abstractions or reflection of climate variation and indicate the stress placed on the resource (Fourie, 2022).

The averages of the groundwater level status for September 2022 are mapped in Figure 6. The groundwater level value is presented as a percentage of the groundwater level status. The entire historical groundwater level monitoring record is assessed per borehole to ensure significant results and understanding. The groundwater level status of the geo-sites is averaged with the topo-cadastral 1:50 000 map sheet grid. It is important to note that the groundwater level status is not linked to groundwater availability and storage levels within an aquifer, but only gives an indication of water level.

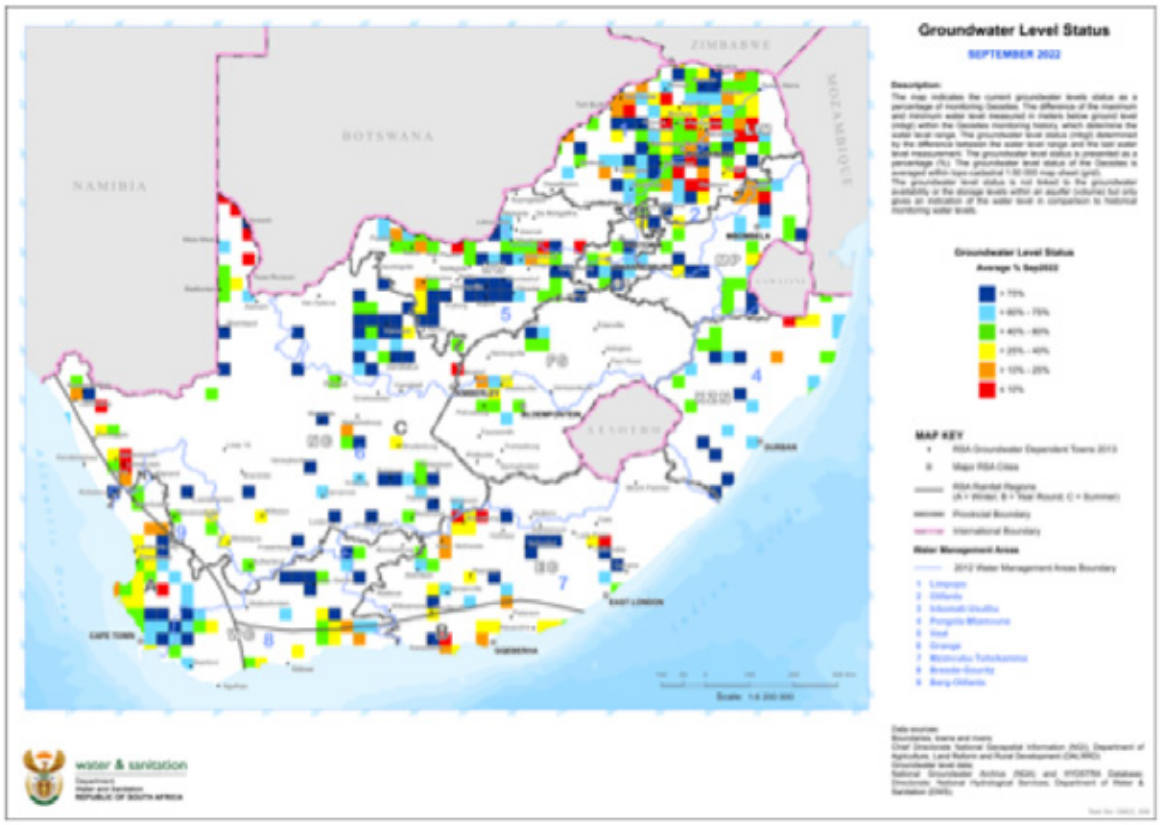


Figure 6: Groundwater level status September 2022

The two consecutive above-normal rainfall years, 2021 and 2022, have improved groundwater level recovery at most places and good aquifer recharge. The impact of drought or over-abstraction on groundwater levels can be presented by its severity on the groundwater resource (average groundwater level status). The average groundwater level status is presented against the percentiles of the historical groundwater levels (Figure 7). The graph provides a visual presentation to indicate drought conditions. Restrictions on groundwater abstraction can be implemented timeously before any negative impacts occur.

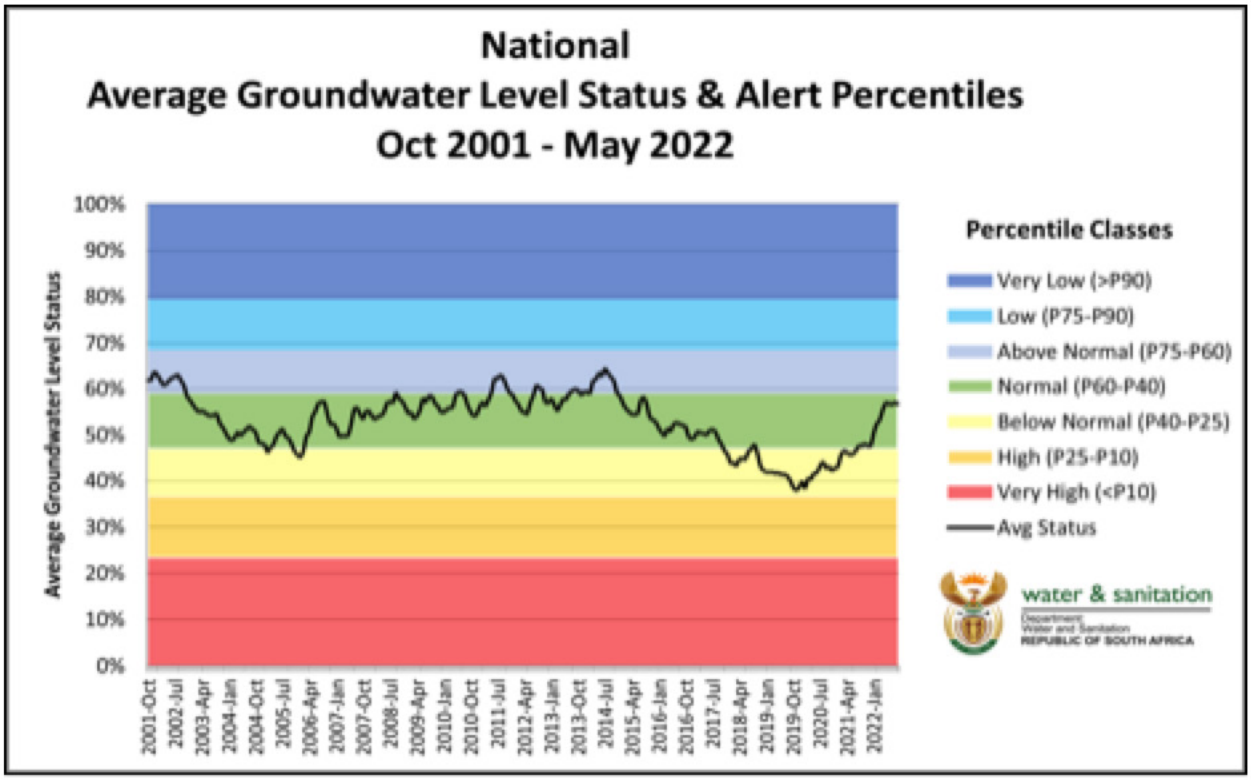


Figure 7: Average Groundwater Level Status Severity Graph

The national average GwLS indicated a recovery trend from below normal in 2019 to normal in September 2022. This can be attributed to the above-normal rainfall received in the current and previous years, which has recharged aquifers.

Deterioration of water ecosystems

South Africa's aquatic ecosystems include seven of the world's freshwater eco-regions, and are characterised by a wide range of river, wetland and estuarine ecosystem types. Many of these aquatic ecosystems make up the country's ecological infrastructure (i.e. nature's equivalent of built infrastructure) that generates and delivers benefits in the water value chain. Ecological infrastructure is currently an under-realised asset that can play a significant role in enhancing returns-on-investment in built infrastructure (e.g. dams), especially if its maintenance is explicitly incorporated into the planning and construction of built infrastructure.

Most of South Africa's freshwater comes from catchments that receive the highest rainfall (i.e. strategic water source areas). There are 22 strategic water source areas occupying 8% of the land, however these provide 50% of the surface run-off (i.e. water in wetlands, streams and rivers). The strategic water source areas support the water needs of approximately 60% of the population, 67% of the national economic activity [4] and supply approximately 70% of irrigation water.

4 Source: Centre for Environmental Rights, https://cer.org.za/news/why-we-must-protect-south-africas-water-source-areas-now.

Many of the high value aquatic ecological infrastructure assets are poorly protected, and in some areas of the country are under severe pressure, from intensive agriculture, mining and urban sprawl that results in loss or degradation of ecosystems. Like built infrastructure, ecological infrastructure needs to be maintained, and in some cases restored, for its socio-economic benefits to be realised.

River systems are either approaching, or already in unsustainable conditions, not functioning as intended, becoming unbearable sites for flora and fauna (including humans) and urgent solutions are needed. The South African National Water Act (Act 36 of 1998) requires regulators to establish a sustainable equitable balance between the use and protection of water resources. This includes a range of resource monitoring and protection measures that must be implemented for the rivers in South Africa. The River Eco-status Monitoring Programme (REMP) enables the monitoring of the ecological condition of river ecosystems in South Africa and provides information to support the management of rivers. Its objective is to determine the ecological condition of South Africa's rivers based on mostly the rapid assessment of aquatic macroinvertebrates identifies problems at an early stage so that prevention measures can be initiated timeously. In areas that are poor or unsustainable, intervention actions can be initiated to remedy problems and rehabilitate these vital water resources.

The findings of the river eco-status monitoring that was undertaken during the 2020/21 hydrological year, comparing it to the results from previous assessments and Resource Quality Objectives (RQOs) where applicable. The number of sites per reporting year has increased from 207 in 2016/17 to 467 in 2020/21 (Figure 7). The decreased number of sites monitored in 2019/20 was due to the COVID-19 restrictions.

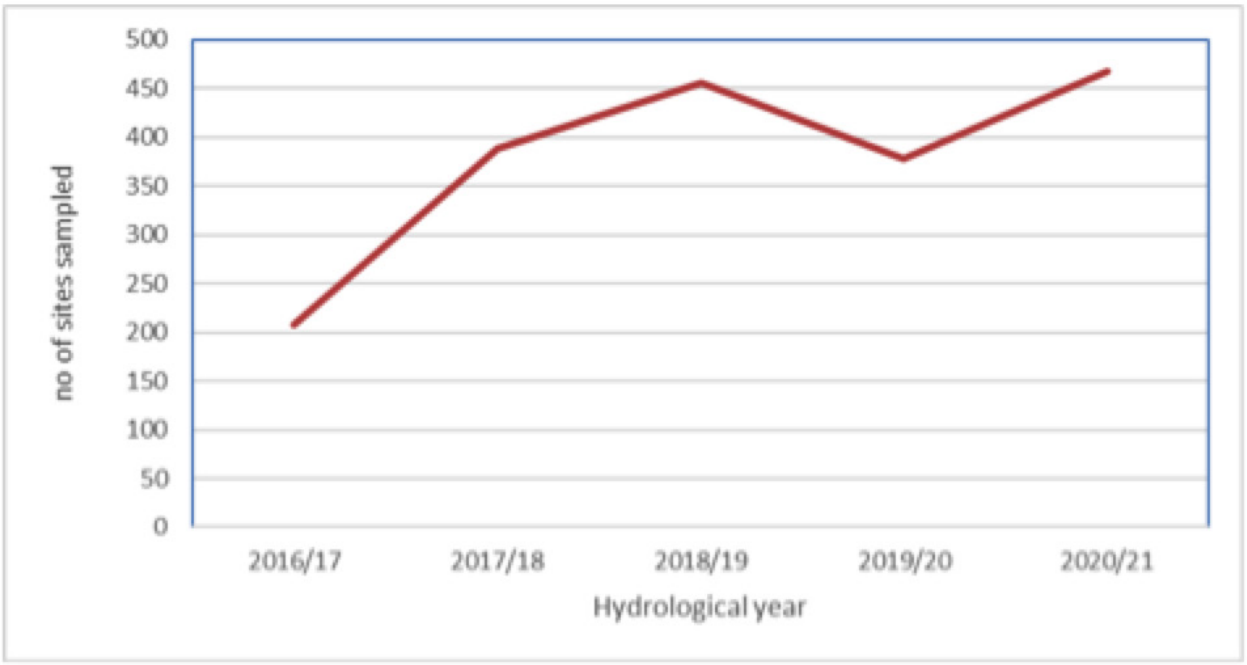


Figure 8: Number of sites sampled per hydrological year from 2016/17 to 2020/21.

Aquatic macroinvertebrates, riparian vegetation, habitat integrity, fish, and/or geomorphology were monitored at a total of 467 sites during the 2020/2021 hydrological year. The results are presented in Figure 9 to Figure 13 for the whole country. The riverine macroinvertebrates were assessed at most (446) of the monitored sites using the Macroinvertebrate Response Assessment Index (MIRAI) with the results depicted in Figure 9. Other indices were also applied at some sites, additional to or instead of MIRAI. The Riparian Vegetation Response Assessment Index (VEGRAI) was done at 65 sites (Figure 10), fish indices at 152 sites (figure 11), the Index of Habitat Integrity (IHI) at 43 sites (figure 12), and the Geomorphology Driver Assessment Index (GAI) at 16 sites (Figure 13).

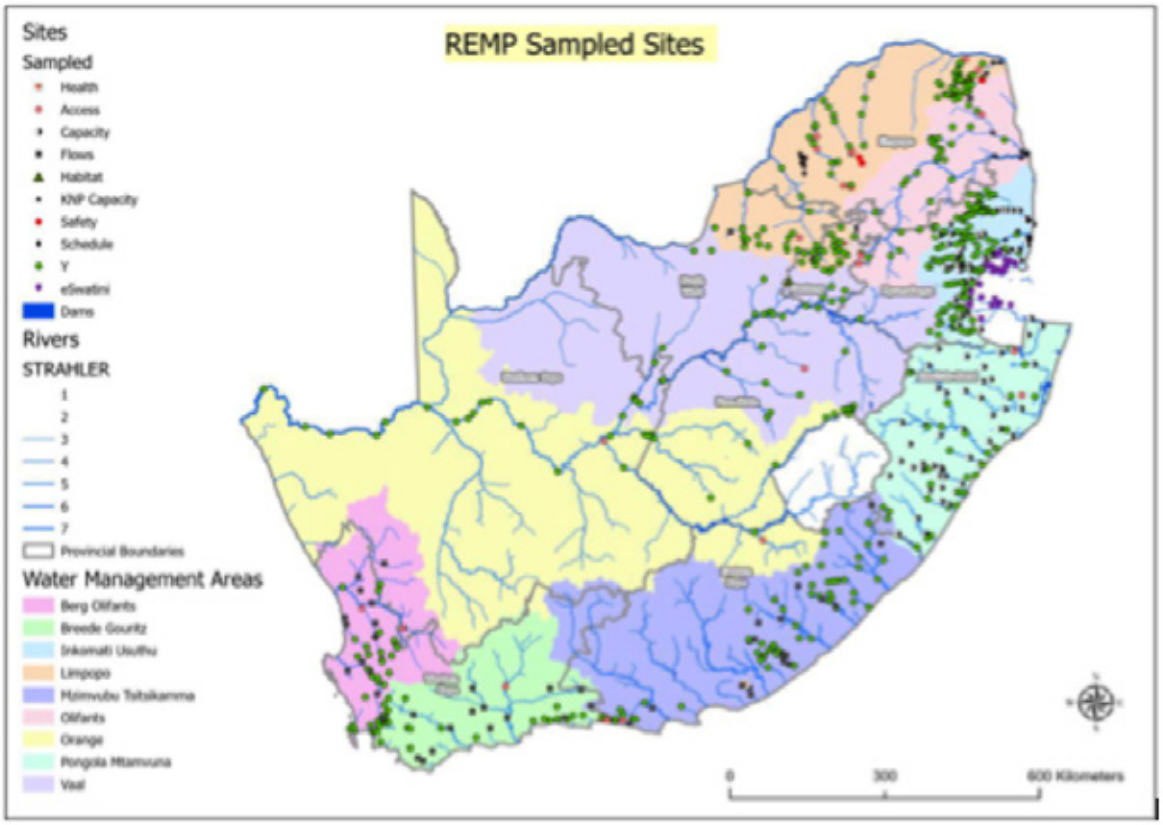


Figure 9: Map indicating the sites sampled during the 2020/21 hydrological year in green

Invertebrates: indicates the distribution of the sites where macroinvertebrates were monitored and their condition. Most sites in the country, about 59%, were moderately modified. Only 5% of the sites were in a largely natural (B) condition and 12% were in a largely modified (D) condition. Eleven sites (2%) of the sites were in an unsustainable (D/E and E) condition. Moderately modified conditions were found as the dominant condition on most rivers. The tributaries to the upper Vaal River were mostly in a largely modified (D) condition. The Sabie and many of its tributaries were mostly in a close to natural (B/C) condition. The Upper Vaal catchment is heavily impacted by industries and failing wastewater treatment works while the Sabie catchment has fewer impacts.

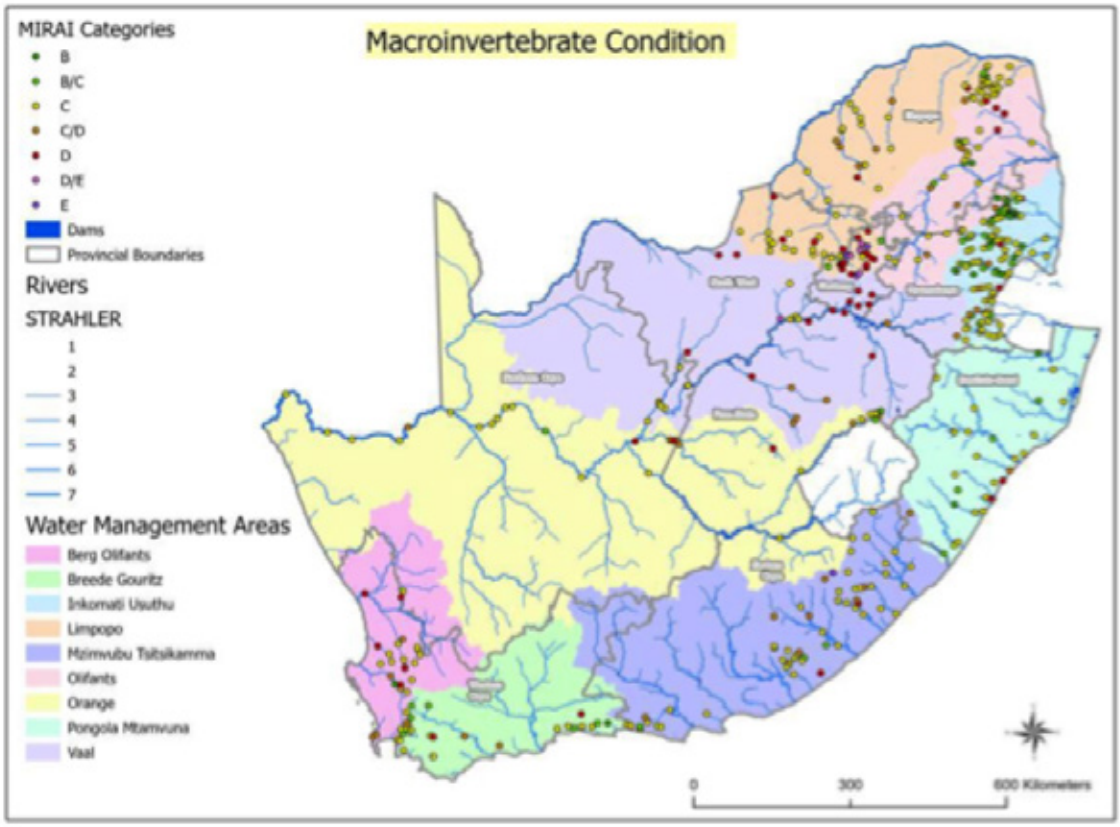


Figure 10: Summary Ecological Categories reflecting the macroinvertebrate condition for selected sites monitored during 2020/2021 hydrological year. The green colour representing relatively good conditions (B and B/C) while the red and purple reflect relatively poor conditions (D to E).

Riparian Vegetation: Riparian Vegetation was monitored in the Western Cape (Berg), Free State (Upper Orange), Gauteng and North West (Crocodile West Marico) and Limpopo (Nwanedi/ Nzhelele & Luvuvhu) catchments (Figure 10). Most (46%) sites were in a largely modified (D) condition with approximately 28% in a moderately modified (C) condition. Approximately 11% of the sites were in a close to natural (A/B) to close to largely natural (B/C) condition and another approximately 11% of the sites in a close to largely modified (D/E) to seriously modified (E) condition. The least impacted sites were in the Berg and Mutale River catchments, while the most impacted sites were in the Berg, Crocodile West, and Mutale River catchments.

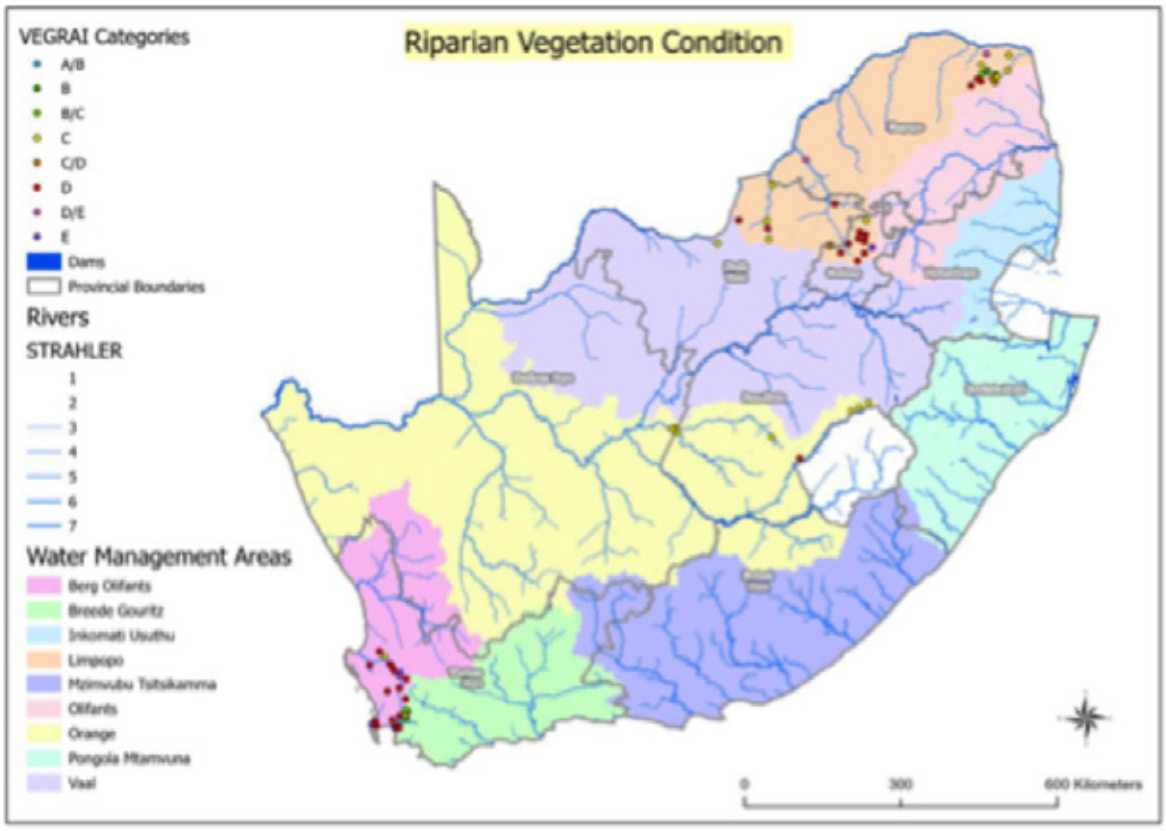


Figure 11: Summary Ecological Categories reflecting the riparian vegetation condition for selected sites monitored during 2020/2021 hydrological year.

Fish: Fish were sampled at 151 sites in the Eastern Cape and Inkomati-Usuthu areas (Figure 11). The fish at most sites (58%) were in a moderately modified (C) condition, with approximately 5% in a natural (A) to largely natural (B) condition and 16% in a largely to seriously modified (D-E) condition. The least impacted site (A) is in the upper Keiskamma River in the Eastern Cape. The other sites in reasonably good condition are in the Keiskamma and in the Sabie-Sand catchments. The sites in worst condition are in the Keiskamma, Great Kei, Mzimvubu and Inkomati catchments. One of the contributing factors to the decline in the Fish condition is the presence of exotic, often piscivorous, fish species such as black bass (*Micropterus salmoides*).

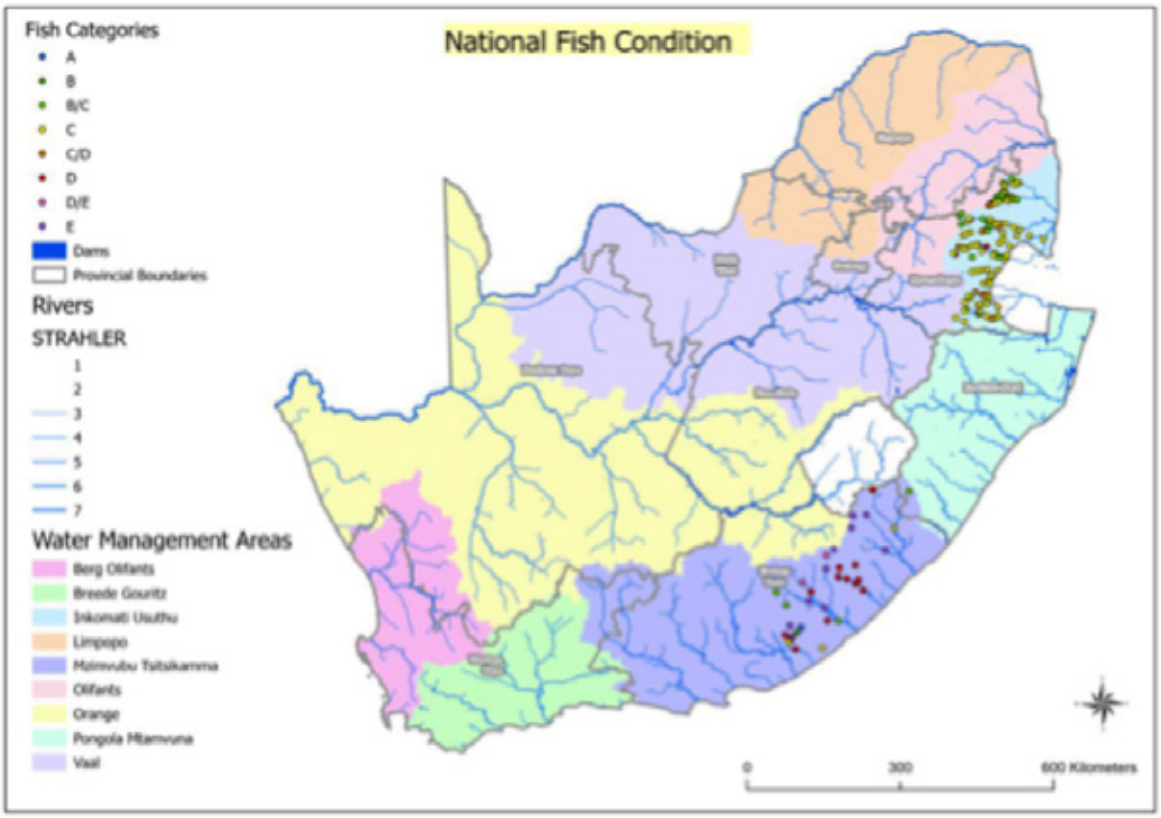


Figure 12 Summary Ecological Categories reflecting the Fish condition for selected sites monitored during 2020/2021 hydrological year.

Index of Habitat Integrity (IHI): The IHI was determined at 40 sites in the Eastern Cape, Free State, Gauteng, and North West. The Instream Figure 12, approximately one-third (33%) of the sites had the instream IHI in a moderately modified (C) and riparian IHI in a largely modified (D) condition. The Instream habitat seems to be in a better condition than the riparian habitat. Approximately 15% of the sites had an instream IHI in a near natural to largely natural (A/B-B) condition while only 12% of the sites had a riparian IHI in a near natural to largely natural (A/B-B) condition.

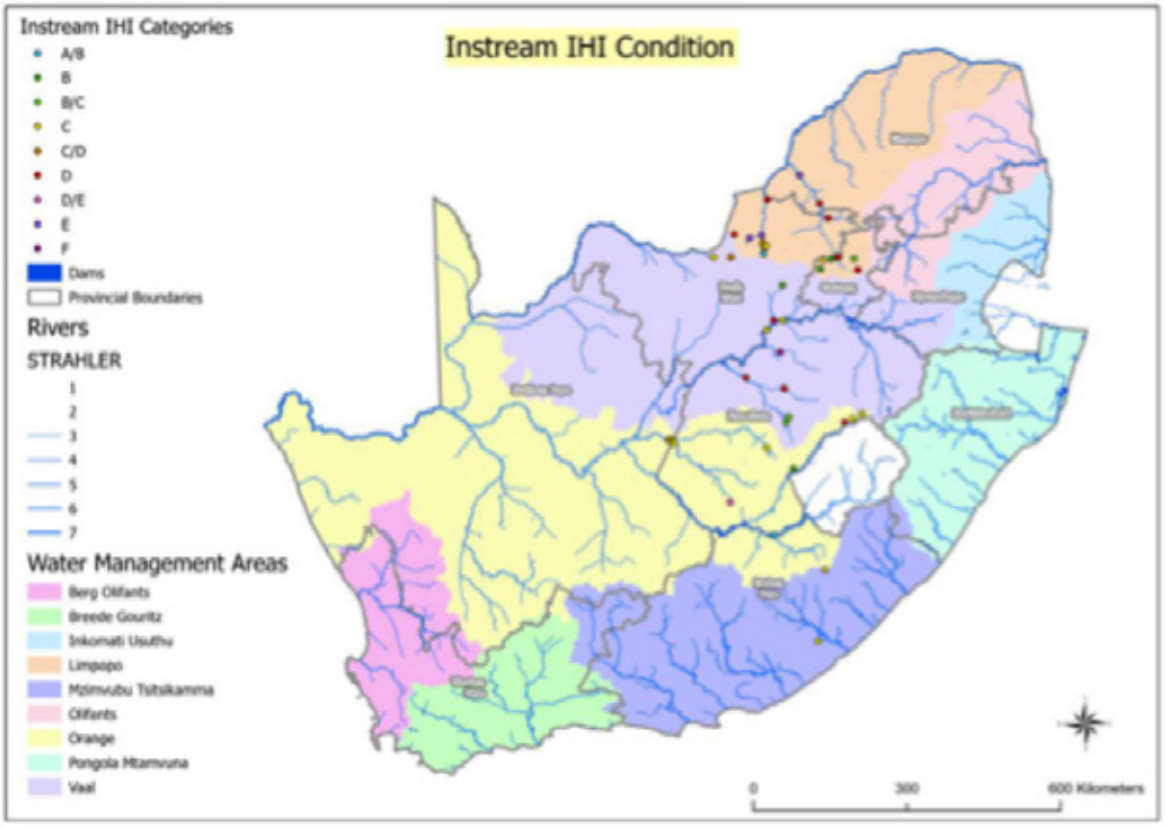


Figure 13: Summary Ecological Categories reflecting the instream habitat condition for selected sites monitored during 2020/2021 hydrological year.

Geomorphology: The geomorphology was only assessed at 16 sites in the Great Kei and Mthatha catchments in the Eastern Cape province (Figure 13). The geomorphology at the sites monitored in the 2020/21 hydrological year was mostly in a reasonably good condition. The GAI was in a moderately modified (C) condition at half of the sites and another 44% in a natural to largely natural (A - B) condition. There were no sites in a poorer than moderately modified condition.

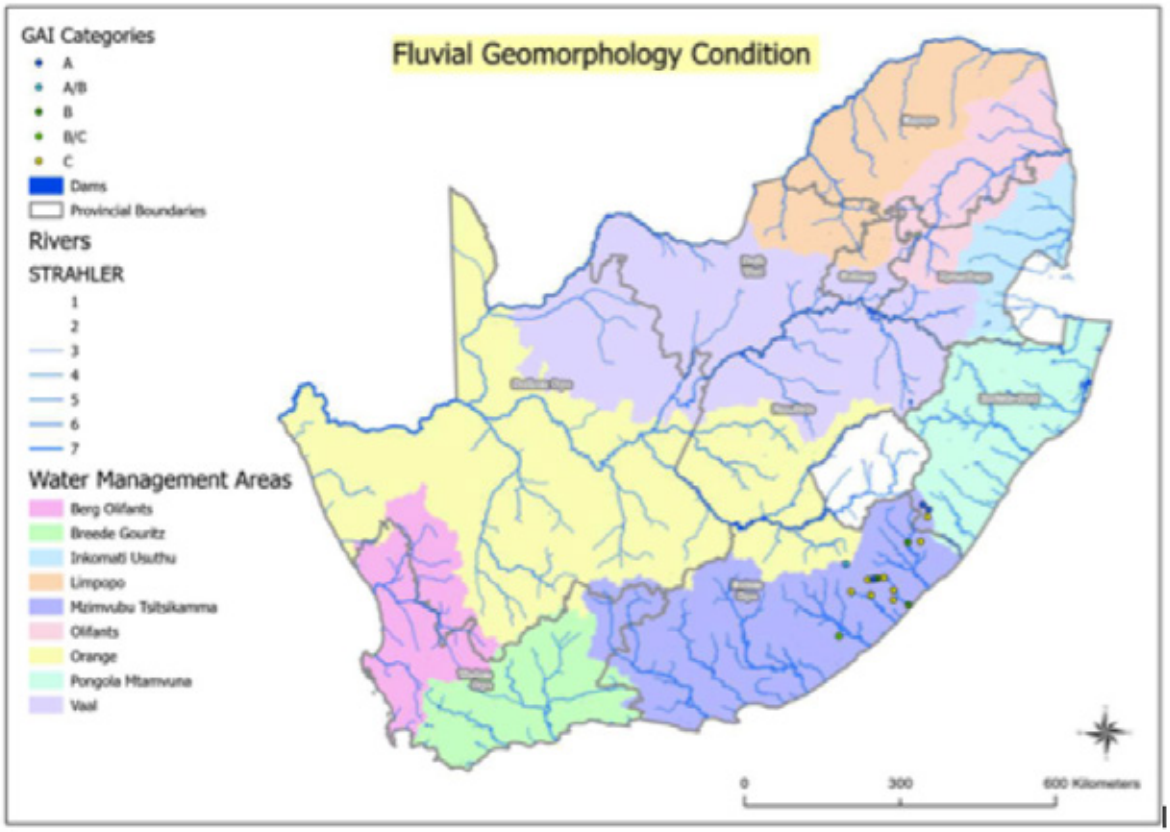


Figure 14 Summary Ecological Categories reflecting the fluvial geomorphology condition for selected sites monitored during 2020/2021 hydrological year.

Unreliable water and sanitation services

Section 27(1) (b) of the Constitution indicates that "*everyone has the right to have access to sufficient water*" with section 10 indicating "*everyone has inherent dignity and the right to have their dignity respected and protected*"; which also applicable to sanitation.

In 1994, 15.2 million people were estimated to have no access to basic water supply and an estimated 20.5 million lacked basic sanitation. Twenty-five years later there is significant progress with 95% of the population provided with access to a basic water supply and basic sanitation service is provided to 79% of the population. Despite these achievements, more than 3 million people are estimated not have access to a safe and reliable water supply and an estimated 14.1 million people do not have access to safe sanitation.

The failure of some water service authorities (municipalities) to provide reliable water and sanitation services is largely due to the lack of technical skills; institutional capacity and funding to operate, maintain and manage water and waste water infrastructure assets properly. Furthermore, is the limited budget allocated by some municipalities for operations and maintenance relative to new capital works; poor revenue management; and the failure to employ suitably qualified technical staff members. In addition, the national infrastructure grant funding mechanisms incentivise the building of new infrastructure, rather than the maintenance of existing infrastructure. A case in point is the operations and maintenance of the country's wastewater treatment works (WWTW) and water treatment works (WTW).

The Green Drop Report that was published during 2022 measured the performance of water service institutions in the management of wastewater. The Green Drop assesses several weighted performance areas including capacity management, environmental management, financial management, technical management, effluent and sludge compliance with a set bonus and penalties. The aggregated score is weighted against the respective plant's design capacity. From the 992 wastewater systems assessed within the 144 water service authorities, 22 systems obtained the Green Drop certification (i.e. obtained 90% and above); 208 systems are in a poor state and 334 are in a critical state.

The Blue Drop risk rating published in 2022 assessed the compliance of water supply systems with drinking water quality, water safety planning and implementation, asset management and technical skills available to operate the water treatment works. A total of 1186 water supply systems within the 144 water service authorities were assessed of which 48% were found to be in the low-risk category, 18% are in the medium category, 11% are in the high-risk category and 23% are in the critical risk category.

The constitutional water supply and sanitation services responsibility lies with 144 municipalities that are water services authorities (WSA). The 2021/22 Municipal Strategic Self-Assessment reports that of the 109 assessed WSAs the business health [5] found 33 to have extreme vulnerability index.

Weak regulation of the water and sanitation sector

Strong regulation is critical to achieve water security in South Africa, in terms of water quality (in rivers and taps), balancing demand and supply, ensuring the safety of dams, and being resilient to climate change impacts. Authorisation for water abstraction, waste discharge, and dam safety, and setting the charges for the use of raw water and the discharge of effluent are some of the tools used by the Department to regulate the water and sanitation sector.

Standards for water and sanitation services provision and associated tariffs are also governed by the Municipal Systems Act and the Municipal Finance Management Act. There are significant challenges in ensuring that WSA set appropriate tariffs that cover costs, including operation and maintenance costs, and that promote water use efficiency.

In addition to the national water and sanitation policies and legislation, WSAs are responsible for developing by-laws that, amongst others, enable regulation of water supply and sanitation provision and use within its area of jurisdiction. The South African Bureau of Standards (SABS) also sets several water quality standards for the water sector, including drinking water standards (SANS 241) and other relevant guidelines.

Despite strong regulatory tools in the legislation, the quality of raw water continues to deteriorate across the country in many parameters as depicted in figure 4 below. This deterioration poses a threat to economic growth, social development, health and hygiene and aquatic ecological functioning. Poor raw water quality increases the costs of treatment for domestic and industrial use. It also negatively impacts agricultural production.

5 *The 18 business health attributes include financial asset management, wastewater compliance revenue collection, water resource management, water conservation and demand management, staff skills and information technology.*

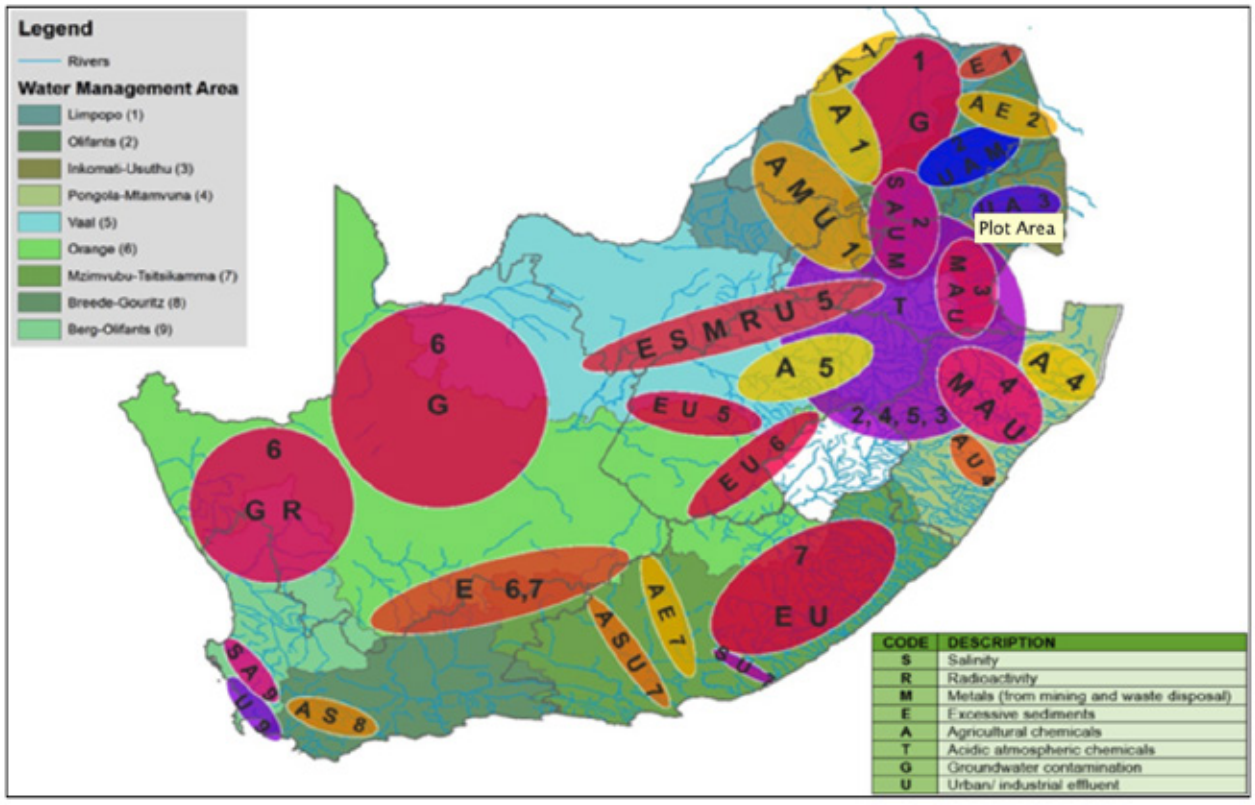


Figure 15: Water quality problems in the country

A case in point is the failure of some WSAs to deliver the requisite level of water supply and sanitation as indicated in the published 2022 Green Drop Report and Blue Drop progress report.

Section 117 to 123 in chapter 12 of the National Water Act requires the regulation of South African dams. The department assesses dams with a safety risk (i.e. a dam that is capable of storing more than 50 000 m3 and having a minimum vertical wall height of 5 metres. The minister may also declare a dam / group of dams to be classified as “dams with a safety risk” even they do not meet the above-mentioned criteria.

There are currently 5 662 registered dams with a safety risk (Oct 2022 data) 79% of these are owned by the Agricultural sector. Most of the dams are in the Western Cape, Eastern Cape and KwaZulu-Natal provinces.

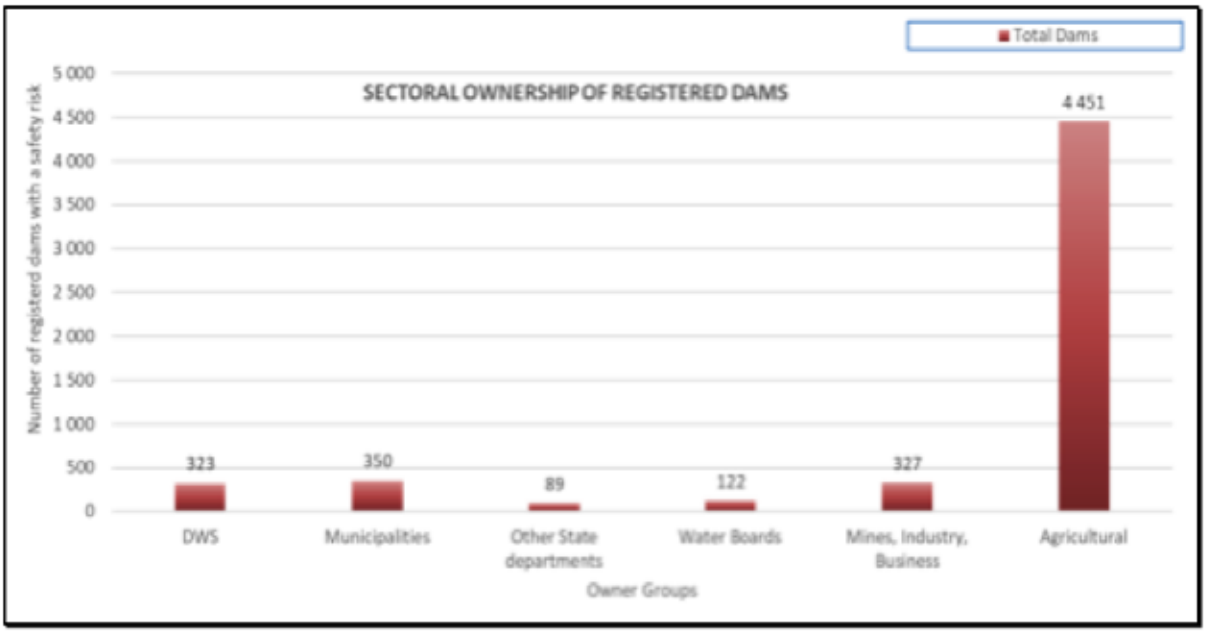


Figure 16: Registered dams per sector

The gross storage capacity of dams registered with the department is 33,8 billion m^3. The department owns 323 of the 5662 dams (i.e. 6%) with the storage capacity of dams is 29,4 billion m^3 (i.e. 87%). The agricultural sector owns 79% of registered dams with only 6% the total gross storage.

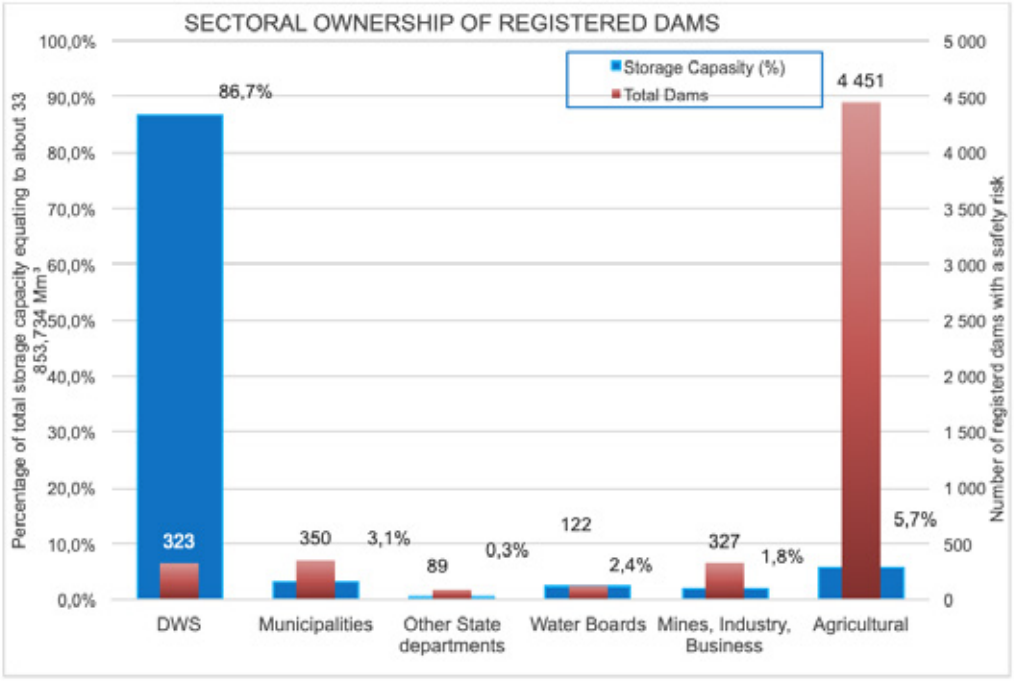


Figure 17: Gross storage capacity of registered dams with the department

For the Department to manage the safety of registered dams, the dam owners are required to submit dam safety evaluation report at his / her cost at least once every five years compiled by an Approved Professional Person (APP). The APP should be a registered professional engineer approved by the Minister of Water and Sanitation after consulting the Engineering Council of South Africa (ECSA).

A total of 2420 of the registered are classified as category II or III and subjected to compulsory dam safety by an approved professional person every five years. The disaggregation per category is as follows:

- There are 3420 category I dams and no dam safety evaluations are required
- There are 2115 category II dams of which agriculture accounts for 67% of these dams
- There are 305 category III dams and DWS accounts for 54% of these dams.

The figure below indicates the percentage of registrations per water management area.

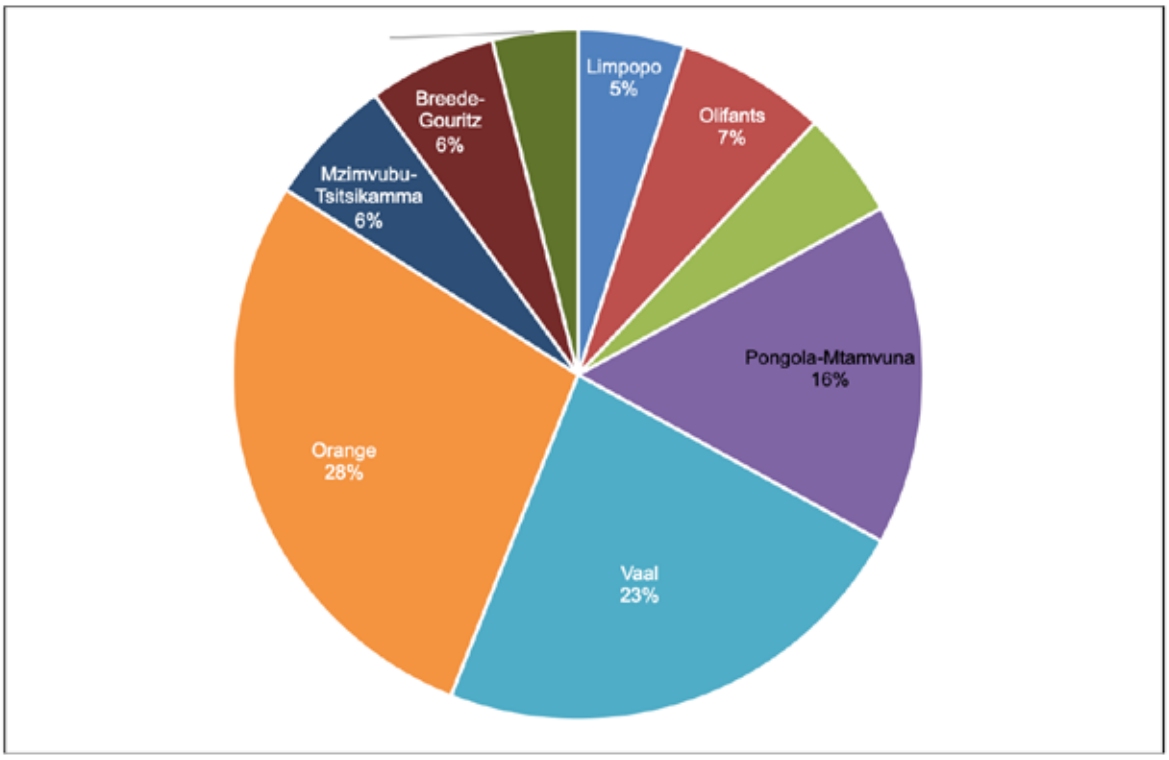


Figure 18: Dam safety evaluation reports

The figure below reflects an increasing trend in the registration of dams. However, dam safety regulation is severely strained owing to limited qualified personnel in the country. The National Water and Sanitation Master plan indicates that there are less than 100 dam safety approved professional persons (APPs) in South Africa (approximately 1 qualified person for every 50 dams on the dam safety register), and more than 66% of these APPs are older than 60 years of age. Also, the dam safety unit in the Department has capacity constraints with limited human resources to services all the dams in the country. Therefore, over the years, there is an increasing backlog of dam safety report that have not been evaluated.

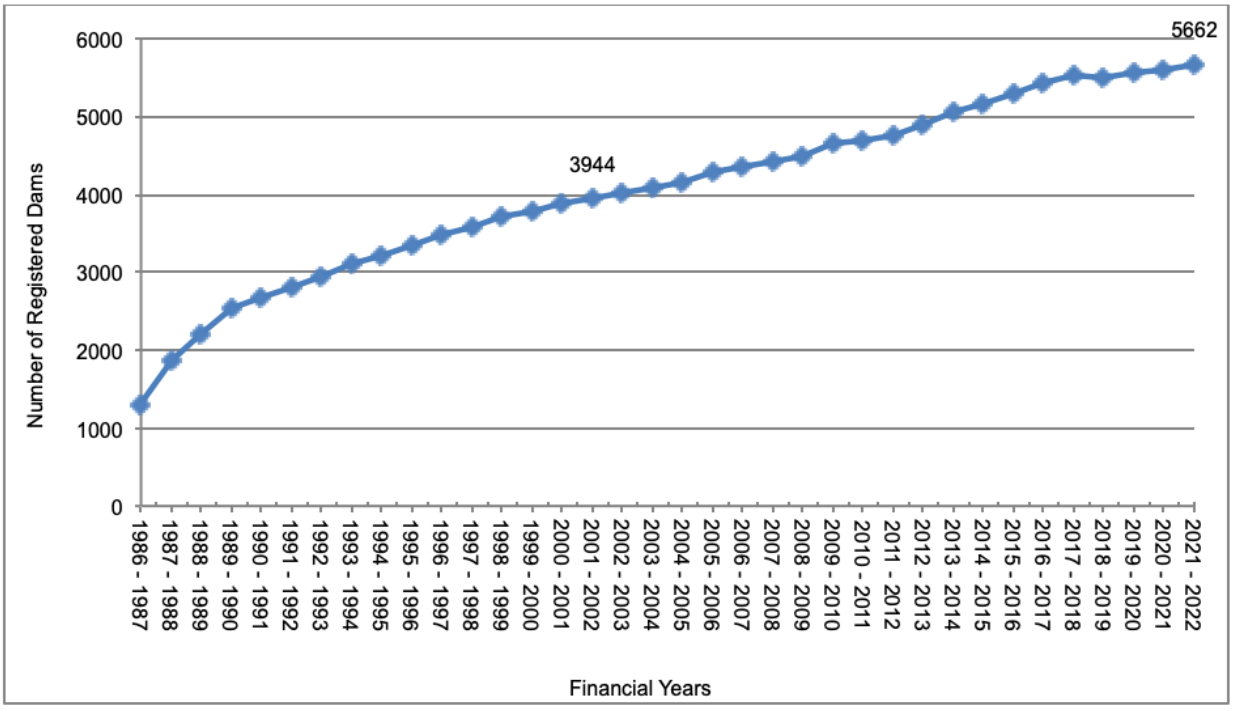


Figure 19: Increase in the number of registered dams since 1986 in South Africa (Source: DSO DWS)

The number of dams that are being registered is expected to increase as the figure below indicates the dams under construction per water management area.

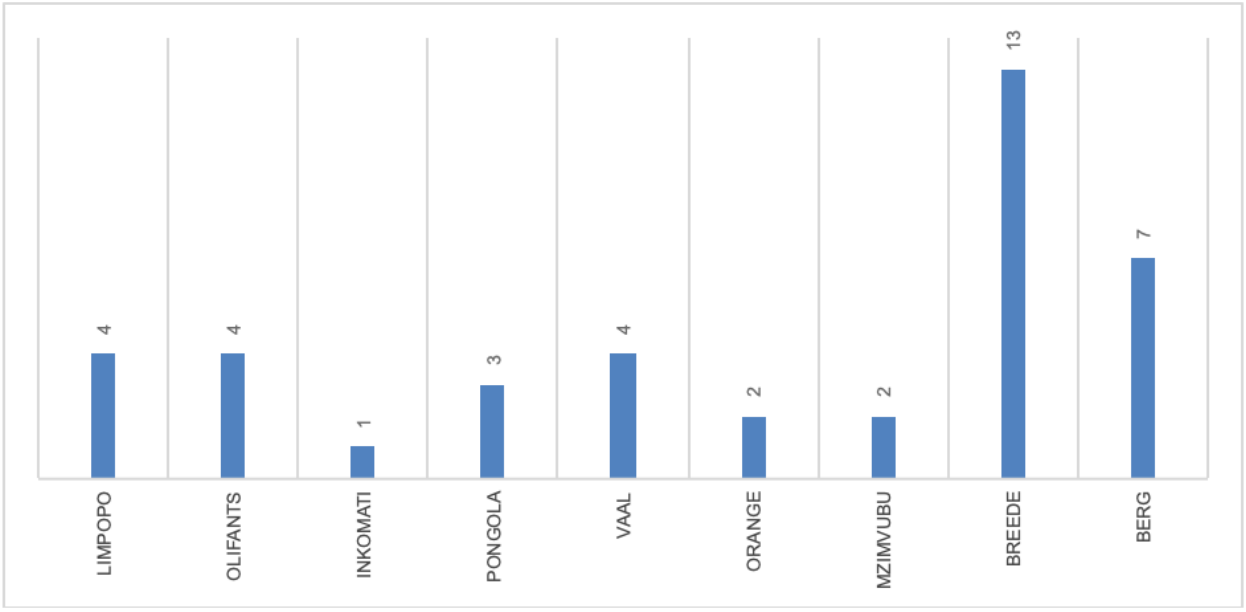


Figure 20: Number of dams under construction per water management area

Inequitable water allocation

The national water and sanitation policies and legislation mandate the water sector to provide universal and equitable access to reliable water supply and sanitation service. The sector is also mandated to protect, manage and develop the nation's water resources in a manner that supports justifiable and ecologically sustainable economic and social development and to transform access to water to redress racial imbalances.

Transformation is critical in ensuring that water for productive used for purposes is equitable; governance of water is representative; there is access to decent water and sanitation services for all. Despite both policy and legislative tools intended to enable the transformation of water allocation to redress the historical racial discrimination in access to water, little has been achieved since the National Water Act (NWA) was promulgated in 1998. This is particularly true in the agricultural sector, where around 95% of the water is estimated to be used by white commercial farmers.

The Existing Lawful Use (ELU) was intended as a transitional arrangement. However, 20 years after the NWA was promulgated, ELUs authorise the biggest volume of water used in the country.

While the restitution of agricultural land has been slower than intended, the reallocation of water has not always even kept pace with the transfer of that land. In some instances, the previous owners traded away their existing lawful water use rights, so that the water allocation was not transferred to land reform beneficiaries. According to The Institute for Poverty, Land and Agrarian Studies, more than 70% of commercial farms in the country are estimated to be owned by white farmers with about 39 000 white commercial farmers and 5 300 black farmers, according to the African Farmers Association of South Africa. Most of the black commercial farmers have relatively smaller farms.

The demand for land reform is high on the political agenda and will remain so until adequately addressed. Within the land reform programme, the transfer of some irrigable land without a water allocation has limited the ability of recipients to make productive use of the land. In addition, there are black farmers and entrepreneurs who have expressed their concerns about lack of access to water, and the challenges in getting water allocated for farming and enterprise development. The pressure to reallocate water to achieve more equitable water use thus remains high.

6.2 Internal environment

The assessment of the Department's resources and capabilities is essential in the realisation of the Department's plan. The assessment is summarised below:

Organisational alignment

From 2007, the Department had adopted an integrated approach on water resources and water services functions. This was evident in the 2014, organisational structure that received concurrence from the Department of Public Service and Administration (DPSA) and the National Treasury (NT).

When reviewing its organisational structure in 2019, several challenges inclusive of poor service delivery necessitated the Department's reconsideration of this integrated approach to separate the water resources and water services functions. Some of the drivers of this separation include the alignment with the:

- Existing National Water Act and Water Services Act.
- Sixth administration mandate.
- Outcomes-based budgeting arising from the compensation of employees' budget constraints.
- Water and sanitation master plan.

The process of re-designing the functional organisational structure, also resulted in the review and development of the service delivery model, the mapping of business processes, standard operating procedures, service standards, a concise service delivery charter and the service delivery improvement plan.

The initiative has provided the Department with an opportunity to align its budget structure with the organisational structure as well as ensuring that the complete organisational structure is funded in line with the Medium-Term Expenditure Framework. As part of the implementation plan, the Department is in process of matching and placing employees against the structure and prioritising the filling of vacant posts. Implementation of the macro structure started on 01 April 2021 with the microstructure planned for implementation on 01 April 2022.

Managing data and information

With the emergence of the 4th Industry revolution, it has become increasingly fundamental for ICT to play a critical role in transforming and enabling the department to meet its strategic goals. The department`s intentions is to continue with the modernisation of the ICT environment. To meet these requirements there is a need for ICT to partner with line of business to work together to unlock digital opportunities at the intersection of business and technology; furthermore, this is looking for ways that business can adapt to the promise of technology. To this end, the department had completed the process to develop a digital strategy which focuses on:

- Water resource monitoring value chain to use data to provide insight which supports evidence-based decision making
- Improving employee experiences in the department
- Modernisation of the IT systems and infrastructure
- Automating and digitising critical business processes like water use permit systems.

The department` s objectives of modernisation are to migrate the critical infrastructure to modern technologies such as cloud, while ensuring adherence to information security requirements. The benefit to be derived from this migration is to eliminate the legacy, silo applications, redundant and non-value adding infrastructure while also reducing the cost of ownership for IT. This will be achieved while ensuring the high availability of the current systems to support the business operations.

Financial resources

Funding of the water sector comprises capital for infrastructure development, operation and maintenance (O&M) along the water supply chain, as well as funding for governance (plan, organize, lead and control) and effective management of water and sanitation services provisioning.

The financial health of the water and sanitation sector, however, is challenged by several factors including but not limited to a funding gap; high non-revenue water; degradation of existing asset value; tariffs not cost reflective.

The Department funds and implements new bulk water resource infrastructure from the fiscus or through the Trans Caledon Tunnel Authority (TCTA) and collects revenue from its raw water provisioning.

Raw water billing is substantial, but revenue collection is failing. Water pricing is based on the “user-pays” principle and tariffs from users provide a significant cash inflow to the sector with billing of raw water of about R 16 billion per annum to more than 85,000 users. Billing and collection is a major administrative and operating challenge with such a large user base

Revenue management within the Department is not optimal and not properly structured/geared to address the billing and collection challenges that exist.

Bulk raw water supply to domestic and industrial users (including mines and power stations) is often metered by the bulk user and the Department is not always directly involved, making meter reading problematic and erratic, impacting on billing and revenue collection.

Municipal accounts represent about 50% of the accumulated raw water debt at DWS, while water boards add another R1,7 billion, which is mostly also due to non-payment by local municipalities

Irrigation water revenue is at 46% of billable amount. Irrigation water is poorly metered, and billing is at best described as “ad-hoc”. The large irrigation schemes have established water user associations (WUAs) and irrigation boards (IRBs), who assist the Department with operation and maintenance of water distribution to irrigable farm areas and selected towns and industries located along the canals. Currently, 47 of the 240 WUAs are also assisting the Department with revenue collection through signed “billing agent agreements”

6.3 National priorities

The Department has revised the national priorities to align with the budget programmes as indicated in the figure below:

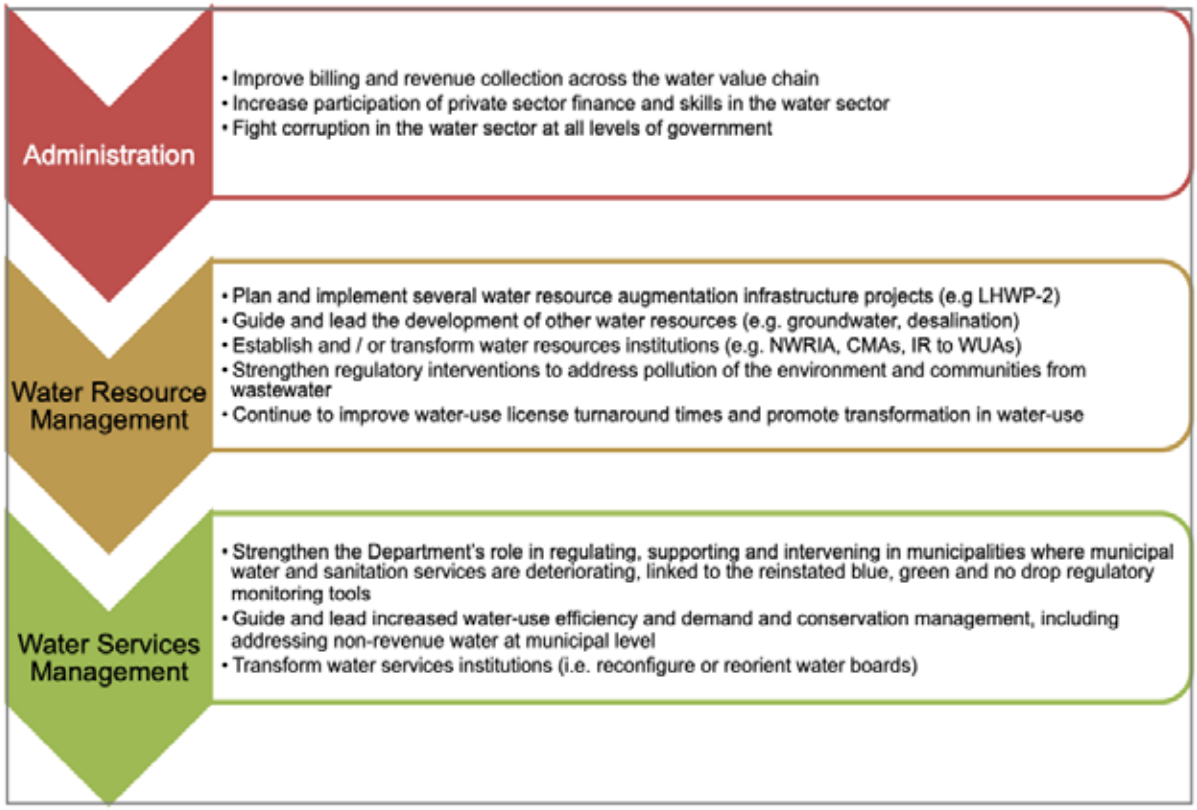


Figure 21: National priorities per budget programme

PART C: MEASURING PERFORMANCE

9 PERFORMANCE INFORMATION

9.1 Measuring the impact

Impact statement	Water resources that are protected, used, developed, conserved, managed and controlled in a manner that supports ecologically sustainable economic and social development that transforms access to water to redress racial imbalances

9.2 Measuring outcomes

Outcome	Outcome indicator		Baseline	2024/25 Five year target
1 Efficient, effective and development orientated department	1.1	Percentage compliance with corporate governance regulatory prescripts	New indicator	100%
	1.2	Annual Communications, Stakeholder Management and Partnership Programme implemented	133%	98%
	1.3	Targeted procurement supporting SMMEs	82%	30%
	1.3.1	Women	New indicator	40%
	1.3.2	Youth	New indicator	30%
	1.3.3	People with disabilities	New indicator	7%

Outcome	Outcome indicator		Baseline	2024/25 Five year target
	1.4	Percentage implementation of the financial recovery and turnaround plan	New indicator	91%
	1.5	Percentage implementation of Annual International Relations Programme	Annual analysis on the implementation of the approved international relations programme	75%
2 Ecological infrastructure protected and restored	2.1	Number of river systems with water resources classes and determined resource quality objectives	11	1
	2.2	Number of rivers in which the River Eco-status Monitoring Programme is implemented	71	81
	2.3	Number of main stem rivers monitored for implementation of Resource Directed Measures (i.e. classification, resource quality objectives and the reserve) by 2026	New indicator	10
	2.4	Waste water management plans developed and implemented	See details below	See details below
		2.4.1 Develop atchment strategies and plans	1	9
		2.4.2 Implement atchment plans	0	5
		2.4.3 Implement Waste Discharge Charge System (WDCS) country wide	Review of existing gap analysis on WDCS	3
3 Water demand reduced and water supply increased	3.1	Water conservation and water demand management strategies developed for water use sectors	New indicator	4
	3.2	Water resource mix diversified	See details below	See details below
		3.2.1 Reliance on surface water reduced	77%	70%
		3.2.2 Groundwater use increased	9%	10%
		3.2.3 Use of return flows increased	14%	16%
		3.2.4 Desalination use increased	0.5%	3%
		3.2.5 Use of acid mine drainage increased	0.1%	1%
	3.3	Gauging stations developed, maintained and refurbished to improve management decisions on water quantity and quality	See details below	See details below
		3.3.1 Number of new water resource gauging stations / weirs constructed	0 existing gauging stations constructed	1

Outcome	Outcome indicator		Baseline	2024/25 Five year target
	3.3.2	Number of existing water resource gauging stations / weirs refurbished	1 existing gauging station refurbished	2
	3.4	National Digitised Integrated Water and Sanitation Monitoring System	See details below	See details below
	3.4.1	Number of water resources monitoring programmes reviewed and maintained	3	8
	3.4.2	Number of water and sanitation information systems maintained	6	6
4 Water and sanitation services managed effectively	4.1	Annual Municipal Strategic Self-Assessment (MuSSA) reports on water service authorities' performance in providing water and sanitation services	Revised indicator [6]	5
5 Enhanced regulation of the water and sanitation sector	5.1	Green Drop report on wastewater systems' compliance with regulatory requirements	2013 Green Drop report on wastewater systems 'compliance with regulatory requirements	3
	5.2	Blue Drop report on water supply systems' compliance with regulatory requirements	2014 Blue Drop report on water supply systems' compliance with regulatory requirements	2
	5.3	Timeframe for processing water use license application reduced	3-12 months depending on complexity	90 days
	5.4	Average number of water users in various sectors monitored for compliance with water use license per year	Revised indicator	396
6 Water redistributed for transformation	6.1	Effective and efficient institutions established	See details below	See details below
	6.1.1	Catchment management agencies established	2	Total of 6
	6.1.2	Number of Water boards reconfigured	0	5
	6.1.3	Water user associations established	85	41
	6.2	Regulation for advancement of water allocation reform finalised	Validation and Verification of existing lawful use in 2 water management areas (WMAs)	Validation and Verification of existing lawful use in 5 water management areas (WMAs)

6 The previous unit of measurement has been revised from number of water service authorities to finalisation of the annual MuSSA reports

9.3 Explanation of planned performance over the five year planning period

9.3.1 Programme 1: Administration

Provide strategic leadership, management and support services to the Department. Develop and promote international relations on water resources with neighbouring countries.

The NDP prioritises the significant role of women, of the youth and of disabled persons and requires their mainstreaming in government's planning. To contribute to these are cross-cutting priorities the Department plans to implement targeted procurement that supports Small Medium and Micro Enterprises (SMMEs) owned and / or controlled by women, youth and people with disabilities.

9.3.1.1 Abridged risk management plan for the programme

Link to output		Risk category	Risk	Mitigation measures
1.1	Compliance with corporate governance regulatory prescripts	Safety and security	Physical and Information Security breaches	• Deploy the security measures which includes security officials and access control • Undertake a project to have integrated control/operations room (integrated system) to monitor security • Draft terms of reference and establishment of the security committees • Monitor recommendations issued by head office to regions on security assessment conducted • Conduct security awareness (data & information classification including storage and archiving, record management) • Ensure department data and information is managed and protected • Review of the record management policy • Implementation of the archiving Act procedures and reviewing of the departmental file plan.
		Information Security	Possible cyber security risk	• Ensure implementation of the Security Information Strategy • Develop a focused ICT awareness
		Technological and System	Non-alignment of ICTs to strategic outcomes	• Implementation of the Digital strategic plan which is aligned to DWS strategic plan, that ensures adequate skills and modernization of technology systems including common data and systems platforms to ensure integration and compatibility.

Link to output		Risk category	Risk	Mitigation measures
		Health and Safety	Failure to maintain a safe and healthy systems of works	• Hold quarterly OHS Committee meeting to monitor health and safety issues. • Continue to conduct OHS risk assessments • Source the service for an initial, periodical and exit medical examination and medical surveillance for employees exposed to high risk working condition (construction or field workers) • Appointment of service provider (Occupational Hygienist) to conduct a workplace hygiene survey Implement the OSD policy/ directive on critical and technical skills
		Fraud and Corruption	Deeply entrenched fraud and corruption	• Conduct lifestyle review on reported employees. • Continuous quarterly consequence management committee meetings to enforce the Public Service Regulations 2016 on consequence management • Inculcate professional ethical culture by conducting awareness • Sensitise officials about the zero-tolerance policy to fraud and corruption during staff meetings • Encourage continuous reporting of all suspicions matters to Forensic Unit and strengthen the protection disclosure policy by making public statement on whistle blowing • Publicize the outcomes of disciplinary cases. • Conduct regular audit of the signed water use authorisation letters • Implementation of the Ethics strategy
1.3	Targeted procurement supporting SMMEs	Financial risk	Nonalignment of SCM processes to support strategic outcomes	• Issue formal communication with DDGs/ heads of regions and clusters on the roles and responsibilities on SCM processes. • SCM to provide support on Region/Cluster/Construction SCM appointments. • Provide input to OD on the omission of the performance management function in the structure • Finance Committee to have SCM, Budget and Planning as standing invitees to monitor the alignment of plans and strategic outcomes. • Review of the SCM, SOP, Delegations to ensure alignment.
		Regulatory Compliance	Noncompliance with B-BBEE codes	• B-BBEE Audit for the Department of Water and Sanitation to be included in the APP as a target • B-BBEE to be included as KRA in the SMS's performance agreements. • B-BBEE codes to be incorporated in the SCM specification checklist/document

Link to output		Risk category	Risk	Mitigation measures
1.4	Financial recovery and turnaround plan implemented	Financial risk	Downturn in economic outlook of the country	• Continue monitoring monthly cash flow projections. • Continued participation in the technical Multi-Disciplinary Revenue Committee (MDRC) consisting of the Department of National Treasury, Public Enterprises, Water and Sanitation, COGTA, SALGA, Cooperative Governance and Traditional Affairs, Public Works and Infrastructure • Implementation of the financial recovery plan for the department • Conduct market analysis on commodity prices.
		Financial risk	Financial instability and sustainability	• Strengthening payment and debt collection enforcement mechanisms. • Monitoring performance of debt collectors • Develop a Communication Strategy to create awareness to the public with regards to the importance of paying for Water Services. • Monitor the implementation of an incentive scheme plan whereby department entered into repayment agreement with the clients.
1.5	Annual International Relations Programme implemented	Regulatory Compliance	Inadequate adherence to international agreements (conventions) to which SA is a signatory (acceded to) in the water sector	• Follow up with the intergovernmental stakeholders to get the signed MoU
1.6	Annual stakeholder Management and partnership Programme implemented	Governance	Failure by entities to adequately implement prescribed regulations, policies, and good governance practices	• Monitoring of the shareholders compact (Water Boards, and CMA's) • Monitoring of business plans (Entities)

9.3.2 Programme 2: Water Resource Management

The National Water Act seeks to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in a manner that supports ecologically sustainable economic and social development that transforms access to water to redress racial imbalances.

As South Africa is a water scarce country, it is faced with the challenge of protecting water resources (i.e. quantity and quality) and the need to utilise water for social and economic development. Some of the country's water resources are overused (e.g. polluted, the available water is already allocated and / or the surrounding environment is in a poor state). Other water resources are hardly used, and the dependent environment is still in a natural state.

The classification of water resource classes and determining resource quality objectives is one of the measures that is intended to ensure the comprehensive protection of all water resources. These are designed to look after the quality of water, the quantity of water, the animals that live in the resource and the vegetation around the water resource. When these are healthy, the water resources function properly and can provide water. The National Water Act states that these measures need to be developed progressively with the National Water Resources and the catchment management strategies.

The resource quality objectives have been determined for most catchments in the country, but little has been done to implement and monitor compliance with them. Furthermore, monitoring compliance entails a systematic process to measure and manage performance in the management of water resource towards RQOs. This is achieved when the resource is equal to or in a "better" condition than indicated by the RQOs or Numerical Limits, or when there is evidence that the resource quality is moving towards the objective and not away from it. If there is a change in direction away from the RQOs, this will then indicate that; the measures in place to protect the water resource are not sufficient to bring the resource into alignment with the objectives, or alternately that the RQOs are not reasonable.

The department is undertaking monitoring of compliance to the RQOs to assess if the standard and quality of the resource is improving or declining based on the set RQOs for the specific resource, the aim is to see the resource improving and the RQOs being implemented. These will allow water resource managers to manage demands on water resources and it will also make decision making easier. Monitoring of compliance to the RQOs will also enable the modification of programmes for resource management and impact control as and when necessary. The department has so far commenced with monitoring compliance RQOs of four river systems.

Also, in response to the country's poor water quality in strategic catchments, the Waste Discharge Charge System (WDCS) has been developed as a key instrument in supporting water quality management of the country, with the Waste Mitigation Charge (WMC) being a critical financial resource to support catchment water quality management. This Strategy has been in development stage for over a decade, and implementation is critical to realising success and improvement in the quality of our water resources.

The National Water and Sanitation Master Plan (NWSMP) indicates that by 2040, treated acid mine drainage and desalinated seawater will make a significant contribution to South Africa's water mix, ground water usage will increase, and the over-reliance on surface water will reduce. Although some large surface water schemes are currently planned and developed, South Africa is approaching full utilisation of available surface water yields and is running out of suitable sites for developing large dams. The water re-use could guarantee availability of water supply (particularly for non-potable water uses); substantially lower water bill; supplement industry's profitability by harvesting valuable resources contained in wastewater; and practice more environmentally sound water usage operations. Although the NWSMP indicates a planned reduction in the reliance of surface water, plans are underway to develop strategic water resources infrastructure projects that will ensure the security of water supply in the country's economic hubs.

There is a need to optimise the water mix, which is currently strongly dominated by surface water, with some groundwater and return flows. The delayed reaction of groundwater to climate change impacts and other stresses such as land-use change is one of the motivating factors for its increased use. In the face of climate change, groundwater, which will not experience the increased evaporation that will impact on surface water as temperatures increase, will become increasingly important. Artificial recharge of aquifers will be an important element of water management.

The NWA requires the establishment of national monitoring and information systems, for all aspects of water resources. There is a well-established network of monitoring points that provide for the collection of data and information to assess among other things water quantity and quality as well as water use. It further includes information on the ecological properties of water resources, both surface and groundwater. The development, maintenance and refurbishment of gauging weirs seeks to improve the coverage of rainfall and runoff gauging that has deteriorated and, in some instances, no longer functional.

Strong regulation is critical to achieve water security in South Africa, in terms of water quality (in rivers and taps). An incentive-based regulation initiative pursuing excellence in wastewater service management was introduced to create a paradigm shift from minimum requirement compliance towards continued risk management. The Green Drop report reviews the WSAs compliance with the requirements for wastewater service management.

One of the main mechanisms of ensuring access to sufficient water, protection of the environment, and reallocation of water to advance the previously disadvantaged communities is to control water use. Water use registration regulates the way water can be used. The 2017 regulations indicate that process of water use applications is undertaken within a period of 300 days of submitting such application. However, the Framework Agreement for the Jobs Summit requires a review of the turnaround time for considering water use license applications. This is essential in the effective implementation of the various projects particularly emerging farming enterprises in the agricultural sector.

The aim of setting of waste discharge standards is to ensure that the aquatic ecosystem will not be compromised. It also seeks to ensure that the quality will always comply with the requirements for basic human needs and other economic uses, bearing in mind that at least some basic treatment process will be applied before the water is used. It therefore supports the pricing strategy in differentiating between different types of water uses and water users as it affects the charges for different uses and users. It is one mechanism that the pricing strategy achieves equity.

Compliance, monitoring and enforcement (CME) is one of the priority focus areas identified in the second edition of the national Water Resources Strategy. CME is essential to support water allocation and water allocation reform (WAR) to ensure that water is used according to authorisation conditions, and by legally authorised water users.

The NWA provides for the establishment and transformation of institutions to assist in giving effect to the Department's mandate. The enactment of the NWA provided for the establishment of the institutional framework for water resource management. To manage water resources at the catchment level, the NWA provides for the establishment of catchment management agencies (CMAs) that must ensure that all interested and affected stakeholders (including poor communities that have been disadvantaged and marginalised) participate in the decisions of the CMA. It also provides for the transformation of existing irrigation boards into Water User Associations that include emerging farmers.

9.3.2.1 Abridged risk management plan for the programme

Link to output		Risk category	Risk	Mitigation measures
2.1	Water resource classes and Resource Quality Objectives determined and monitored	Service delivery	Unprotected Water Resources	• Progressively determine water resource classes and resource quality objectives in three river systems namely, Fish to Tsitsikamma, Luvuvhu and Usutu to Mhlathuze
2.2	Wastewater management plans developed and implemented	Service delivery	Inability to effectively manage and protect water quality	• Implementation of the Anti-Pollution Task Team (APTT) and National Water Quality Management Strategy (NWQMS SteerComm) action plan
3.1	Integrated water resource plans / measures developed	Service delivery	Inadequate planning and project implementation resulting in unreliable water delivery	• Develop and update strategies to reconcile water availability with growing demands for key large systems and small towns and clusters of villages • Develop and update operating rules for key large systems and stand-alone dams / schemes to manage reliability of water resources availability including the impact of natural events such as droughts and floods • Partner with research institutions that generate relevant data and information to ensure sustained access to data and information • Undertake feasibility studies for water resource development projects and recommend them for timely implementation
3.2	7 water resources monitoring programmes and 6 information systems reviewed and maintained by 2025	Data and information	Inadequate monitoring and ability to collect and analyse monitoring data (qualitative and quantitative)	• Implementation of the Monitoring Network Strategy through upgrade all supporting elements for water use and resource monitoring to its required levels. • 6 monitoring programmes reviewed and maintained • Implementation of water use metering regulations by all water users as per notice no 42956 of 2020 - Water use monitoring reports
		Research and Innovation	Failure to adopt innovation technologies in water and sanitation management	• National digitised integrated water and sanitation monitoring system design completed
3.4	Strategic water resources infrastructure projects implemented	Service delivery	Projects not completed on time and within budget	• Optimise project budget allocations within the approved baseline allocations. • Procure specialist support services to augment capacity for project implementation. • Engage with SCM to ensure understanding of infrastructure procurement requirements. • Maintain engagements and communications with project stakeholders.

Link to output		Risk category	Risk	Mitigation measures
3.5	Maintenance Plans implemented as scheduled and unscheduled maintenance minimised	Service delivery	Inadequate implementation of maintenance plans resulting in continuous deterioration in the water infrastructure portfolio	• Engage the CFO: WTE for the additional budget as and when required • Ensure the approval of term contracts (electrical, mechanical and civil) for all cluster offices • The implementation of Maintenance management system
		Regulatory Compliance	Non-compliance to dam safety legislation, regulations, standards & license conditions by a dam with a safety risk.	• Compile Standard Operating Procedure (SOP) to implement fines once the amendment of the NEMA came into effect. • Conduct compliance audit of APPs against license conditions. • Create monitoring capability and capacity for dams under construction to ensure Progress Reports are received from APP's as scheduled • Carry out a functional analysis and capacitate the Dam Safety Office with registered engineering professionals to carry our dam safety functions as the unit is a Specialist Unit with no regional offices in the DWS structure.
3.6	Adherence to Water Supply Agreements/ Authorisations and Operating Rules (Water Resource Operations)	Service delivery	Failure to adhere to the Water Supply Agreements/ Authorisations and Operating Rules	• Implementation of the Individual Emergency preparedness plan as when required. • Development of EPPs • Implementing operating rules (floods and draughts control)
5.1	Water resource regulatory prescripts developed and implemented	Regulatory Compliance	Possible noncompliance to Water Service regulatory prescripts	• Conduct an internal workshop (Ministerial office) on raw water tariff approval process to ensure the approval by 30 September 2023 to allow commencement of bulk water tariff approval process • Consultation with Portfolio Committee as engagement stakeholder in the Water Pricing Strategy. • Implementation of the standard operating procedure for Raw Water Use Charges and Bulk Water Tariffs Workshop Central Point, Office of Ministry to ensure approval submission for tariffs are timeously processed
		Service delivery	Delays in finalising water use authorisation applications within specified timeframes	• Appointment of regional officials - (engineers, environmental officers, admin, etc.) • Training and induction of staff into water licencing authorisation

9.3.3 Programme 3: Water Services Management

The programme addresses the water and sanitation services provision across water and sanitation value chain in support to water service authorities. The integration of bulk and retail water services to improve the coherence of the sector and to realise economies of scale and efficient use of water. It also provides for the development of effective policies, strategies, guidelines and procedures and plans as well as oversight and regulation of all water service management institutions.

Poor service delivery at municipal level requires the prioritisation of support to municipalities that are failing. The Executive authority has therefore identified the strengthening of the department's role in support and intervention at municipal level as the key strategic priority for the foreseeable future.

The Municipal Strategic Self-Assessment (MuSSA) is an annual review on the effectiveness of water services management within WSAs. The WSAs which may be a district, local, or metropolitan municipality undertake a structured self-evaluation of their current and expected future performance in providing water and sanitation services. The review is based on five "essence questions" for 18 "business health attributes" related to service delivery in general and water and sanitation services. The MuSSA reports for each WSA provide an insight particularly on the strengths and vulnerabilities in terms of water and sanitation service delivery.

Water conservation and water demand management targets will be set for all water use sectors (namely agriculture, industries, mining, power generation, municipal and domestic water supply) to reduce total the water requirements from existing infrastructure. In addition, through the existing grant mechanisms, water conservation and water demand strategies would be implemented by supporting projects that will directly impact on bulk infrastructure requirements.

Domestic rainwater harvesting should be encouraged as a way of improving household food security, income savings and improved reliability of water supply, especially in rural areas. Although mostly only suitable as augmentation, it has been proven that, with good management, rainwater harvesting can yield more economical water than formal municipal water supply.

An incentive-based regulation initiative pursuing excellence in drinking water quality was introduced to create a paradigm shift from minimum requirement compliance towards continued risk management. The Blue Drop report reviews the WSAs compliance with the requirements for drinking water quality management.

The Municipal Strategic Self-Assessment (MuSSA) is an annual review on the effectiveness of water services management within WSAs. The WSAs which may be a district, local, or metropolitan municipality undertake a structured self-evaluation of their current and expected future performance in providing water and sanitation services. The review is based on five "essence questions" for 18 "business health attributes" related to service delivery in general and water and sanitation services. The MuSSA reports for each WSA provide an insight particularly on the strengths and vulnerabilities in terms of water and sanitation service delivery.

The NWA provides for the establishment and transformation of institutions to assist in giving effect to the Department's mandate. The enactment of the Water Services Act provided for the establishment of the institutional framework for water services.

The enactment of the Water Services Act provided for the establishment of the institutional framework for water resource management and water services. The NDP indicates that "while local government will retain responsibility for ensuring adequate service provision in its areas, regional water utilities will provide services where municipalities have inadequate technical and financial capacities".

9.3.3.1 Abridged risk management plan for the programme

Link to output		Risk category	Risk	Mitigation measures
3.7	Water conservation and water demand management strategies developed for water sectors	Service delivery	High water losses	• Updated water conservation and water demand management strategies • Develop monitoring tool (M& E) to monitor the development of the operational and maintenance infrastructure assets management plans by Municipalities
3.9	Regional bulk infrastructure project implemented	Service delivery	Inability to deliver mega and large projects on time, within budget and scope	• Initiate the development of the SOP on how to deliver departmental projects and provide support to other branches including the required skills and expertise. • Resuscitate functional committees on project management (CAPEX Committee) • Review the tender documents and conduct site inspection to ensure that the project meet the required specification prior finalisation of the specification. • Implementation of the approved procurement strategy. • Establish Effective contract management skills strategy Institutionalise monthly reporting on projects
		Service delivery	Inability to deliver infrastructure within required timeframes	• Ongoing Review project implementation models (WSIDG and Infrastructure Management) -(Grants' frameworks and comments on the Division of Revenue Act/Bill) • Adherence to the project planning conditions stipulated in Water Service Act, DORA and RBIG Framework. submission of quarterly evaluation monitoring reports
3.10	Water services Infrastructure Grant projects implemented	Financial risk	Under/ Overspending of allocated budget	• Continuous monitoring of budget through monthly and quarterly financial reports • Ensure proper planning for monthly and quarterly financial projections • Ensure proper financial planning in alignment with the project construction schedule
4.1	District municipalities' five-year reliability plans developed	Service delivery	Lack of integrated municipal water service planning	• Development of the 5-year reliability plans for 12 District Municipalities

Link to output		Risk category	Risk	Mitigation measures
5.2	Water services regulatory prescripts developed	Regulatory / compliance risk	Failure to secure approval of the Water Services Bill from cabinet to conduct public consultations.	• Ensure all documentation and requisites for the amendment of the Water Services Act are articulated clearly, and submitted timeously to avoid further delays
		Service delivery	Inadequate integrated planning, monitoring and evaluation to ensure sustainable water and sanitation services	• Development of national sanitation integrated plan • National Faecal Sludge Management disseminated
		Regulatory Compliance	Possible duplication of work during the development, implementation and review of water and sanitation policies	• Utilisation of the quarterly forums to ensure collaborative spirit is encouraged throughout the sector. As a risk mitigation strategy, physically/ virtually platforms will be utilised to access quarterly forums in instances such forums are meeting to ensure collaborative spirit. • Water Services Policy alignment report

3 Key risks

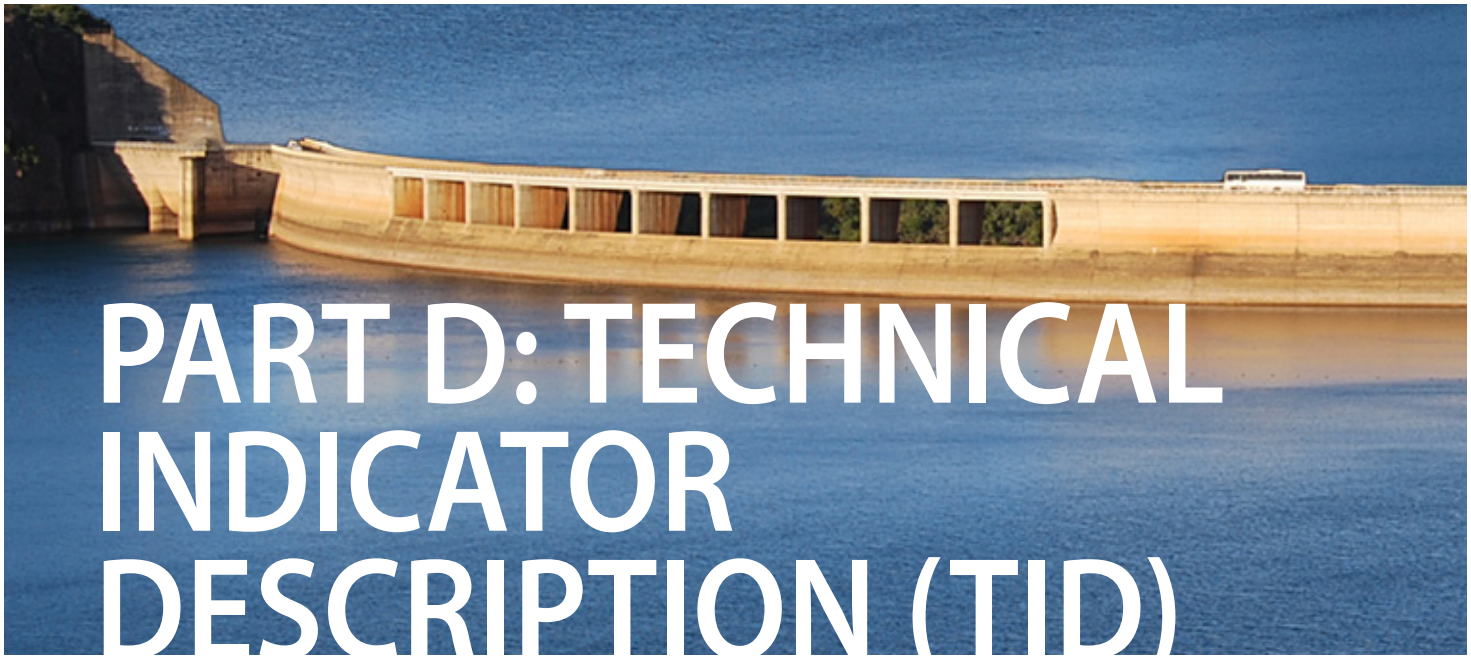
Please refer to the tables on the abridged risk management plan below each programme performance targets.

Public entities

Name of public entity	Mandate	Outcomes	Current annual budget in Rand thousand
Amatola Water	The mandate of Amatola Water is set out in Sections 29 and 30 of the Water Services Act; The provision of water services (bulk water supply and sanitation services) to other water services institutions (water services authorities and water services providers) within its service area.	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	584 570
Bloem Water	Is a bulk water services provider and is listed as a Schedule 3B National Government Business Enterprise in terms of the Public Finance Management Act (PFMA) No. 1 of 1999 as amended.	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	2 647 569
Breede-Gouritz CMA	Is a water management institution that was established in terms of section 78 of the National Water Act 36 of 1998 and is operational in the Inkomati- Usuthu Water Management Area	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	92 041
Inkomati-Usuthu CMA	Is a water management institution that was established in terms of section 78 of the National Water Act 36 of 1998 and is operational in the Inkomati- Usuthu Water Management Area	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	216 287
Lepelle Water	The mandate of Lepelle Northern Water is set out in Section 29 and 30 in the Water Services Act; To provide bulk water services according to the contracted quantities and set quality requirements despite challenges such as the the lack of payment by certain WSAs, inadequate raw water services and increase in demand from WSAs and aging infrastructure	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	832 559

Name of public entity	Mandate	Outcomes	Current annual budget in Rand thousand
Magalies Water	The Water Board was established in terms of section 28 of the Water Services Act, (Act No 108 of 1997) and Government Business Enterprise as per Schedule 3B of the Public Finance Management Act (Act No 1 of 1999), as amended to operate, maintain and supply bulk water including water retail services to the Water Services Authorities and Water Services Providers within its service area.	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	1 531 056
Mhlathuze Water	The mandate of Mhlathuze Water is set out in Section 29 and 30 of the Water Services Act; In addition to the mandate the shareholder acknowledges that the entity has strategic development role that may require decisions that are not always optimal from the commercial perspective but contribute to National Government's broader objectives and the growth and development in South Africa and Africa.	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	735 000
Overberg Water	The Mandate is set out in Section 29 and 30 of the Water Services Act. The Shareholder acknowledges that Overberg Water has a strategic development role that may require decisions that are not always optimal form a commercial perspective but contribute to National Government's broader objectives and the growth and development in South Africa	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	72 000
Rand Water	The mandate of Rand Water is set out in Sections 29 and 30 of the Water Services Act. In addition to its mandate, the Shareholder acknowledges that Rand Water has a strategic developmental role that may require decisions that are not always optimal from a commercial perspective but contribute to National Government's broader objectives and the growth and development in South Africa and Africa.	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	21 914 000

Name of public entity	Mandate	Outcomes	Current annual budget in Rand thousand
Sedibeng Water	Disestablished	Disestablished	Disestablished
Trans Caledon Tunnel Authority	It was established in 1986 as a state-owned entity specialising in project financing, implementation and liability management.	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	7 123 000
Umgeni Water	The mandate of Umgeni Water is set out in Sections 29 and 30 of the Water Services Act. In addition to its mandate, the Shareholder acknowledges that Umgeni Water has a strategic developmental role that may require decisions that are not always optimal from a commercial perspective but contribute to National Government's broader objectives and the growth and development in South Africa and Africa.	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	5 599 265
Water Research Commission	WRC was established in 1971 to generate new knowledge and to promote the country's water research.	Outcome 3: Water demand reduced and water supply increased Outcome 6: Water redistributed for transformation	390 738



PART D: TECHNICAL INDICATOR DESCRIPTION (TID)

Compliance with corporate governance regulatory prescripts

Indicator Title	Compliance with corporate governance regulatory prescripts
Definition	This assesses the extent in which the department adhere to HR policies by maintaining the minimum vacancy rate, managing coaching and mentorship programmes and availability of information technology network system and assessing the effectiveness of safety and security of departmental facilities; for internal controls and operations to enhance good governance and effectives of the organisation.
Source of data	Reports of human resource management and safety and security assessments; and information technology plan, risk management implementation plan and internal audit implementation plan.
Method of Calculation/ Assessment	Produced reports
Assumptions	Budget allocation; availability of electrical power, agility of SCM process, responsiveness and agility of outside role-players (i.e. SITA)
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	Enhanced good governance, effective internal control and operations
Indicator responsibility	Corporate Support Services

Percentage implementation of the 2024/2025 Annual Communications, Stakeholder Management and Partnership Programme

Indicator Title	Percentage implementation of the 2024 /2025 Annual Communications, Stakeholder Management and Partnership Programme
Definition	This measures the extent in which the department assesses the implementation of its approved Annual Communications, Stakeholder Management and Partnership programme.
Source of data	An annual Communications, Stakeholder Management and Partnership programme will be developed with reports on its implementation. The document verification includes: • The approved Annual Communications, Stakeholder Management and Partnership programme • Reports on the implementation of the Annual Communications, Stakeholder Management and Partnership Programme
Method of Calculation/ Assessment	If the number of implemented Communications, Stakeholder Management and Partnership activities (i.e. media relations, content development, public relations, branding, awareness campaigns, events and conferencing, stakeholder management engagements and partnership activities) is given the value "x" and the total number of Communications, Stakeholder Management and Partnership activities in the approved communications programme (i.e. media relations, content development, public relations, branding, awareness campaigns, events and conferencing, stakeholder management engagements and partnership activities) is given the value "y" the formula is as follows: $y\% = {}^{x}/_{y} \times 100$
Assumptions	• The assumption is that Public Participation Programmes will contribute to changing the communities' perception about service delivery by the department. • The assumption is that Public Education Programmes will encourage behavioural change with regard to water conservation and water demand management as well as proper practices on health and hygiene. • The assumption is that stakeholder engagement will improve the relationship between government/the department and stakeholders (communities, business, other government departments) • The assumption is that social facilitation will ensure that communities at grassroots levels are well informed and empowered to participate in government departmental programmes and projects. • The assumption is that when engaging affected councillors and local government around departmental projects, they have the best interest of the community at heart. • The assumption is that internal activations will bring a change in staff perception and understanding of Government Programme of Action as well as achieving a buy in and their transformation into Departmental ambassadors. Adoption and willingness to implement departmental policies by staff. • A clear understanding of Departmental Corporate ID and programmes by members of the public through branding and marketing. • The assumption of media briefings and media products is that communities will be empowered and in turn change their views about government which is often perceived as corrupt and not delivering services to the public. • The assumption is that partnerships will be sustained to the benefit of our communities and all stakeholders.
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	98% implementation of the Annual Communications, Stakeholder Management and Partnership programme
Indicator responsibility	Corporate Support Services

Targeted procurement supporting SMMEs

Indicator Title	Targeted procurement supporting SMMEs
Definition	The extent in which the Department empowers exempted micro enterprises (EME) and qualifying small enterprises (QSE) through the procurement of goods and services in line with the department BBBEE policy. The Broad-Based Black Economic Empowerment Act defines: **Exempted Micro Enterprises (EME) –** any enterprise with annual total revenue of R10 million or less. **Qualifying Small Enterprises (QSE) –** any enterprise with an annual total revenue of between R10 million and R50 million.
Source of data	Contract Register and Central Supplier Database
Method of calculation/ assessment	If the total procurement from EME and QSE is given the value "x" and the total procurement budget is given the value "y" the formula is as follows $SMME\ procurement = \frac{x}{y} \times 100$
Assumptions	The specifications will incorporate targets for designated groups (i.e. women, youth and people with disabilities
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial transformation (where applicable)	Not Applicable
Reporting cycle	Annually
Desired performance	Achieve 30% for targeted procurement supporting SMMEs
Indicator responsibility	Chief Financial Officer

Percentage implementation of the financial recovery and turnaround plan

Indicator Title	Percentage implementation of the financial recovery and turnaround plan
Definition	This measures the extent to which the key deliverables of the Financial Recovery Plan have been implemented. The analysis assess the achievement of the following broad strategies, funding and budget management, expenditure control, financial governance and accountability, alignment of strategic intent, policy, legislation and institutional matters
Source of data	Reports on the implementation progress against the Financial Recovery Plan
Method of Calculation/ Assessment	Monthly and quarterly reports, against the Financial Recovery Plan
Assumptions	Approved budget, DMP and APP
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	91%
Indicator responsibility	Chief Financial Officer

Percentage implementation of 2024/25 annual International Relations Programme

Indicator Title	Percentage implementation of 2024/25 annual International Relations programme
Definition	• This measures the extent in which the approved International Relations Implementation Plan is implemented.; and it consist of the following: • The new strategic cooperation's initiated with countries in Africa and Global • The existing agreement with countries in Africa and Global • The obligatory multilateral platform
Source of data	• Outcomes from the engagements with water sector partners • Attendance register, signed back to office reports and other related reports • Foreign policies and • Country and departmental priorities
Method of calculation/ Assessment	The total number of implementation of 2024/25 International Relations programme that will include the following [2 new cooperation's, implementation of 11 existing agreements, 21 obligatory water and multilateral platforms, 6 Development Partners], will be given as an X. What is required to be implemented on the International Relations programme will be given as Y. The total of all 2025/26 International Relations programme is 40 and that constitute 80% $Y\% = {}^{X}/_{Y} \times 100$
Assumption	Submission of Portfolio of Evidence: • Attendance Registers • Signed Back to Office DDG Reports (Engagement between Countries Report) • Signed Minister/DG Reports (Engagement between Countries Report) Note Verbal • Signed Summary Notes on outcomes
Disaggregation of Beneficiaries (where applicable)	Not Applicable
Spatial Transformation (where applicable)	Not Applicable
Reporting cycle	Annually
Desired performance	75%
Indicator responsibility	Provincial and International Coordination

Number of river systems with water resource classes and determined resource quality objectives

Indicator Title	Number of river systems with water resource classes and determined resource quality objectives
Definition	This measures the number of river systems with water resource classes and determined resource quality objectives that provide the status of water quality and quantity, the habitat and biota characteristics of the river.
Source of data	Water resource databases supported by water resource classes gazettes and published resource quality objectives
Method of Calculation/ Assessment	This will be the gazetted water resource classes and resource quality objectives for the following river system:
Assumptions	Addressing concerns from stakeholder during the study may delay the finalisation of the study
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	1
Indicator responsibility	Water Resources Management

Number of rivers in which the River Eco-status Monitoring Programme is implemented

Indicator Title	Number of rivers in which the River Eco-status Monitoring Programme is implemented
Definition	This monitors the number of river systems in which the system's ecological health is measured through the implementation of the River Eco-status Monitoring Programme
Source of data	A database of river eco-status indicators is maintained.
Method of Calculation/ Assessment	This will be the number of river systems as specified
Assumptions	Head office and regional budgets as allocated will remain stable, manageable staff turnover, stable climatic conditions
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	81 river systems in which the River Eco-status Monitoring Programme is implemented
Indicator responsibility	Water Resources Management

Number of river systems monitored for the implementation of resource directed measures

Indicator Title	Number of river systems monitored for the implementation of resource directed measures
Definition	This monitors the river systems in which resource directed measures have been implemented
Source of data	Data will be obtained from the various monitoring systems in place of which the water management system will be the main source
Method of Calculation/ Assessment	The river systems in which RDMs are implemented will be monitored and assessed against the desired water quality outcomes of the individual systems
Assumptions	The budget from Head and Regional Offices as allocated will remain stable; manageable staff turn-over and stable climate conditions
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	10
Indicator responsibility	Water Resources Management

Number of catchment strategies and plans developed for mine water and wastewater treatment works

Indicator Title	Number of catchment strategies and plans developed for mine water and wastewater treatment works
Definition	This will be the formulation of strategies to respond to mine water and/ or waste water (sewage) impacts in priority catchments
Source of data	GIS; catchment assessments and Green Drop reports/ water quality assessments
Method of calculation / Assessment	Mitigation strategies
Assumption	Reliable mine data and water quality monitoring in place
Disaggregation of beneficiaries (where applicable	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	9 catchment strategies and plans developed for mine water and wastewater treatment works
Indicator responsibility	Water Resources Management

Number of catchment plans implemented for mine water and waste water management

Indicator Title	Number of catchment plans implemented for mine water and waste water management
Definition	This will be the application of interventions to deal with mine water and/ or waste water (sewage) impacts in priority catchments
Source of data	Catchment assessments and Green Drop reports/ water quality assessments
Method of calculation / Assessment	Implementation Plan for mine water and waste water management
Assumption	Reliable water quality data and monitoring systems in place
Disaggregation of beneficiaries (where applicable	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	5
Indicator responsibility	Water Resources Management

Waste Discharge Charge System (WDCS) Implemented country wide

Indicator Title	Waste Discharge Charge System (WDCS) Implemented country wide
Definition	To pilot the WDCS project in the water management areas
Source of data	WMS and WARMS
Method of calculation/ Assessment	WDCS piloted and implemented
Assumption	Data on WARMS database
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	3
Indicator responsibility	Water Resources Management

Number of water conservation and water demand management strategies updated

Indicator Title	Number of water conservation and water demand management strategies updated
Definition	The Water Conservation and Water Demand Management Strategy (ies) is a fundamental step in promoting water use efficiency. This is consistent with both the National Water Act 36 of 1998 and Water Services Act, Act 107 of 1997 which emphasize effective management of our water resources and conservation
Source of data	This indicator ensures that the WC/WDM strategies are updated to reflect the latest developments on WC/WDM
Method of Calculation/ Assessment	Information will be collected from literature review including the existing strategies, consultation with various water users and relevant Departments.
Assumptions	• Minutes and attendance registers • Progress reports, • Updated WC/WDM Strategies • Development of the comments register and response matrix
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting Cycle	Annually
Desired performance	4
Indicator responsibility	Water Services Management

Water resource mix diversified

Indicator Title	Water resource mix diversified
Definition	Diversification of water mix can be defined as combination of water resources mix of conventional and unconventional water sources (including increased groundwater use, desalination, re-use and artificial recharge) to ensure water security
Source of data	Reconciliation strategies
Method of calculation/ assessment	Reports for surface and ground water; return flows, desalination and mine drainage
Assumptions	National water resources planning provide an analysis indicating the shifts in the water mix.
Disaggregation of beneficiaries (where applicable)	Not Applicable
Spatial transformation (where applicable)	Not Applicable
Reporting cycle	Annually
Desired performance	Water resource mix diversified as follows: • 70% surface water • 10% ground water • 16% return flows • 3% desalination • 1% acid mine drainage

Indicator responsibility	Water Resources Management

Number of new water resource gauging stations / weirs constructed

Indicator Title	Number of water resource gauging stations / weirs constructed
Definition	The definitions are as follows: 1) **Gauging station:** site on a stream, canal, lake, or reservoir where systematic observations of gauge height (water level) or discharge are obtained. From the continuous records obtained at these stations, hydrologists make predictions and decisions concerning water level, flood activity and control, navigation.[7] 2) **Water quantity:** pattern, timing, water level and assurance of in-stream flow 3) **Water quality:** chemical, physical, and biological characteristics of water bodies (i.e. rivers, dams, lakes, wetlands, estuaries and ground water)
Source of data	Data is collected directly from the gauging sites (stations) and stored in the databases
Method of Calculation/ Assessment	Numbers (of surface water monitoring sites)
Assumptions	• High flows in rivers may cause delays on site. • Problems may be experienced with supply chain to obtain material in time on site, etc. • Problems may be experienced with environmental approvals and inspections. • Problems may be experienced to obtain approvals to conduct the required site inspections on at least monthly basis
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation applicable)	Not applicable
Reporting cycle	Annually
Desired performance	1
Indicator responsibility	Water Resources Management

7 *Source: https://www.britannica.com/science/gauging-station*

Number of existing water resource gauging stations / weirs refurbished

Indicator Title	Number of water resource gauging stations / weirs refurbished
Definition	The definitions are as follows: 1) **Gauging station:** site on a stream, canal, lake, or reservoir where systematic observations of gauge height (water level) or discharge are obtained. From the continuous records obtained at these stations, hydrologists make predictions and decisions concerning water level, flood activity and control, navigation. 2) **Water quantity**: pattern, timing, water level and assurance of instream flow 3) **Water quality**: chemical, physical, and biological characteristics of water bodies (i.e. rivers, dams, lakes, wetlands, estuaries and ground water)
Source of data	Data is collected directly from the gauging sites (stations) and stored in the databases
Method of Calculation/ Assessment	Numbers (of surface water monitoring sites)
Assumptions	• High flows in rivers may cause delays on site. • Problems may be experienced with supply chain to obtain material in time on site, etc. • Problems may be experienced with environmental approvals and inspections. • Problems may be experienced to obtain approvals to conduct the required site inspections on at least monthly basis
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation applicable)	Not applicable
Reporting cycle	Annually
Desired performance	2
Indicator responsibility	Water Resources Management

Number of water resources monitoring programmes reviewed and maintained

Indicator Title	Number of water resources monitoring programmes reviewed and maintained
Definition	A report on the number of water resources monitoring programmes that have been reviewed and maintained with the objectives and schedules for the maintenance of monitoring networks achieved and recommendations for improvement as part of the hydrological inputs towards an overview of the state of water in South Africa with interpreted and recommended actions.
Source of data	DWS databases and systems, reports, South Africa Weather Services, surface and ground water flow records, status of dams and the report on Hydrological Extremes (droughts and floods) network review and maintenance reports from DWS Regions as well as from other water-sector data users and related Institutions
Method of Calculation/ Assessment	Number of monitoring programmes with available final reports ; that will include interpreted, assessed data/ information, formalised recommendations for action to be taken and its distribution
Assumptions	The budget as allocated will remain stable, manageable staff turnover, stable climatic conditions
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation **(where applicable)**	Not applicable
Reporting cycle	Quarterly
Desired Performance	8 programmes • Groundwater (GW), • Surface Water (SW), • National Chemical (NCMP), • National Eutrophication (NEMP), • National Wetlands (NWMP) • National Microbial (NMMP) • River Eco-status Monitoring Programme (REMP) • National Estuary (NESMP)
Indicator Responsibility	Water Resources Management

Number of Water and Sanitation information systems maintained

Indicator Title	Number of Water and Sanitation information systems maintained
Definition	This indicator will be used to monitor the number of major computerised information systems successfully developed and maintained to the prescribed operational requirement with at least 95% system availability per month. It measures the operational status of the six water information systems and the provision of water information (quantity and quality) by the DWS National Information Systems.
Source of data	The flow and flood information products are required for the safe and effective operation of major water infrastructure in order to inform water supply and to support flood management. In order to achieve that, the Information Systems is maintained and operated daily and this is made possible by the IT Service Provider engaged through service level agreements managed through the Office of the CIO. This indicator monitors compliance with the SLA. Data will be obtained from the portfolio managers and processed through each information system (HYDSTRA, National Groundwater Information system, Water Management System, Flood management Systems on (i) if the development project is on track, and (ii) if the system was operational for more than the minimum required period per month. (Minor developments to be done within the ambit of the SLA. NIWIS imports data from various existing DWS legacy systems as well as from the N-drive for unstructured (Excel spread sheets) sources. The GIS import data from Existing Data sets, spatial data, RS, aerial photography data, field data as well as data sourced from external stakeholders and private sector. The operation of the FMS is dependent on real-time river flow and rainfall data collected through DWS monitoring networks; and weather information (reports and forecasts) from the South African Weather Service and the MESA donated satellite based weather information receiver and processing workstation installed at Vaal Dam. Whether or not the system was operational or operated on a given weekday is determined by the availability of flow and flood information products on the Hydrology website and archives in HYDSTRA. System development and maintenance work is captured in plans and deliverables which are signed-off monthly.
Method of Calculation/ Assessment	Number of major information systems available and operational at not less than 95% of the time monthly; as well as the signing-off; the planned maintenance activities and deliverables per system
Assumptions	Departmental IT contract in place, IT infrastructure stable, the budget as allocated will remain stable, manageable staff turnover
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation applicable)	Not applicable
Reporting cycle	Quarterly
Desired performance	6 (National Integrated Water Information System , Hydrological Information System , National Geo-hydrological Information System , Water Management System, geographical Information System and Flood Monitoring and Forecasting System)
Indicator responsibility	Water Resources Management

Annual MuSSA reports on water services authorities' performance in providing water and sanitation services

Indicator Title	Annual MuSSA reports on water services authorities performance in providing water and sanitation services
Definition	MuSSA is a tool used to assess overall business health of WSAs to fulfill the water services function
Source of data	42 Municipalities, 8 Metro and 8 Secondary cities are sources of data. Questionnaires are sending to municipalities to complete regarding various key functional attributes.
Method of Calculation/ Assessment	Collected data is captured on the database, which has scores for various attributes. Processed data gives rise to information that categories municipalities in terms of vulnerability status and allows the identification of key business areas of vulnerability.
Assumptions	Factors that are accepted as true and certain to happen without proof; The update process is voluntary (the MuSSA is a municipal self -help assessment process) and the completion targets cannot be imposed on the municipalities
Disaggregation of Beneficiaries (where applicable)	Not applicable
Spatial Transformation applicable)	Not applicable
Reporting cycle	Annually
Desired performance	5 National Reports on Municipal Strategic Self-Assessments (MuSSA) within the WSAs, metros and secondary cities
Indicator responsibility	Water Services Management

Green Drop report on wastewater systems' compliance with regulatory requirements

Indicator Title	Green Drop report on wastewater systems' compliance with regulatory requirements
Definition	The definitions are as follows: **1)** **Green Drop:** a certification incentive based regulation that seeks to identify and develop the required core competencies that if strengthened will gradually and sustainably improve the level of wastewater management in South Africa. **2)** **Wastewater system:** A system composed of gravity pipes, manholes, tanks, lift stations, control structures, and force mains that gather used water from residential and non-residential customers and convey the flow to the wastewater treatment plant.
Source of data	Water services databases, water service authorities databases, accredited laboratories
Method of calculation/ assessment	A report containing the results of participating wastewater treatment systems
Assumptions	Individual Green Drop reports for participating wastewater treatment systems would be accessible on the Department's website.
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	3 Green Drop reports
Indicator responsibility	Water Resources Management

Blue Drop report on water supply systems' compliance with regulatory requirements

Indicator Title	Blue Drop report on water supply systems' compliance with regulatory requirements
Definition	The definitions are as follows: **Blue Drop:** a certification incentive-based regulation that seeks to safeguard the tap water quality management in South Africa. **Water supply system:** infrastructure for the collection, transmission, treatment, storage, and distribution of water for homes, commercial establishments, industry, and irrigation, as well as for such public needs.
Source of data	Water services databases, water service authorities databases, accredited laboratories
Method of calculation/ assessment	A report containing the results of participating water supply systems
Assumptions	Individual Blue Drop reports for participating water supply systems would be accessible on the Department's website.
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	2 Blue Drop reports
Indicator responsibility	Water Services Management

Timeframe for processing water use license applications reduced to 90 days

Indicator Title	Timeframe for processing water use license applications reduced to 90 days
Definition	The reduction of the turnaround time to finalise applications for water authorisations. A water use authorisation may be one of the following: **Schedule 1 use:** small volumes of water for household use only. no application for a licence needs to be made. **General Authorisations:** larger volumes of water may be generally authorised for a specific type of water use or category of water user. These users need to register their use but do not need a licence. **Existing Lawful Use:** this allows water use that was lawfully used before the NWA came into effect to continue until it can be converted into a licence using compulsory licensing. **Licensed Water Use:** Licences are issued under the NWA, and require approval of an application by the Department of Water and Sanitation
Source of data	A database of finalised water use authorisations
Method of calculation/ assessment	Actual gazetted regulations
Assumptions	The revised regulations would be recommended by Cabinet
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	Revised regulations for water use licence applications
Indicator responsibility	Water Resources Management

Average number of water users in various sectors monitored for compliance with water use license per year

Indicator Title	Average number of water users in various sectors monitored for compliance with water use license per year
Definition	The definitions are as follows: 1) **Water user:** agriculture, bulk storage, forestry, industry, mining, power generation, recreation, water services 2) **Various sector:** public, mining, industrial, agricultural and forestry sectors
Source of data	Water use entitlements and compliance inspection reports with score card completed and uploaded on NCIMS (National Compliance Information Management System).
Method of calculation/ assessment	This is the actual number of water users compliance evaluations conducted within the financial year.
Assumptions	Though specific water users are targeted, operational needs may see deviations from water users selected for inspection (i.e. substitutions)
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial transformation (where applicable)	Not applicable
Reporting cycle	Quarterly
Desired performance	Average of 396 water users in various sectors monitored for compliance with water use license per year
Indicator responsibility	Water Resources Management

Performance of water resource institutions evaluated against their performance plans

Indicator Title	Performance of water resource institutions evaluated against their performance plans
Definition	This monitors the Performance of institutions(2 CMAs, TCTA and WRC) against their Shareholder Compacts, Corporate Plans, Annual Performance Plans, Annual Reports and Quarterly Reports as required by the legislation (PFMA)
Source of data	Submitted plans/reports from entities
Method of calculation/ Assessment	Number of performance assessments/appraisals conducted
Assumption	Submission of all plans/reports
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	Annual performance plans and reports for 2 CMAs, TCTA and WRC
Indicator responsibility	Water Resources Management

PPI no 6.3.2: Number of water boards reconfigured

Indicator title	Number of water boards reconfigured
Definition	This indicator monitors the reconfiguration of water boards in terms of financial sustainability, service areas that are not currently serviced and eradicating institutional confusion caused by having multiple water boards serving the same area
Source of data	Roadmap, due diligence and gazette notices for the reconfigured water boards.
Method of calculation/ assessment	Roadmap, due diligence and gazette notices for the reconfigured water boards.
Means of verification	• Mhlathuze and Umgeni Water • Notice for single water board • Letter of appointment for the board • Status report for a single water boards • **Rand Water** • Due Diligence report • gazette notices • Proof of assets transfers • **Magalies Water** • Due Diligence report • Proof of assets transfers
Assumptions	Due diligence report and gazette notices.
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial transformation (where applicable)	Not applicable
Calculation type	Non-Cumulative
Reporting cycle	Quarterly
Desired performance	5 Reconfiguration of • Mhlathuze Water and Umgeni Water, • Rand Water and • Magalies Water • Overberg Water and • Lepelle Water
Indicator responsibility	Water Services Management

Number of irrigation boards transformed into Water User Associations

Indicator Title	Number of irrigation boards transformed into Water User Associations
Definition	This indicator monitors the progress of transforming Irrigation Boards into Water User Associations
Source of data	Proposals and constitutions of Irrigation boards to be transformed
Method of calculation/ Assessment	The roadmap and implementation plans on the transformation of Irrigation Boards and the review of proposals For the following water user association Loskop, Ixopo, Brandweg, Gamtoos and Upington Island WUAs
Assumption	Submission of all proposals/reports/minutes
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	5 Irrigation boards to be transformed into Water User Associations (Loskop, Ixopo, Brandweg, Gamtoos, Upington Island)
Indicator responsibility	Water Resources Management

Regulation for advancement of water allocation reform finalised

Indicator Title	Regulation for advancement of water allocation reform finalized
Definition	This indicator monitors the process of developing the Regulations for the Water Allocation Reform.
Source of data	National Water Act and National Water Resources Strategy II
Method of calculation/ Assessment	First Draft Regulations Approved for Internal Consultation; Internal Consultation Schedule and Minutes of Regional Consultations, Second Draft Regulations Approved for Public Comments and Government Gazette of the Draft Regulations for Public Comments.
Assumption	National Water Act 36 of 1998 Reviewed/amended to enable the development of the Regulations
Disaggregation of beneficiaries (where applicable)	Not applicable
Spatial Transformation (where applicable)	Not applicable
Reporting cycle	Annually
Desired performance	Validation and verification of existing lawful use in 7 WMAs
Indicator responsibility	Water Resources Management

PART E: DISTRICT DEVELOPMENT MODEL

OR Tambo DM

PPI No.	Output Indicators	Project Name	Project description	Location	Status
3.4.1	Number of bulk raw water projects in the preparation for implementation	Lusikisiki regional water supply scheme: Zalu Dam on the Xura River	Bulk raw water (i.e. dam and associated infrastructure)	O R Tambo DM, Eastern Cape	Design
3.9.3.1	Number of mega regional bulk infrastructure project phases under construction	OR Tambo Mthatha King Sabata Dalindyebo district municipality bulk water supply	Bulk water supply	OR Tambo DM, Eastern Cape	Construction
3.9.4.2	Number of large regional bulk infrastructure project phases completed	Ingquza Hill bulk water supply	Bulk water supply	O R Tambo DM, Eastern Cape	Completed
3.9.3.1	Number of mega regional bulk infrastructure project phases under construction	Mbizana regional bulk water supply	Bulk water supply	O R Tambo DM, Eastern Cape	Completed
3.9.1	Number of feasibility studies for water and wastewater services projects (RBIG) completed [Not funded]	Coffee bay water treatment works	Bulk water supply	O R Tambo DM, Eastern Cape	Feasibility

PPI No.	Output Indicators	Project Name	Project description	Location	Status
5.1.8	Number of wastewater systems assessed for compliance with the Green Drop Regulatory requirements	Bizana	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment
		Flagstaff	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment
		Lusikisiki	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment
		Mqanduli	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment
		Mthatha	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment
		Ngqeleni	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment
		Ntabankulu	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment
		Port St Johns	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment
		Qumbu	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment
		Tsolo	Wastewater system compliance assessment	O R Tambo DM, Eastern Cape	For green drop assessment

Alfred Nzo DM

PPI No.	Output Indicators	Project Name	Project description	Location	Status
3.9.3.3	Number of small regional bulk infrastructure project phases under construction	Matatiela Bulk Water Supply	Bulk water supply	Alfred Nzo DM, Eastern Cape	Construction
3.9.3.1	Number of mega regional bulk infrastructure project phases under construction	Greater Bizana Water Supply	Bulk water supply	Alfred Nzo DM, Eastern Cape	Construction
3.9.1	Number of feasibility studies for water and wastewater services projects (RBIG)	Ntabankulu bulk water supply	Bulk water supply	Alfred Nzo DM, Eastern Cape	Construction
3.9.4.2	Number of large regional bulk infrastructure project phases completed	Mount Ayliff bulk peri-urban water supply	Bulk water supply	Alfred Nzo DM, Eastern Cape	Construction
3.4.2	Number of bulk raw water projects under construction	Mzimvubu Water Supply	Bulk raw water (i.e. dam and associated infrastructure)	Alfred Nzo DM, Eastern Cape	Construction
5.1.8	Number of wastewater systems assessed for compliance with the Green Drop Regulatory requirements	Bizana	Wastewater system compliance assessment	Alfred Nzo DM, Eastern Cape	For green drop assessment
		Cedarville	Wastewater system compliance assessment	Alfred Nzo DM, Eastern Cape	For green drop assessment
		Matatiele	Wastewater system compliance assessment	Alfred Nzo DM, Eastern Cape	For green drop assessment
		Mount Ayliff	Wastewater system compliance assessment	Alfred Nzo DM, Eastern Cape	For green drop assessment
		Mount Frere	Wastewater system compliance assessment	Alfred Nzo DM, Eastern Cape	For green drop assessment
		Ntabankulu	Wastewater system compliance assessment	Alfred Nzo DM, Eastern Cape	For green drop assessment

Waterberg

PPI No.	Output Indicators	Project Name	Project description	Location	Status
3.9.1	Number of feasibility studies for water and wastewater services projects (RBIG) completed [Not funded]	Mokolo and Crocodile water Augmentation Project (MCWAP) Phases 2A	Bulk raw water (i.e. dam and associated infrastructure)	Waterberg DM, Limpopo	EIA
3.9.1	Number of feasibility studies for water and wastewater services projects (RBIG) completed [Not funded]	Magalies water supply to Waterberg (Klipvoor)	Bulk water supply	Waterberg DM, Limpopo	Feasibility
3.9.3.1	Number of mega regional bulk infrastructure project phases under construction	Mogalakwena bulk water supply phase 2	Bulk water supply	Waterberg DM, Limpopo	Construction
3.9.1	Number of feasibility studies for water and wastewater services projects (RBIG) completed [Not funded]	Lephalale/ Eskom: Bulk water augmentation	Bulk water supply	Waterberg DM, Limpopo	Feasibility
5.1.8	Number of wastewater systems assessed for compliance with the Green Drop Regulatory requirements	Pienaarsrivier wastewater supply system	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Radium wastewater supply system	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Witpoort	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Zongesien	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Modimolle	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Vaalwater	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Mokopane old & New	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment

PPI No.	Output Indicators	Project Name	Project description	Location	Status
		Rebone	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Naboomspruit	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Seshego	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Northam	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment
		Rooiberg	Wastewater system compliance assessment	Waterberg DM, Limpopo	For green drop assessment

Ethekwini

PPI No.	Output Indicators	Project Name	Project description	Location	Status
3.9.3.2	Number of large regional bulk infrastructure project phases under construction	Mdloti River development project: Raising of Hazelmere Dam	Bulk raw water (i.e. dam and associated infrastructure)	iLembe DM, KwaZulu-Natal	Construction
5.1.8	Number of wastewater systems assessed for compliance with the Green Drop Regulatory requirements	Amanzimtoti	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Cato Ridge	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Central	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Craigieburn	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Dassenhoek	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Fredville	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Fredville	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Genazzano	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Glenwood Road	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Hammarsdale	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Hillcrest	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment

PPI No.	Output Indicators	Project Name	Project description	Location	Status
		Isipingo	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Kingsburgh	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		KwaMashu	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		KwaNdengezi	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Magabeni	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Mpumalanga	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		New Germany	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Northern Works	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Phoenix	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Southern	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Tongaat Central	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Umbilo	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Umdloti	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Umhlanga	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment

PPI No.	Output Indicators	Project Name	Project description	Location	Status
		Umhlatuzana	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Umkomaas	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment
		Verulam	Wastewater system compliance assessment	eThekwini Metropolitan Municipality	For green drop assessment

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