

1

INTRODUCTION



1 INTRODUCTION

1.1 Background

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 surface and groundwater quality and quantity.

South Africa is characterised 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 come when a mix of water resources is required to reconcile supply and demand, including sustainable ground water use, reuse of wastewater, and desalination.

A necessary means to address water insecurity challenges is the consideration of integrated, circular, and transformative approaches that include the water-energy-food (WEF) nexus. The challenges of water, energy, and food insecurity are interlinked in such a way that any changes in any of the three sectors would also affect the other two. Providing solutions to any of the three should also consider the impacts on the other two. Otherwise, the interventions would transfer the challenges from one sector to another. Linear approaches have been helpful for a long time but have reached their limits. They are being replaced by circular approaches, which are multi-sectoral and multi-stakeholder in their approach.

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 for future generations.

1.2 Water Sector Institutional Reform

The South African Water Sector Institutional Reform has not been completed, and the outlook as of October 2022 is illustrated in Figure 1.1. The National Department of Water and Sanitation is the custodian of water resources with an obligation to perform water resource management functions. The National Department acting through the Minister is responsible for water sector policy, support, and regulation.

The water resource management functions are to be delegated to the Catchment Management Agencies (CMAs), although there is some level of uncertainty currently. This supports the principles of good governance, where water is managed locally. In water management areas where a CMA has not been established, the responsible authority (DWS national and provincial offices) continues to act as a CMA to perform all water resource management functions at a catchment level.

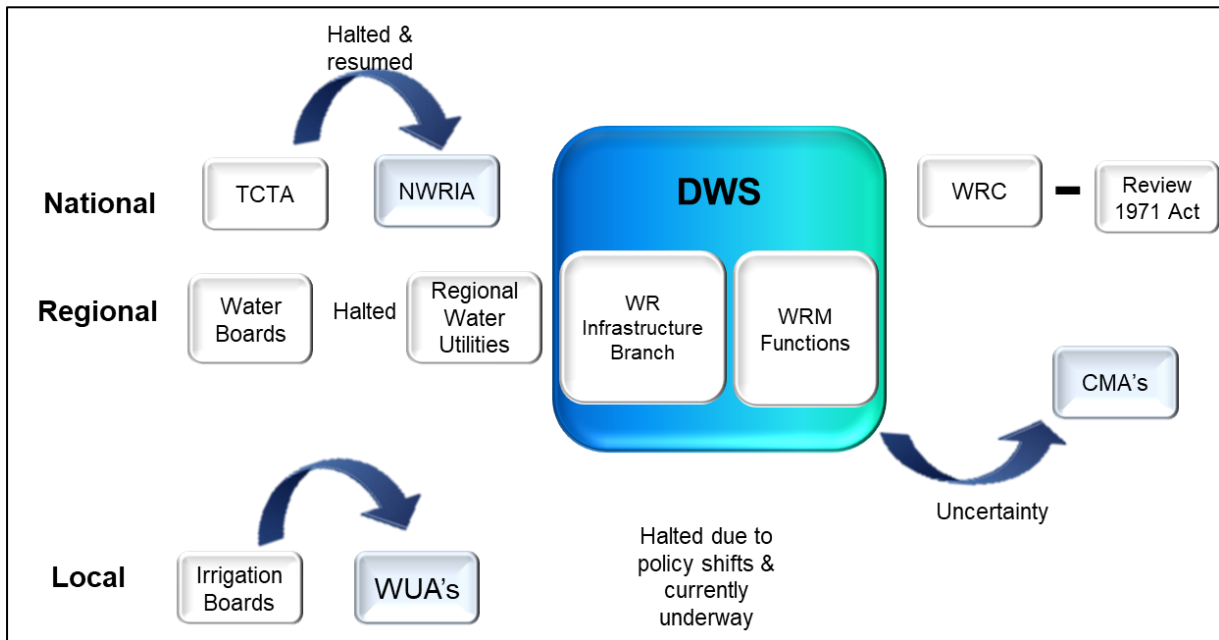


Figure 1.1 Water Sector Institutional Landscape in 2020

At a national level, the reform process involves the consolidation of the DWS's Water Resource Infrastructure Branch and Trans Caledon Tunnel Authority (TCTA) to form a *National Water Resource Infrastructure Agency (NWRIA)*, which will be responsible for infrastructure development and management. At a regional level, the process of converting the water Boards to Regional Water Utilities has been halted. At a local level, the transformation of Irrigation Boards (IBs) into Water User Associations (WUAs) has been halted due to policy shifts that are currently taking place.

Furthermore, although not shown in the illustration, we find Water Services Institutions at the local level, and these are Water Services Authorities (WSAs) - municipalities that provide water services or outsource water services provisions to the private Water Services Providers (WSPs). 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 are any persons who provide water services to consumers or another institution. Notably, some WSAs are WSPs; in other cases, the WSA has WSPs that provide 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 recognised 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 the nine WMAs or, in some instances, Provinces, as shown in Figure 1.2.

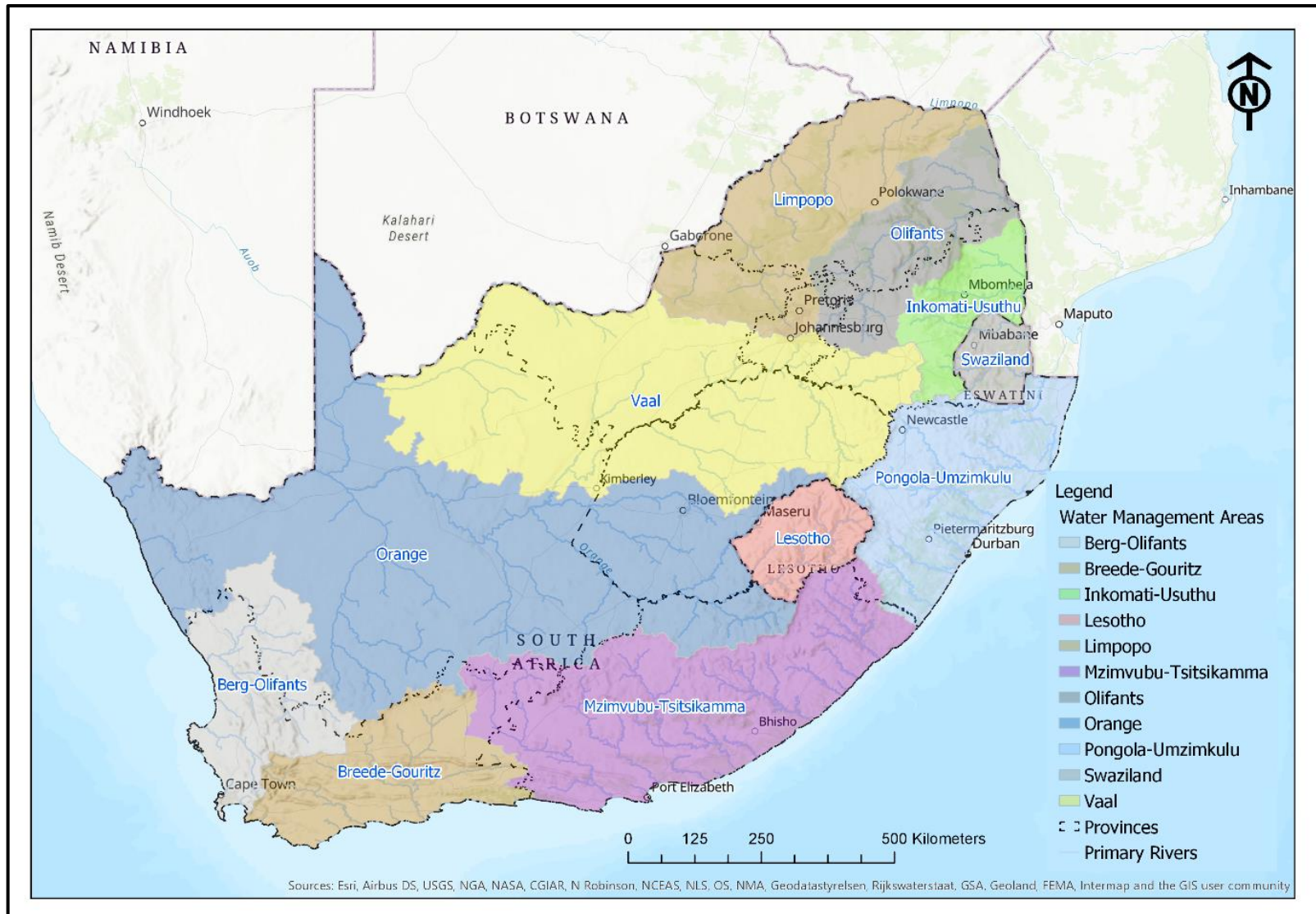


Figure 1.2 South African Nine Water Management Areas as of 2012

1.4 Establishment of CMAs

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

The National Water and Sanitation Master Plan, launched in November 2019, has prioritised the establishment of CMAs, and the progressive delegation or assignment of powers, functions, and duties of CMA. CMA establishment has demanded attention be given to any opportunities for reducing costs and increasing efficiencies without compromising on the core objectives of decentralising water resource management.

A proposal has been made to reduce the number of CMAs from nine to six through the consolidation of WMAs (see Figure 1.3.). The CMAs will be for: Limpopo-Olifants (1); Inkomati-Pongola (2); Mhlatuze-Mzimkhulu (3); Vaal-Orange (4); Mzimvubu-Tsitsikamma (5); Breede-Olifants (6).

The main principles in realigning the WMA and CMAs from nine to six are the following:

- **Operational Integration** – *connected and integrated water systems, easy coordination, and monitoring of agreements improved capacity-pooled technical skills.*
- **Integrated water resource planning** – *the river basins fall within the same system, improved resource planning, and the same conventions manage transboundary systems.*
- **Economies of scale** – *enhance revenue and hence sustainability, cost-effectiveness, and consolidated management structures.*

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. The progress of the establishment of CMAs is provided in Table 1-1 below.

Table 1-1 CMA Establishment Progress October 2022

NAME OF THE CMA	STATUS OF CMA ESTABLISHMENT	Next Steps
Breede-Olifants	A business case is completed The Minister has signed the Gazette notice for the establishment of the Breede – Olifants CMA	Will publish the Gazette notice as soon as the decision on staff transfer has been finalised. This should take place by the end of November 2022
Vaal-Orange	CMA was gazetted for public consultation in May 2022 A business case is finalised Consultation with stakeholders is underway	The CMA will be gazetted for establishment by Dec 2022
Pongola-Umzimkulu	CMA was gazetted for establishment in 2014	The Board appointment process has been initiated and should be finalised by November 2022
Limpopo-Olifants	Business case development is completed Consultation with provincial offices is ongoing	CMA will be gazetted for public consultation in November 2022
Mzimvubu-Tsitsikamma	CMA was gazetted for public consultation in 2016 A business case is under development Consultation with the internal and external stakeholders	The CMA will be gazetted for establishment by March 2023
Inkomati-Usuthu	No configuration will be done	



Figure 1.3 Proposed New WMAs and CMA configuration

1.5 Water Pricing Strategy

The pricing strategy provides the framework for the pricing of water use (as defined in Section 21 of the National Water Act, 36 of 1998) from South Africa's water resources, i.e., the use of raw (untreated) water from the water resource and/or supplied from government waterworks and the discharge of water into a water resource or onto land. It is developed in terms of the National Water Act, which empowers the Minister of Water & Sanitation (the Minister), with the concurrency of the Minister of Finance, to establish a pricing strategy for charges of any water use within the framework of existing relevant government policy. The **third revision** of the strategy is currently being finalised to incorporate social-economic, environmental, and other changes.

The primary objectives of the pricing strategy are to:

- Ensure that the costs of achieving and maintaining the Resource Quality Objectives are sufficiently recovered through the water use charges.
- Ensure that there is adequate funding for the effective operation, maintenance, and development of waterworks by the Department and other water management institutions.
- Provide an enabling framework for the provision of financial assistance and the use of water pricing to support the redress of racial and gender imbalances in access to water and to support the redistribution of water for transformation and equity purposes.
- Facilitate financial sustainability of water management
- Promote/facilitate water use efficiency.

The pricing strategy recognises the developmental context of the South African water sector and acknowledges that for social equity, environmental or affordability reasons, where water management cannot be sustainably financed from specific water users, then that shortfall must be recovered transparently. The following principles underpin the revised pricing strategy:

- **Hybrid tariff approach** – The pricing strategy provides for a combination of national charges and water management-specific charges to facilitate the development of affordable tariffs for all users; some elements of the water charge will be levied based on a national charge for a particular sector(s), and some on the basis of the scheme based or catchment level charge in terms of sections 56(3) and 56(4) of the NWA.
- **User pays, and recovery of costs** – The intent of the pricing strategy is to provide for the full recovery of costs associated with the management, use, conservation, and development of water resources and the associated administrative and institutional costs. Users must pay for the costs of their water use in this regard, considering the need for targeted subsidies where, due to socio-economic conditions, users are not able to afford the costs resulting from

the full application of these principles. In line with section 61 of the NWA (56)(2)(a) and (b).

- **Polluter pays** – Aligned to the principle above, this principle sets out that polluters must pay for the costs of their water discharge or pollution.

- **Differential charges and capping of water use charges** – The pricing strategy allows for differential charges and the capping of water use charges to designated water use sectors to support the achievement of key national objectives, such as food security, racial and gender equity, job creation, economic development.

- **Fiscal support** – The Department will provide fiscal support for core national and public interest functions. The source of funding will come from National Treasury, undertaken by water management institutions, which cannot be recovered fully through water use charges.

- **Ecological sustainability** – The pricing strategy will facilitate funding to ensure the provision of water for the ecological reserve and the water sector's contribution to maintaining water ecosystems.

- **Accountability** – Funding will be allocated to specific water management institutions so that there is transparency and accountability for the funds that are generated through the pricing strategy of Section (57)(3)(b).
- **Efficiency** – The pricing strategy makes provision for the independent economic regulator charge to ensure that the water management charges are maintained at affordable levels.
- **Multi-year tariffs** – The pricing strategy provides for multi-year tariff determination to facilitate longer-term planning and greater levels of certainty for water institutions and users.

1.6 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 the 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 1-2. These agreements have been established with the neighbouring states to promote international transboundary cooperation.

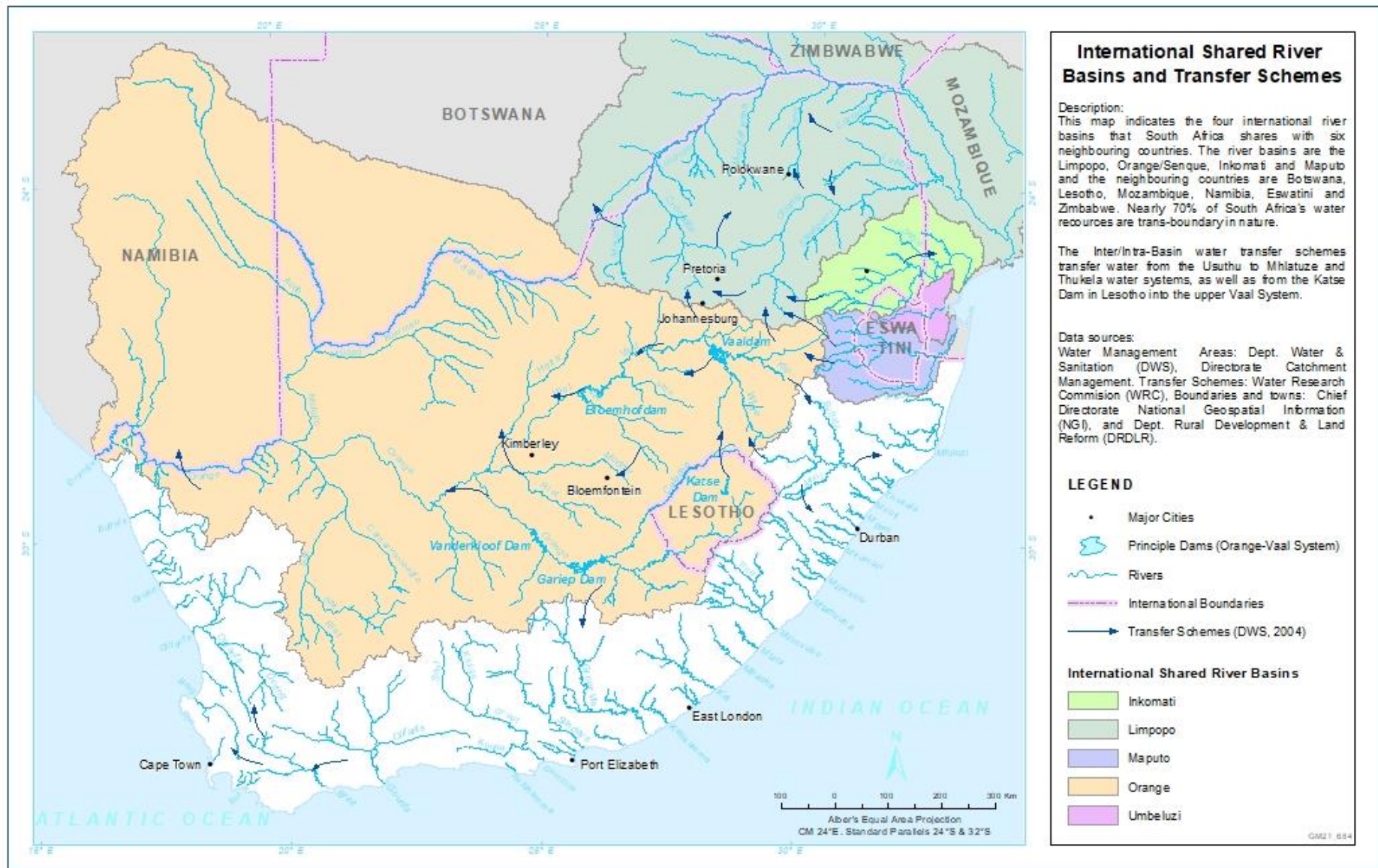


Figure 1.4 International shared basin and transfer schemes

Table 1-2 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	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

Country	Title of the Agreement	Date signed	Date entered into force	Status of Agreement	Areas of Cooperation
	Africa on the Lesotho-Botswana Water Transfer Feasibility Study				<p>Lesotho Highlands Water Project.</p> <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
Republic of Mozambique, Kingdom of Swaziland/Eswatini, and Republic of South Africa (TPTC) Agreement)	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.			Not active	