1 INTRODUCTION

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1.1 Background

The Department of Water and Sanitation is the public trustee of the nation's water resources and 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.

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 characterised by a high spatial variation in rainfall and variations in catchment sizes and physical properties. These result in different river flow patterns and dynamics within catchments and across water management areas (WMAs), which affect water resource availability.

Aquifer (groundwater) storage is another expression of water availability that contributes to the countries' water resource mix. Notably, in the past decades, groundwater utilisation has increased in the country's water mix in support of the national groundwater strategy, national water resource strategy 3, and national water and sanitation master plan. Groundwater is essential because of its potential to adapt to climatic-related pressures and the growing need to augment conventional surface water supply systems.

South Africa is naturally inclined to drought conditions because of its semi-arid climate. The other persistent challenges posing a risk to water security are growing water demands, significantly high non-revenue water, water pollution, ageing infrastructure and insufficient investments in water-related infrastructure. South Africa experiences varying weather conditions with different seasons due to its unique geographical location and long coastline spanning 2,800 kilometres. The cold Atlantic Ocean on the west coast and the warmer Indian Ocean on the south and east coasts significantly influence both the climatic and weather conditions. In 2024, South Africa experienced a new record warm year, with very hot conditions predominantly in the central and northern interior, and this had ramifications on the water management environment.

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. A mix of water resources or sources will be required to reconcile supply and demand, including sustainable groundwater use, reuse of wastewater, and desalination where feasible.

This National State of Water (NSoW) 2024 Report sets out to communicate the water resources information primarily based on available data from the established monitoring programmes through an integrated report to assist water managers in understanding the state of water resources, influencing decision-making, evaluating the effectiveness of policy, legislation and strategies, and to highlight identified problem areas. Furthermore, the National State of Water Report informs the public on the status of water resources and sanitation and interventions to balance the water demand and supply and ensure water availability for future generations. The report is based on an analysis of identified water resource indicators and available observational data for the hydrological year from October 2023 to September 2024.

1.2 National Water Resource Strategy

The goals of the National Water Resource Strategy-3 (NWRS-3) are to ensure water is protected, used, developed, managed, and controlled sustainably and equitably and that water and sanitation must support development and eliminate poverty and inequality. The NWRS-3 should contribute to the economy and job creation. The NWRS-3 focuses on increasing water supply, reducing water demand, managing effective water and sanitation, regulating the water and sanitation sector, redistributing water for transformation, promoting international cooperation, managing water and sanitation under a changing climate, improving raw water quality, and protecting aquatic ecosystems and maintaining and restoring ecological infrastructure.

The implementation of the NWRS-3 is possible when enabling aspects such as the creation of effective water sector institutions, data collection, analysis and information management for effective monitoring, evaluation and reporting, building capacity for action, ensuring financial sustainability, enhancing and deploying research, development and innovation, and addressing legislative and policy gaps are adequately addressed.

1.3 Water Management Areas

Based on the outcome of the Departmental Institutional Reform and Realignment study, the National Water Resource Strategy second edition (NWRS-2) established six WMAs in South Africa in March 2023 (Figure 1.1). These replaced the nine 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 current state and historical trends of various water resource indicators provided in this report have been analysed and presented based primarily

on the six or the nine WMAs and, in some instances, Provinces and District Municipalities.

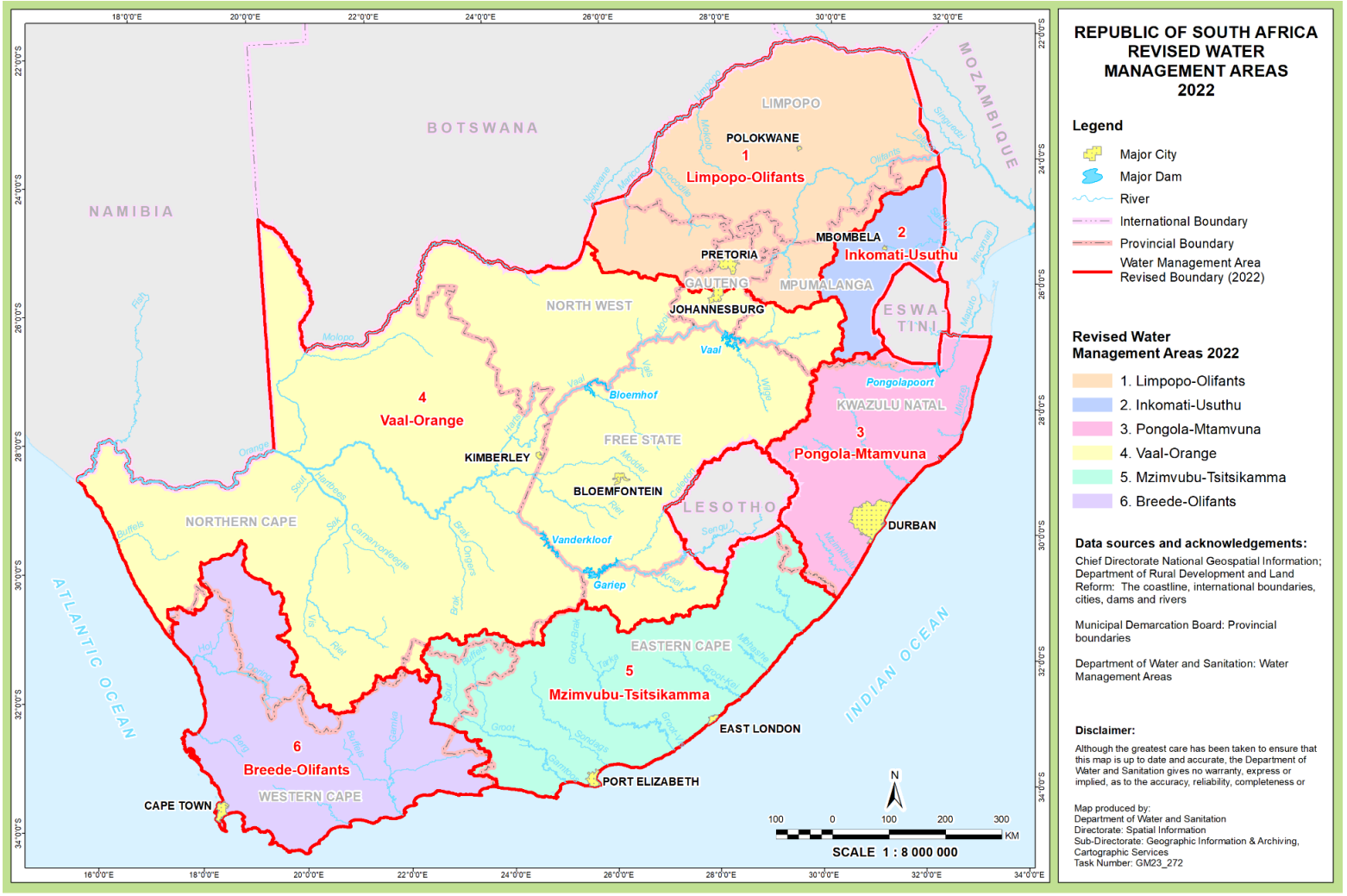

Figure 1.1 South African Six Water Management Areas as of 2023

1.4 Water Sector Institutional Reform

The South African Water Sector Institutional Reform has not been completed, and the outlook is illustrated in Figure 1.2. The National Department of Water and Sanitation is the custodian of water resources and is obliged to perform water resource management functions. The National Department, acting through the Minister, is responsible for water sector policy, support, and regulation.

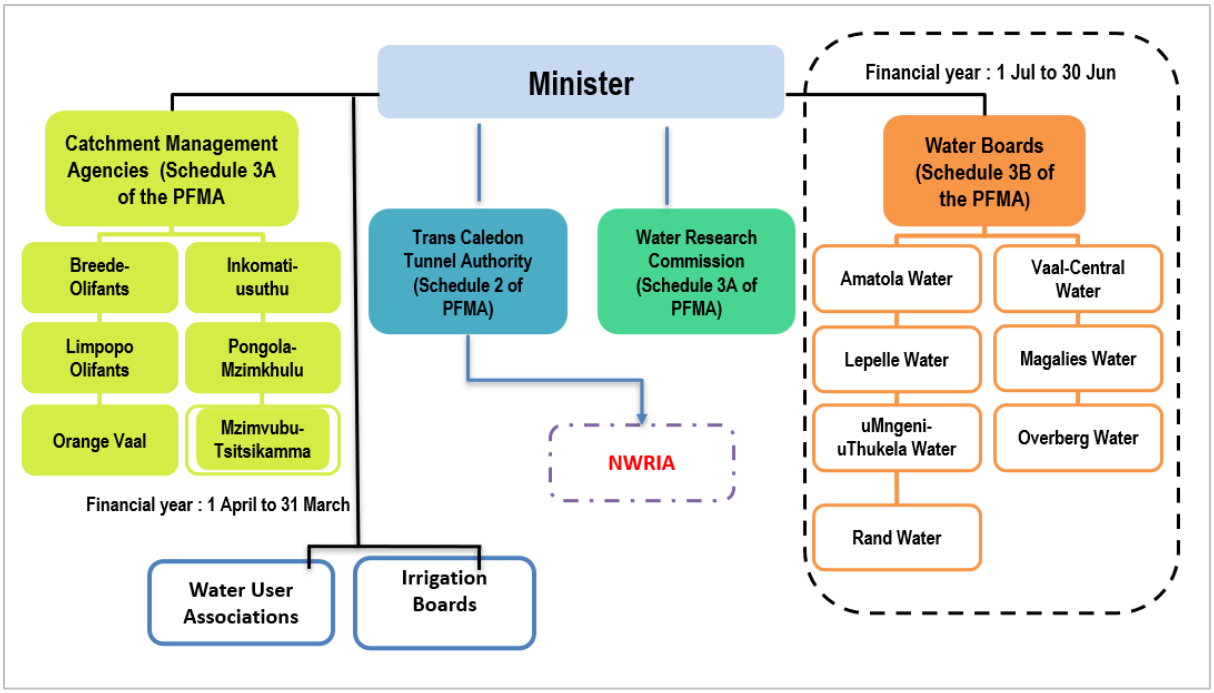

Figure 1.2 An Overview of the Institutional Arrangements

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

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. The Department reviewed the Water Boards in terms of financial sustainability, servicing areas that are not currently serviced and institutional confusion caused by having multiple Water Boards serving the same province. The rationale for the reconfiguration of the Water Boards was to improve and enhance institutional efficiencies and rationalise the number of institutions to ensure economies of scale, improve financial viability and enhance the

ability to raise capital from the market for infrastructure projects. The Department completed the reconfiguration of the water boards in 2023. Before the reconfiguration, there were nine water boards, and there are now seven water boards

At a local level, the transformation of Irrigation Boards into Water User Associations (WUAs) has been halted due to policy shifts. Furthermore, we find Water Services Institutions (WSI) 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) – water boards. These WSAs and WSPs provide water and sanitation services and are regulated by the Department of Cooperative Governance and Traditional Affairs (CoGTA).

A water services authority would mean 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 provide water services to consumers or other institutions. Notably, some WSAs are WSPs; in other cases, the WSA has WSPs that provide water services on their behalf.

1.5 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 CMAs. CMA establishment has demanded attention be given to opportunities to reduce costs and increase efficiencies without compromising on the core objectives of decentralising water resource management.

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, and improved resource planning and the same conventions manage transboundary systems.*
- ***Economies of scale –*** *enhance revenue and 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 municipal coordination and implementation 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 – March 2025

NAME OF THE CMA	STATUS OF CMA ESTABLISHMENT	Next Steps
Breede-Olifants (BOCMA)	The new board-appointed process is underway and should be finalised by July 2025.	Acting Chief Executive Officer in place
Vaal-Orange (VOCMA)	Cabinet concurred on the appointment of Board Members for the VOCMA in November 2023 and their appointment was on 1 December 2023.	Chief Executive Officer appointed
Pongola-Umzimkulu (PUCMA)	Cabinet concurred on the appointment of Board Members for the VOCMA in November 2023 and their appointment was on 1 December 2023.	Interim Chief Executive Officer appointed for the transitional phase until the board appoints a CEO.
Limpopo-Olifants (LOCMA)	Cabinet concurred on the appointment of Board Members in October 2024, and their appointment was 1 November 2024.	Interim Chief Executive Officer appointed for the transitional phase until the board appoints a CEO.
Mzimvubu-Tsitsikamma (MTCMA)	Cabinet concurred on the appointment of Board Members in December 2024, and their appointment was 11 December 2024.	Interim Chief Executive Officer appointed for the transitional phase until the board appoints a CEO.
Inkomati-Usuthu	No configuration to be done	

1.6 Transboundary Water Resources

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, future water resource development options, water resource protection, etc. South Africa has three international rivers, which it shares with its neighbours (Figure 1.3), 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. The neighbouring states have established these agreements to promote international transboundary cooperation.

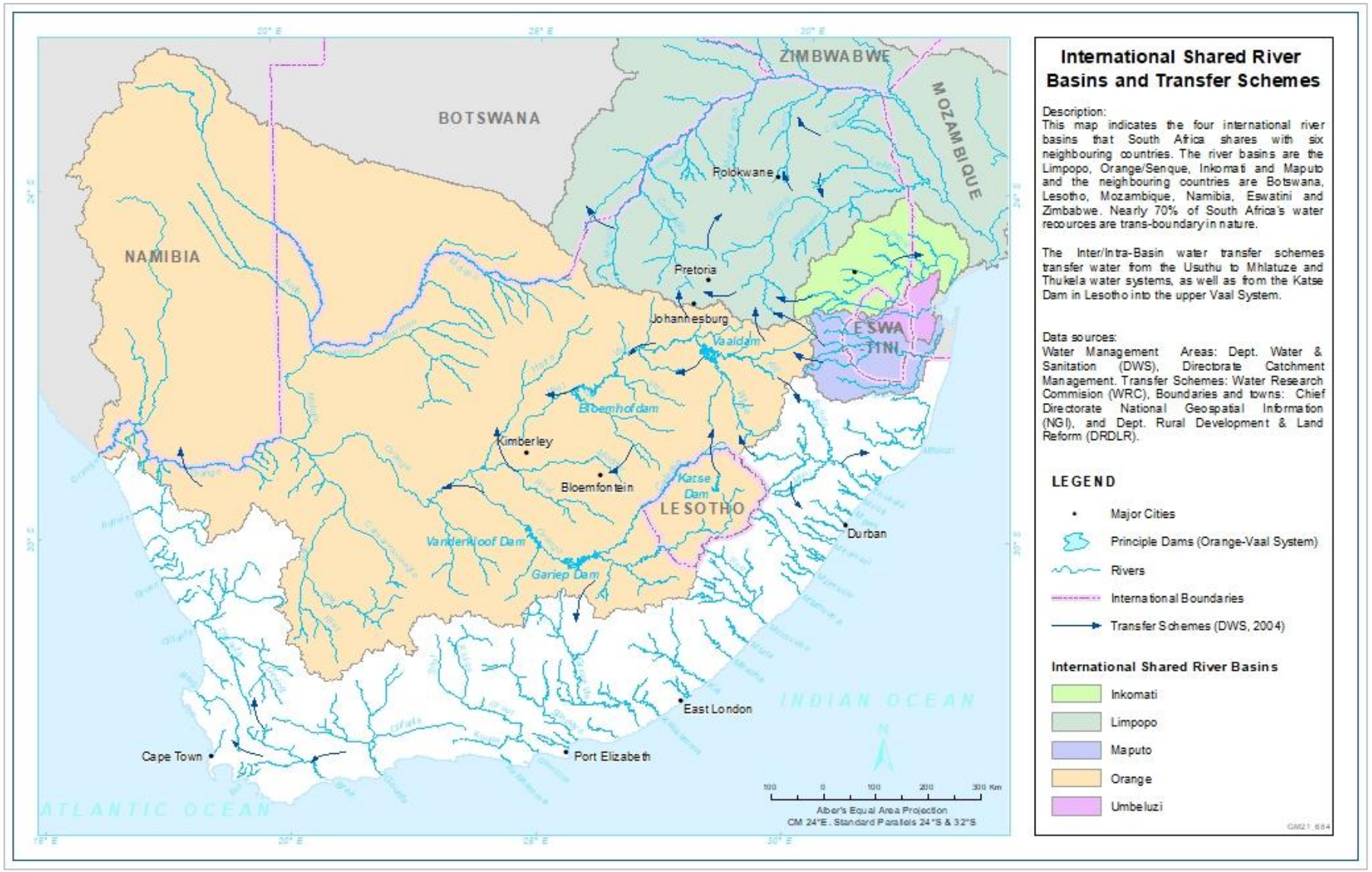

Figure 1.3 International shared basin and transfer schemes

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 the Republic of Botswana, Republic of Mozambique, Republic of South Africa (RSA), 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, and Republic of South Africa.	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	RSA, Botswana, and Lesotho experts (engineers) jointly study the possibility of Botswana extracting water from the Lesotho Highlands Water Project. Implementation of Phase II Procurement process implementation

Country	Title of the Agreement	Date signed	Date entered into force	Status of Agreement	Areas of Cooperation
					Establishment of Project management
Republic of Mozambique, Kingdom of Swaziland/Eswatini, and Republic of South Africa	**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	