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INTRODUCTION



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1.1 Background

South Africa is characterized by spatial variability in rainfall, with the east of the country lying in the summer rainfall zone with high rainfalls. In contrast, the country's west lies in an all-year-round or winter rainfall region that is semi-arid to arid. River systems are the common surface water expression of water availability in South Africa, with others being lakes, ponds, and pans.

South Africa requires additional water resources to support the growing economy as a developing country. With 98% of the country's available water resources already allocated, opportunities to supplement future water requirements with conventional surface water resources are limited. The time has now come when a mix of water resources is required to reconcile supply and demand, including sustainable ground water use, reuse of waste water, and desalination.

The Department of Water and Sanitation as the public trustee or custodian of the nation's water resources has a vital and significant role in managing the country's water resources. The department runs several monitoring programmes through established monitoring networks to collect data and derive information on the quality and quantity of surface and ground water.

A decrease in water supply threatens South Africa's water security due to negative impacts on yields arising from climate change, degradation of wetlands and water resources, and siltation of dams, whilst water losses and demand are escalating due to population and economic growth, urbanization, inefficient use, and changing lifestyles.

The National State of Water (NSoW) report sets out to communicate the available water resources information through this integrated report to assist water managers in decision making; evaluating the impact of the implementation of legislation; highlight identified problem areas; inform the public on the status of water resources and sanitation; what is being done to balance the water demand and supply; and ensure availability of water to future generations.

Most importantly, this report is part of an effort to disseminate information and knowledge to the public. The main aim is to enhance the quality, accessibility, and relevance of information and data related to Integrated Water Resource Management. This is to improve the public's understanding of the importance of this vital resource and how it can be used more efficiently.

The Directorate: Water Information Integration, under the Chief Directorate: National Water Resource and Information Management, coordinates the provision of the

national state of water report. The reporting on the state of water is a collaborative effort of all directorates within different branches of the Department of Water and Sanitation.

1.2 Water Sector Institutional Design

The South African Sector Institutional landscape as of 2020, together with proposed new entities, is illustrated in **Error! Reference source not found.**. The National Department of Water and Sanitation is the custodian of water resources with an obligation of water resource management. The National Department acting through the Minister, is responsible for water sector policy, support, and regulation.

This water resource management obligation or function is to be delegated to an institution at the water management area level, such as a Catchment Management Agency (CMA). This is in support of the principles of integrated water resource management. In water management areas where a CMA has not been established, the responsible authority (DWS national and provincial) continues to act as a CMA to perform all water resource management functions at a catchment level.

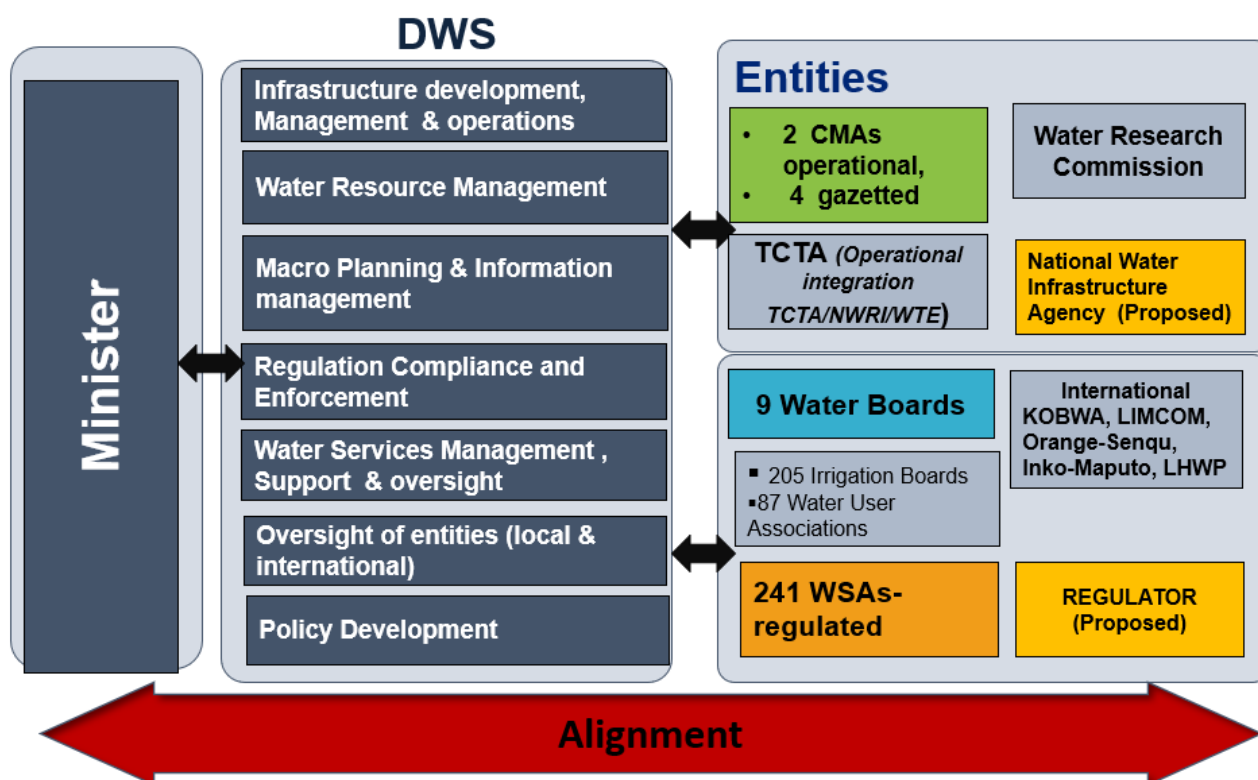


Figure 1.1 Water Sector Institutional Landscape in 2020

At the local level, we find Water Services Institutions, and these are Water Services Authorities (WSAs) - municipalities that provide water services or outsource water services provisions to the private Water Services Providers (WSPs) - water boards. These WSAs and WSPs that provide water and sanitation services are regulated by the Department of Cooperative Governance and Traditional Affairs (CoGTA). A

water services authority means any municipality, including a district or rural council (as defined in the Local Government Transition Act, 1993), responsible for ensuring access to water services. Water services providers mean any person who provides water services to consumers or another water services institution. Notably, some WSAs are WSPs; in other cases, the WSA has WSP that provides water services on their behalf.

1.3 Water management areas

Based on the outcome of the Departmental Institutional Reform and Realignment (IRR) study, the NWRS2 established the nine WMAs in South Africa in July 2012. These replaced the 19 WMAs identified before this date. It was recognized that these WMA boundaries needed to be reviewed periodically to accommodate new realisations and issues. WMAs are based mainly on catchment boundaries, except for those catchments that cross international borders. Within these WMAs, catchments are further subdivided into tertiary, secondary, and quaternary catchments. The status and trends of water resources provided in this report have been analysed and presented based on these nine WMAs.

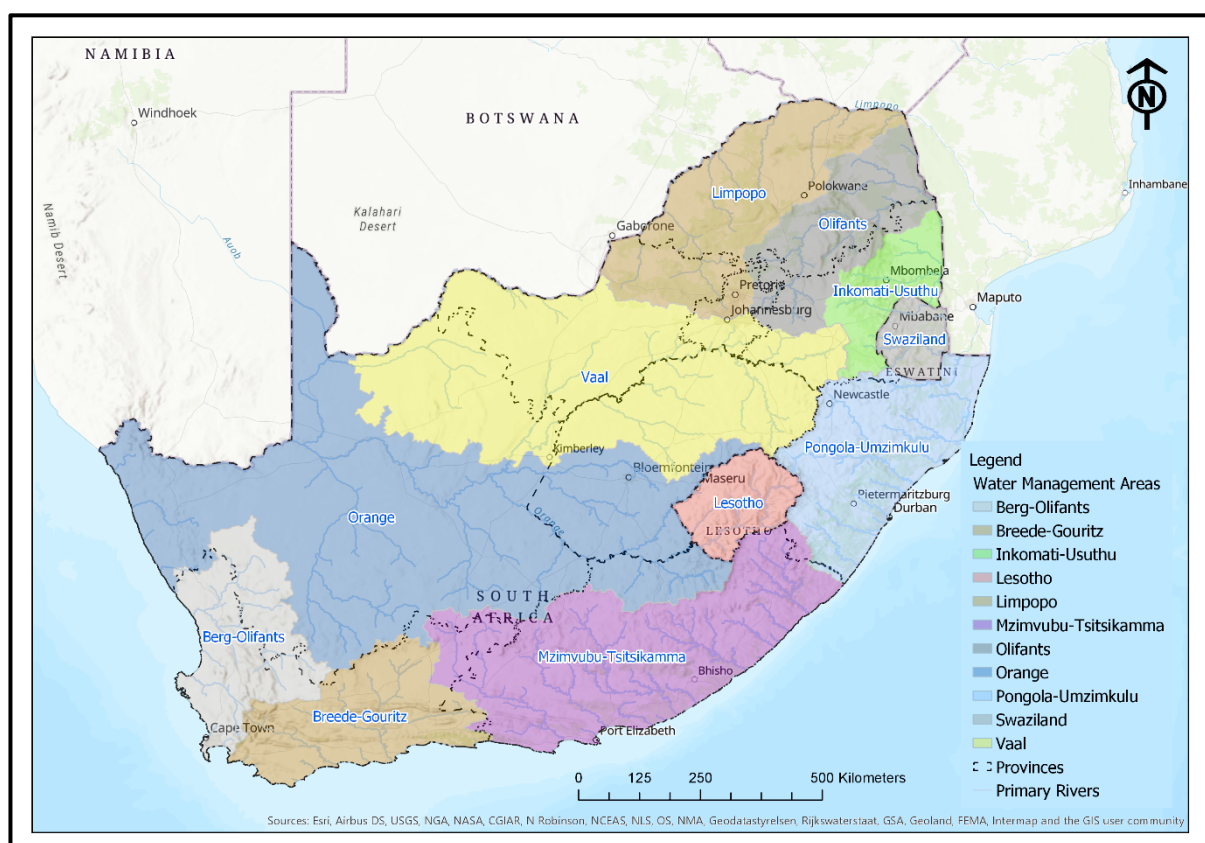


Figure 1.2 South African Nine Water Management Areas as of 2012

The Department has embarked on several institutional re-alignment processes to transform the water sector, build stable institutions with clearly defined roles and responsibilities across the sector, and promote effective institutional performance. It

is proposed that as we advance, water resource management will be based on six water management areas for which CMAs will be established, these are: Limpopo-Olifants (1); Inkomati-Pongola (2); Mhlathuze-Mzimkhulu (3); Vaal-Orange (4); Mzimvubu-Tsitsikamma (5); Breede-Olifants (6) – see Figure 1.3.

As part of the Department's turnaround strategy in establishing CMAs, the extension of the boundary of the existing Breede-Gouritz CMA to incorporate the Berg-Olifants water management area has been gazetted for public comments in terms of section 78(1) of the National Water Act, 1998 (Act No. 36 of 1998) to establish the Breede-Olifants CMA in September 2020. While in March 2021, the extension of the Vaal CMA to include the Orange water management area has been gazetted for public consultation in terms of section 78(4) of the National Water Act, 1998 (Act No. 36 of 1998). This incorporation will enhance revenue generation and sustainability of the CMA, as well as enable effective water resources management.

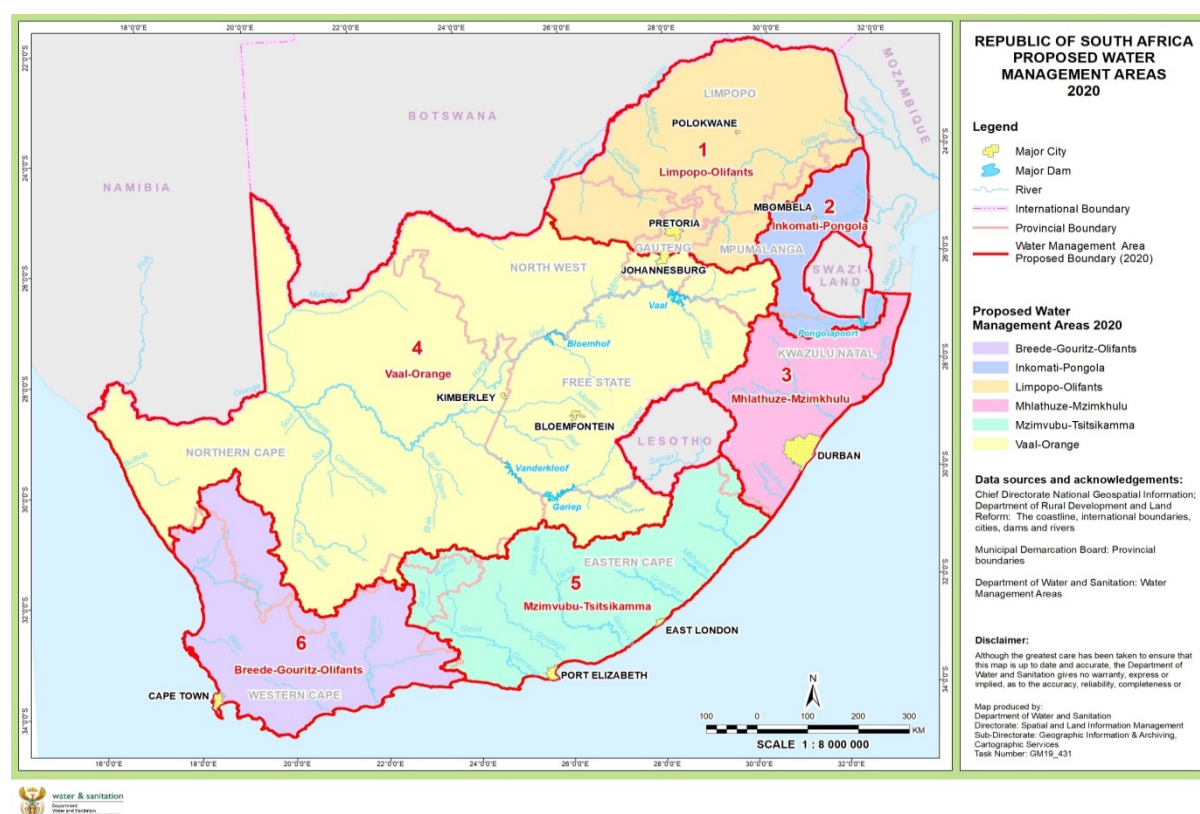


Figure 1.3 Proposed New WMAs and CMA configuration

The CMAs initial function will be to promote community participation in water governance. The CMA will manage and control water resources, develop catchment management strategies and ensure coordination and implementation by municipalities as per section 80 of the National Water Act, 36 of 1998.

1.4 Internationally Shared Basins

South Africa shares four international river basins, namely the Limpopo, Orange/Senqu, Inkomati, and Maputo, with six neighbouring countries, Botswana, Lesotho, Mozambique, Namibia, eSwatini, and Zimbabwe.

The shared watercourse institutions are responsible for international cooperation on water resource management of the basin, including equitable water sharing between countries, basin management, operation of basin infrastructure for droughts and floods, and future water resource development options, water resource protection, etc. South Africa has three international rivers which it shares with its neighbours (Figure 1.4), i.e.:

- Orange – Senqu River: shared with Kingdom of Lesotho, Botswana & Namibia
- Limpopo River: shared with Botswana, Zimbabwe and Mozambique
- Inkomati River: shared with the Kingdom of Eswatini and Mozambique
- Maputo River: shared with the Kingdom of Eswatini and Mozambique

The summary of international agreements and their status is given in Table 1-1. These agreements have been established with the neighbouring states to promote international transboundary cooperation.

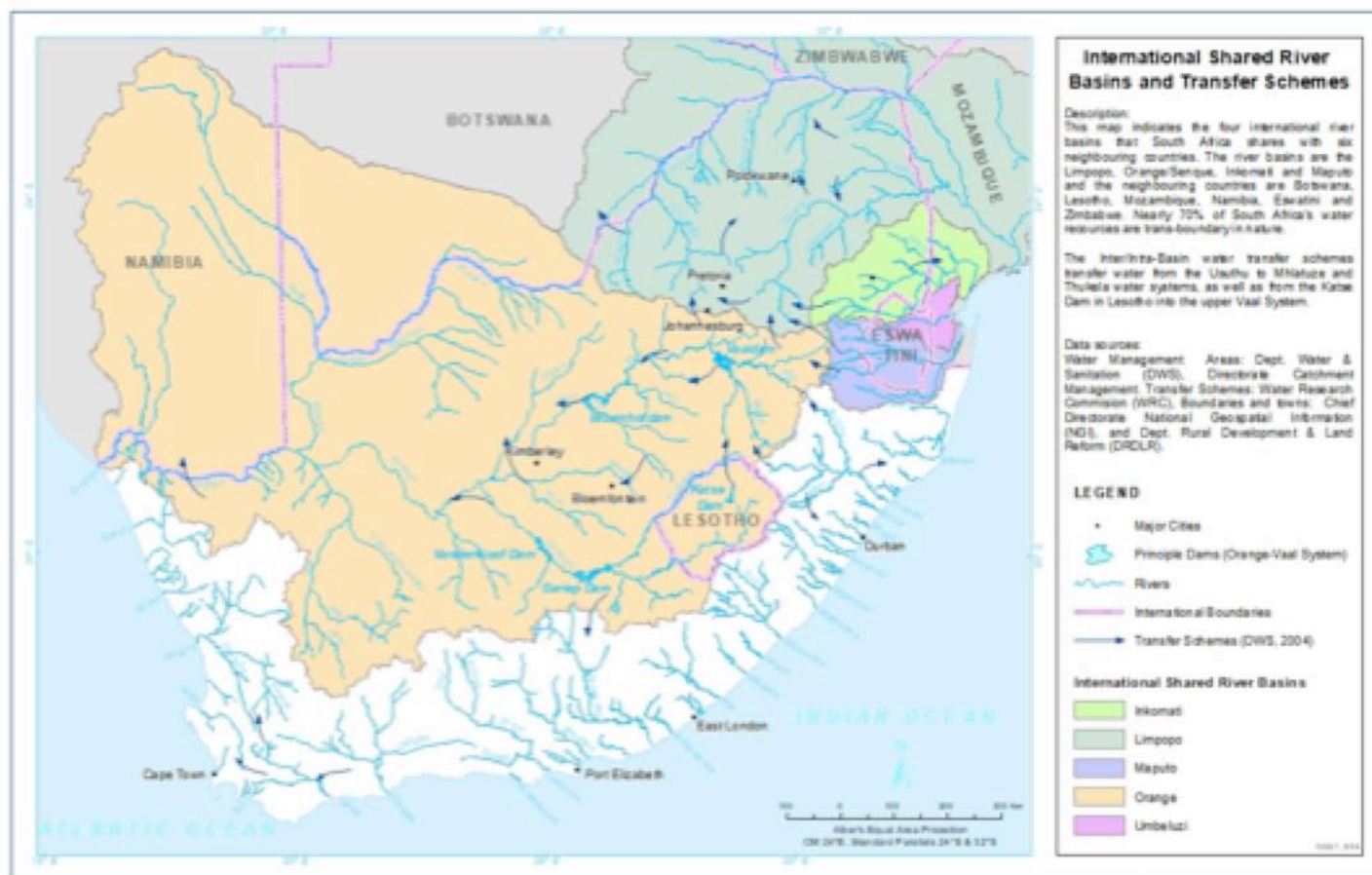


Figure 1.4 International shared basin and transfer schemes

Table 1-1 List of Shared Watercourses Agreements

Country	Title of the Agreement	Date signed	Date entered into force	Status of Agreement	Areas of Cooperation
Republic of Botswana, Republic of Mozambique, Republic of South Africa, and Republic of Zimbabwe	Agreement between Republic of Botswana, Republic of Mozambique, Republic of South Africa, and Republic of Zimbabwe on the establishment of the Limpopo watercourse Commission (LIMCOM)	2003/11/27	2003/11/27	Active	Joint Integrated Water Resource Management of the Limpopo River Shared Water between RSA, Botswana, Mozambique, and Zimbabwe
Republic of Botswana, Kingdom of Lesotho, Republic of Namibia, and Republic of South Africa	Agreement between Republic of Botswana, Kingdom of Lesotho Republic of Namibia, and Republic of South Africa on the establishment of the Orange Senqu River Commission (ORASECOM)	2000/11/03	2000/11/03	Active	Joint Integrated Water Resource Management of the Limpopo River Shared Water between RSA, Botswana, Namibia, and Lesotho
Republic of Botswana, Kingdom of Lesotho, Republic of Namibia, and Republic of South Africa	Agreement between SA and ORASECOM for the Hosting of the ORASECOM Secretariat	2008	2008	Active	The South African Department of Water and Sanitation has been responsible for paying office rental for the hosting of the RASECOM secretariat in Centurion every year since 2008
Republic of Botswana, Kingdom of Lesotho, and Republic of South Africa (JSMC Agreement)	Memorandum of Agreement between the Government of Republic of Botswana, Kingdom of Lesotho and Republic of South Africa on the Lesotho-Botswana Water Transfer Feasibility Study	2017/11/16	2017/11/16	Active	<ul style="list-style-type: none"> RSA, Botswana, and Lesotho experts (engineers) jointly study the possibility of Botswana extracting water from the Lesotho Highlands Water Project.

Country	Title of the Agreement	Date signed	Date entered into force	Status of Agreement	Areas of Cooperation
					<ul style="list-style-type: none"> • JSMC monitors the study on a regular basis • Implementation of Phase II • Procurement process implementation • establishment of Project management
<p>Republic of Mozambique, Kingdom of Swaziland/Eswatini, and Republic of South Africa (TPTC)Agreement)</p>	<p>Agreement between the Kingdom of Swaziland, The Republic of Mozambique and Republic of South Africa on the establishment of Inco and Maputo Watercourse Commission. This is an envisaged Agreement which countries are still consulting with their respective Legal entities in their countries.</p>			Not active	