April 2026

MONTHLY STATE OF WATER BULLETIN

WATER IS LIFE - SANITATION IS DIGNITY

water & sanitation
Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

2030 NDP

Overview

The South African Weather Services (SAWS) Seasonal Climate Watch, May to September 2026 report indicates that the El Niño-Southern Oscillation (ENSO) is still in a neutral state and expected to rapidly move towards an El Niño state within the next few months and continue to strengthen up to spring and the start of the next summer season. The SAWS 2026 report further indicates that the eastern coastal areas are expected to receive above-normal rainfall during the winter season, while below-normal rainfall is expected for the south-western and southern coastal areas during the same time. Moreover, minimum and maximum temperatures are largely expected to be above normal for most parts of the country during the autumn and early winter seasons.

Most parts of the Northern Cape, North West, Free State, and Western Cape recorded more than 60 mm of rainfall in April, exceeding 200% of the normal rainfall. In some areas of the Northern Cape, Free State, and Limpopo, rainfall exceeded 500% of the normal rainfall. Despite these significant downpours, no flooding was reported across the country.

South Africa monitors dam levels in Lesotho and Eswatini because we share critical river systems, dams, and water-transfer schemes that supply Gauteng, Mpumalanga, KwaZulu-Natal, and the Free State. In March 2026, DWS Minister Pemmy Majodina and Eswatini's Minister of Mineral Resources and Energy, Prince Lonkhokhela Dlamini, signed a revised treaty on the Development and Utilisation of the Water Resources of the Komati River Basin. The amended treaty supports future water development and safeguards long-term water security for communities in Mpumalanga that rely on the Driekoppies and Maguga Dams. It also strengthens transboundary cooperation between South Africa and Eswatini.

At the end of April 2026, the national dam levels recorded 95.8% of Full Supply Capacity (FSC). This level is 5.8% lower than at the same time last year, when the national storage level was 101.3% of FSC. The historical data also show that the dam levels fell below 75% of FSC in January of the 2024/2025 hydrological year, which was the lowest point for all five hydrological years. The dam levels have been above 90% FSC since April 2025. The increase in the overall dam storage indicates higher-than-normal stream flows, as a result of above-normal rainfall received this hydrological year.

The Integrated Vaal River System (IVRS) was above full supply capacity (FSC), at 102.4% as of the end of April 2026. However, this is a 5.4% decline compared to the 107.8% recorded at the same time last year. Similarly, the Orange System recorded storage levels of 101.3% of FSC, reflecting a decrease of 8.2% from the 109.5% observed last year.

The water quality segment features Polycyclic Aromatic Hydrocarbons (PAHs), a class of persistent organic pollutants that accumulate in river sediments and aquatic ecosystems. These toxic and carcinogenic compounds originate mainly from industrial activities, mining, wastewater discharges and fossil fuel combustion. Recent studies in the Klip River (Gauteng) found elevated PAH concentrations that exceeded international sediment quality guidelines. The contamination has been linked to harmful ecological impacts on aquatic organisms. The findings highlight the need for improved pollution control and expanded monitoring of emerging contaminants in South African water resources.

Rainfall

Figure 1 shows two rainfall distribution maps for April 2026, produced by the South African Weather Services (SAWS). The first map (top) shows total rainfall in mm, and the second map (bottom) shows the percentage of normal rainfall relative to the 1991–2020 climatological norm. Most parts of the Northern Cape, North West, Free State, and Western Cape recorded more than 60mm of rainfall in April, exceeding 200% of normal rainfall. In some areas of the Northern Cape, Free State, and Limpopo, the rainfall exceeded 500% of the normal rainfall. Despite these significant downpours, no flooding was reported across the country.

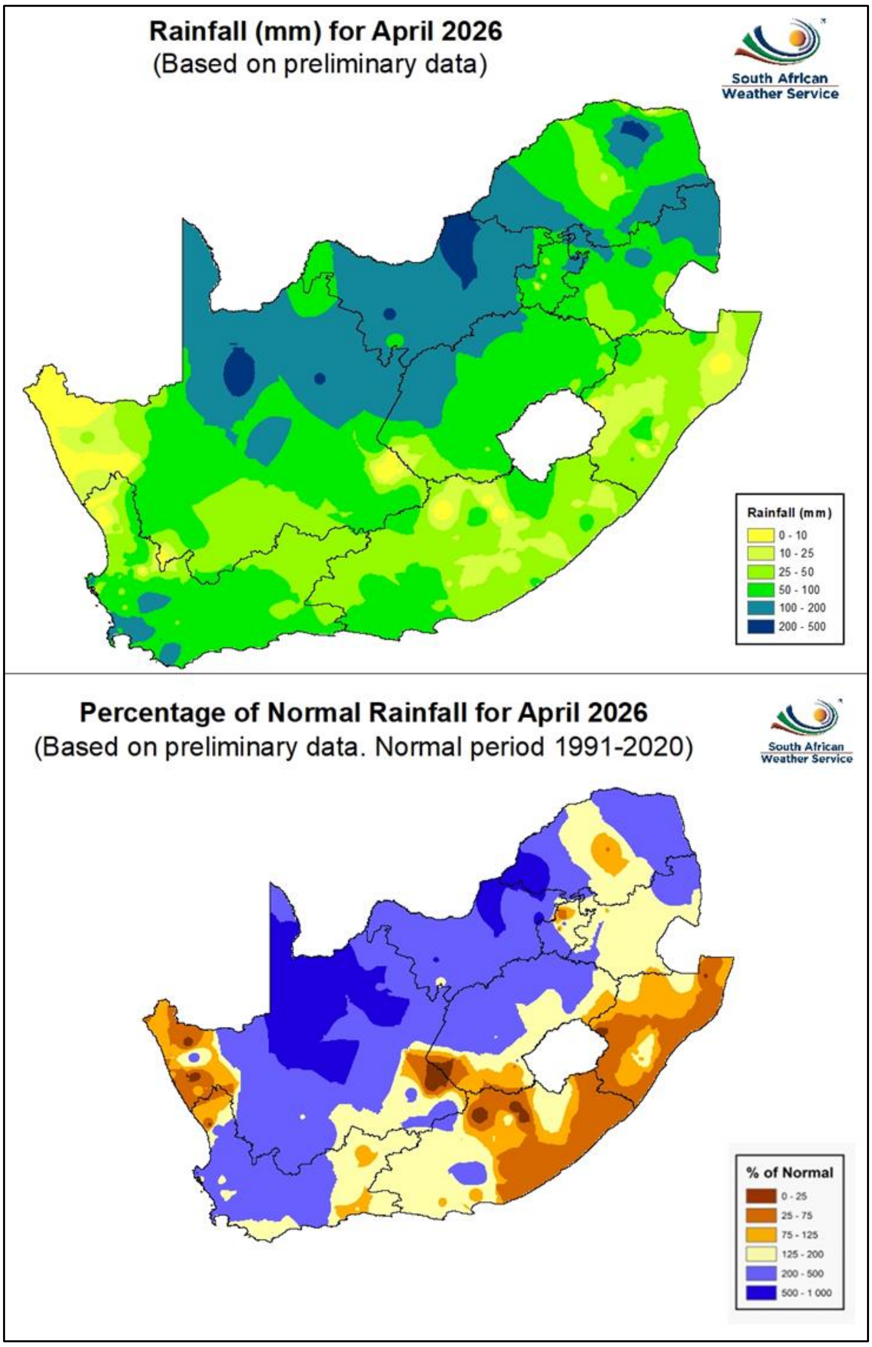

Figure 1: Rainfall distribution for April 2026 (Top) and Percentage of normal rainfall distribution for April 2026. (Bottom).

Weather Forecasting

Weather plays a crucial role in shaping water resources by influencing their quantity, quality, and overall availability. Changes in temperature, precipitation patterns, and the frequency of extreme events all contribute to the status of our water resources. Higher temperatures accelerate evaporation, reducing the amount of accessible water, while extreme events like droughts and floods intensify water scarcity and pollution, respectively.

The South African Weather Services Seasonal Climate Watch, May to September 2026 (SAWS, 2026a) report indicates that the El Niño-Southern Oscillation (ENSO) is still in a neutral state and expected to rapidly move towards an El Niño state within the next few months, and will continue to strengthen up to spring and the start of the next summer season. However, predictions of the ENSO phenomenon are limited during the winter months; therefore, it is highly recommended to track forecasts during and after winter.

During the winter season, only the south-western, southern, and eastern coastal areas receive significant rainfall. The SAWS 2026 report further indicates that the eastern coastal areas are expected to receive above-normal rainfall during the winter season, while below-normal rainfall is expected for the south-western and southern coastal areas during the same time (Figure 2). The maps indicate the highest probability of the above-normal and below-normal categories.

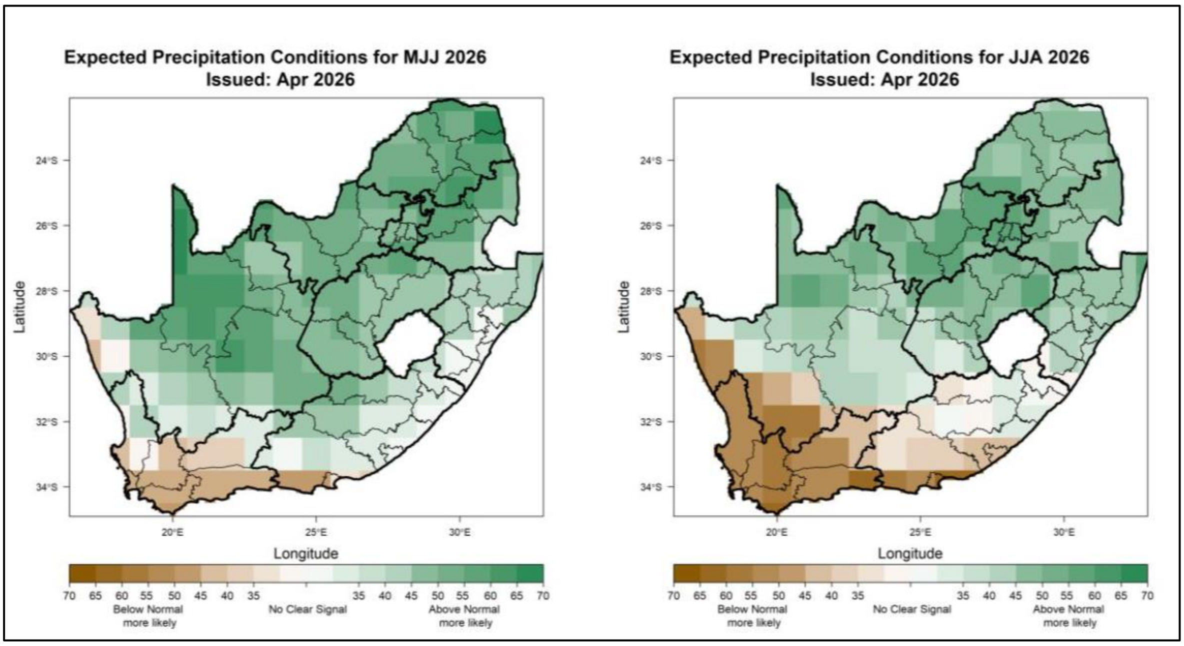

Figure 2: Seasonal precipitation predictions for May-June-July 2026 (MJJ; left), June-July-August 2026 (JJA; right), (Source: SAWS, 2026a).

Minimum and maximum temperatures are largely expected to be above normal countrywide during the winter season (Figure 3). Maps indicate the highest probability of the above-normal and below-normal categories.

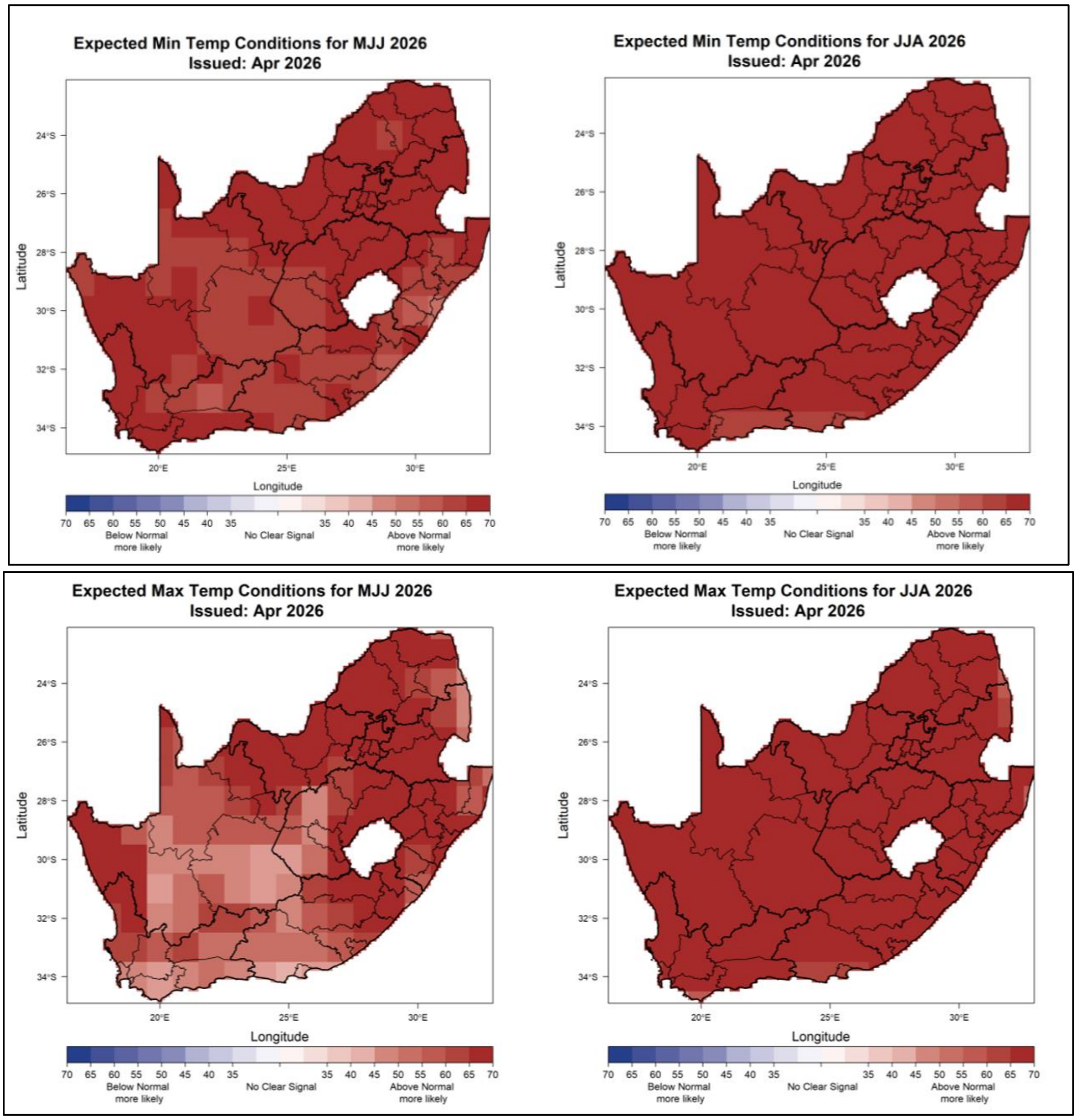

Figure 3: Seasonal Minimum (Top) and maximum(Bottom) temperature predictions for May-June-July 2026 (MJJ; left), June-July-August 2026 (JJA; right) (Source: SAWS, 2026a).

National Dam Storage

The national dam water storage trends for the current hydrological year (2025/26) are compared to those of the past four hydrological years in Figure 4. The South African hydrological year (12 months) runs continuously from 1 October to 30. The 2025/26 hydrological year line (blue) shows that at the end of April 2026, the national dam levels were 95.8% of Full Supply Capacity (FSC). This level is 5.8 % lower than at the same time last year (black), when the national storage level was at 101.3% of FSC. It is at the same level as recorded at the same time during the 2021/22 hydrological year (light blue). The historical data also shows that the dam levels fell below 75% of FSC in January of the 2024/2025 hydrological year, which was the lowest point for all five hydrological years. The dam levels have been above 90% FSC since April of the 2024/25 hydrological year. The increase in the overall dam storage indicates higher-than-normal stream flows, as a result of above-normal rainfall received this hydrological year.

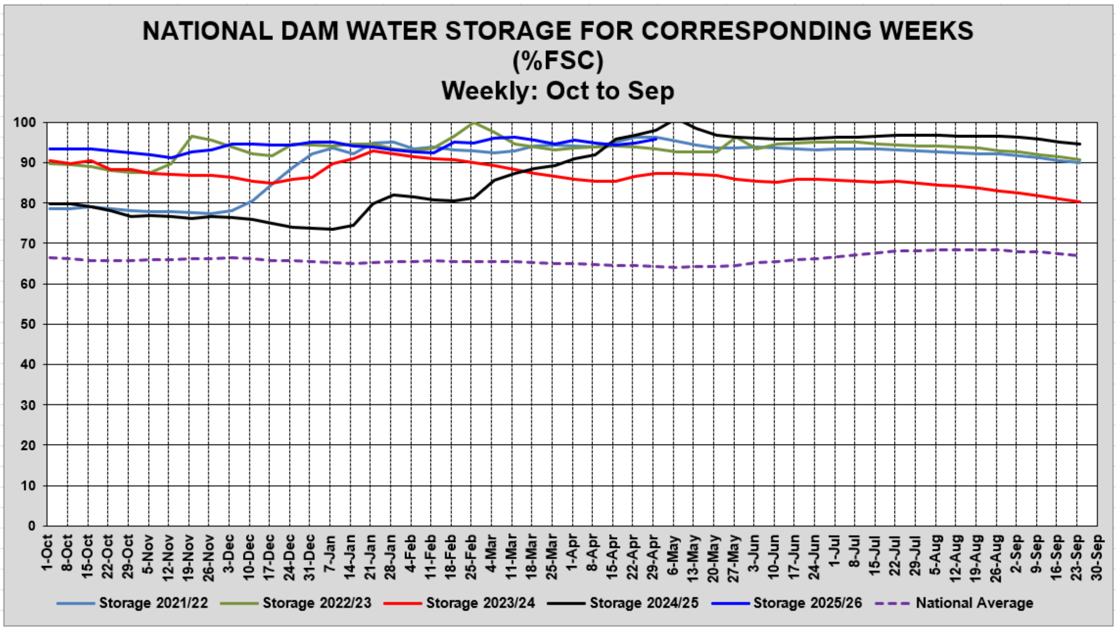

Figure 4: Weekly National Dam Storage at the end of April 2026, for five hydrological years.

Table 1 shows a summary of the status of 219 South African dams, together with three dams from the Kingdoms of Eswatini and Lesotho. South Africa monitors dam levels in Lesotho and Eswatini because we share critical river systems, dams, and water-transfer schemes that supply Gauteng, Mpumalanga, KwaZulu-Natal, and the Free State.

South Africa and Eswatini sign revised Komati River Basin treaty

DWS Minister Pemmy Majodina and Eswatini's Minister of Mineral Resources and Energy, Prince Lonkhokhela Dlamini, have signed a revised treaty on the Development and Utilisation of the Water Resources of the Komati River Basin.

The amended treaty, signed at Maguga Dam in Eswatini on Friday, 13 March 2026, supports future water development, safeguards long-term water security for communities in Mpumalanga that rely on the Driekoppies Dam and Maguga Dam. It also strengthens transboundary cooperation between South Africa and Eswatini.

Based on dam level data as of 27 April 2026, at least 110 of the 222 national dams recorded above 100% of FSC. KwaZulu-Natal, Eastern Cape, and Western Cape are the only provinces with dm levels below 100% of FSC. In Gauteng, dam levels have remained above 100% of FSC since March 2025. Following above-average rainfall in Limpopo, which began in January 2026, dam storage levels in the province increased significantly, with 26 of the 29 dams exceeding 100% of FSC.

Table 1: National Surface Water Storage –27 April 2025 and 27 April 2026.

Provinces/ Countries sharing Water Resources with RSA	FSC million m^3	Total No. of Dams	Number of Dams per Province/ Country				% of Full capacity	
			<10 (% of FSC)	10% - <50 (% of FSC)	50 - <100 (% of FSC)	≥100%	Last Year 27/04/2025	This Year 27/04/2026
Kingdom of Eswatini	333.75	1				1	100.4	100.4 =
Eastern Cape	1 726.24	46		8	33	5	84.7	78.5 ↓
Free State	15 664.61	21			6	15	110.0	102.2 ↓
Gauteng	128.08	5				5	104.1	102.0 ↓
KwaZulu-Natal	4 909.66	19			10	9	98.5	91.6 ↓
Kingdom of Lesotho	2 362.63	2			1	1	101.0	100.9 ↓
Limpopo	1 484.64	29			3	26	91.7	102.6 ↑
Mpumalanga	2 538.40	22			4	18	102.5	101.0 ↓
Northern Cape	149.29	5		1	1	3	124.2	104.8 ↓
North West	866.23	28			4	24	102.4	105.6 ↑
Western Cape - Other Rainfall	269.61	22	2	9	9	2	73.5	53.3 ↓
Western Cape - Winter Rainfall	1 596.80	22		11	10	1	53.0	42.8 ↓
Western Cape - Total	1 866.41	44	2	20	19	3	56.0	44.3 ↓
Grand Total:	**32 029.94**	**222**	**2**	**29**	**81**	**110**	**101.3**	**95.8 ↑**

As of 27 April 2026, dam level records show that the only two dams below 10% of FSC (critically low) are located in the Western Cape. In addition, 20 of the 29 dams with levels between 10% and 50% of FSC are also in the Western Cape. This represents a slight month-to-month improvement of one dam, but remains significantly higher than the 16 dams recorded in February 2026. The dam levels for the Western Cape (total) has fallen 11.7%, from 56.0% down to 44.3% year-on-year. Month-to-month, the dam levels from the winter rainfall and other rainfall regions of the Western Cape indicate no significant changes (Figure 5). From the monthly rainfall maps, the Western Cape did receive over 200% more rain than norma for April, which stabilise the dam levels.

Figure 6 shows the spatial distribution of the 222 dams and their respective dam storage levels.

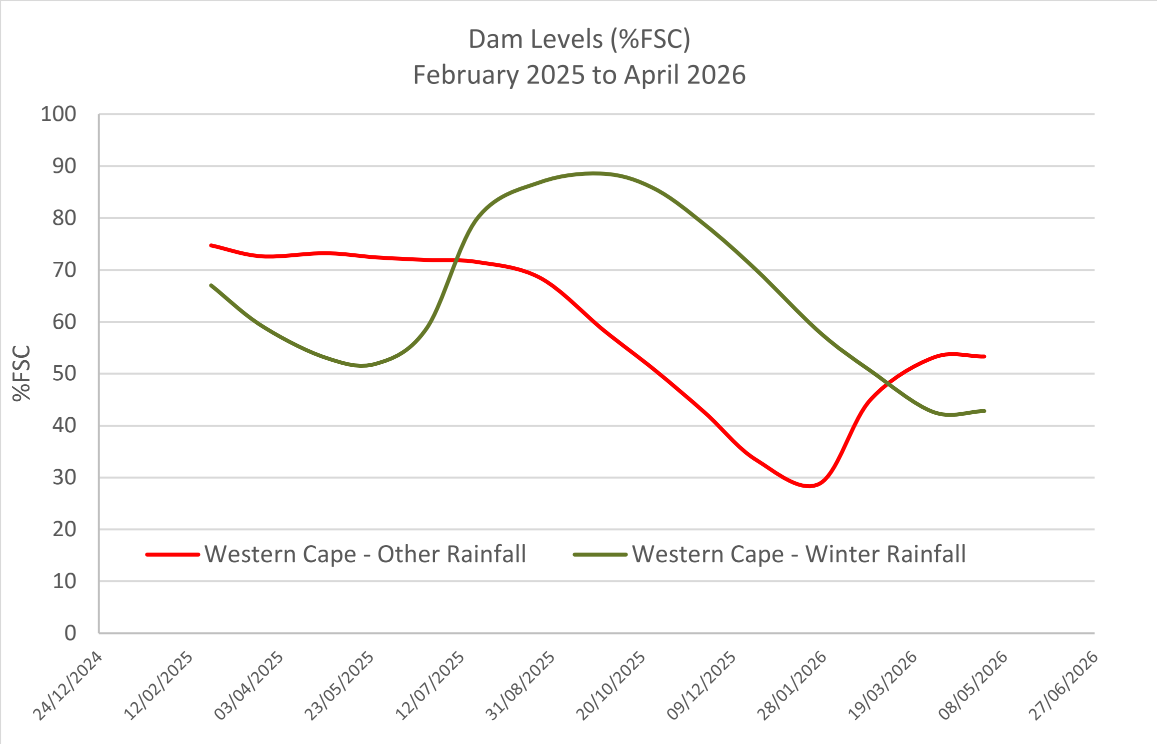

Figure 5: Western Cape dam level trends from February 2025 to April 2026.

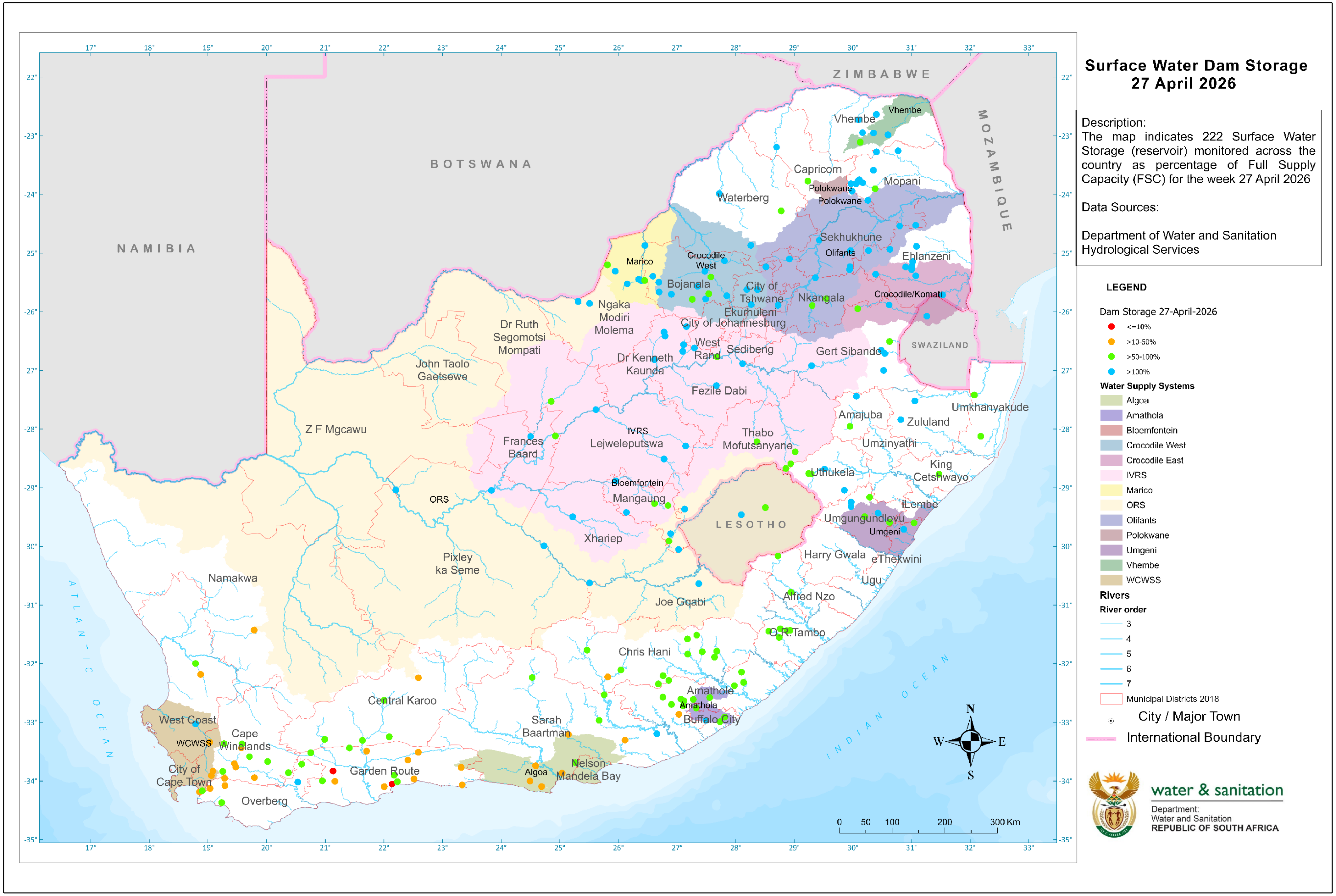

Figure 6: Surface Water Storage Levels – 27 April 2026.

Figure 7 graphically illustrates the comparison of storage levels across provinces, including the Kingdoms of Eswatini and Lesotho, for April 2025 and April 2026. All provinces recorded a decline in surface water storage levels except for Limpopo and North West, which recorded +10.9% and +3.2%, respectively, year-on-year. The Northern Cape recorded a more significant decline at -19.4%, year-on-year. Other notable decreases in dam storage levels were observed in Western Cape, Free State, KwaZulu-Natal, and Eastern Cape, which recorded -11.7%, -7.8%, -6.9% and -6.2%, respectively.

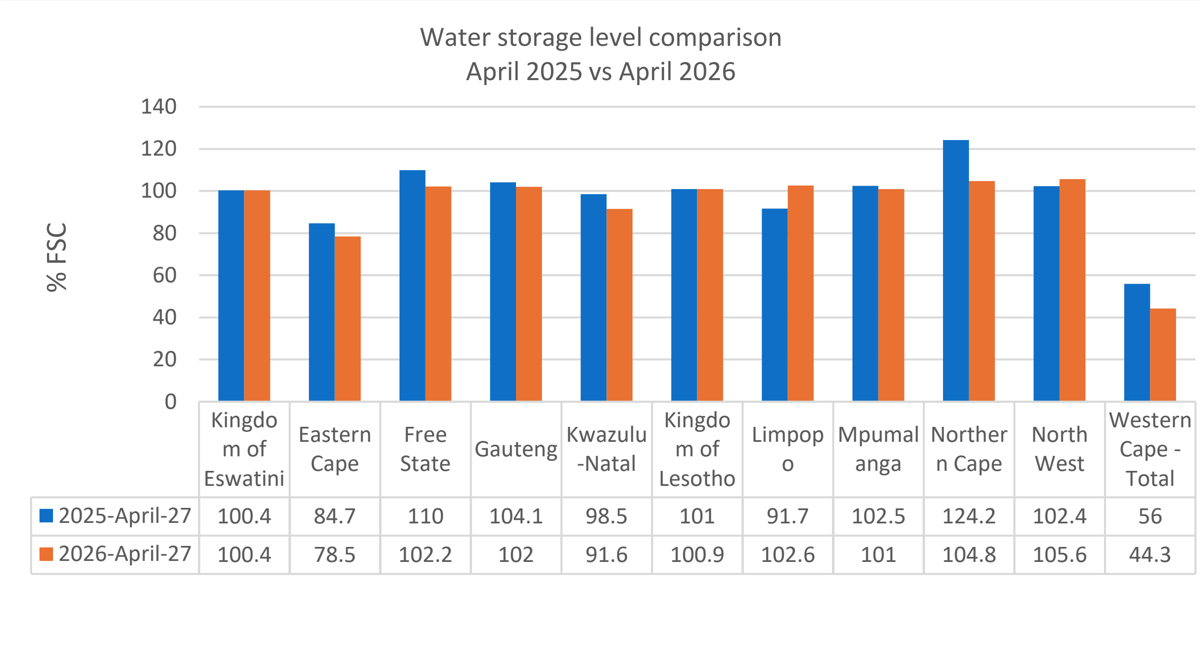

Figure 7: Water Storage Levels April 2025 vs. April 2026.

The comparison between April 2025 and April 2026 of the country's five largest dam storage is presented in Table 2. Sterkfontein and Pongolapoort are the only two dams are below 100% of FSC. However significant declines were recorded in the Vaal , Gariep and Pongolapoort Dams, at -17.6%, -11.0%, and -10.2% respectively.

Table 2: Storage Levels Comparison for the Five Largest Storage Dams

Reservoir	River	Province	Full Supply Capacity (Mm3)	27 April 2025 (% FSC)	27 April 2026 (% FSC)	Difference (%)
Gariep Dam	Orange River	Free State	4 903.45	111.1	101.9	-11.0
Vanderkloof Dam	Orange River	Free State & Northern Cape	3 136.93	107.0	103.1	-3.9
Sterkfontein Dam	Nuwejaarspruit River	Free State	2 616.90	100.0	99.8	- 0.2
Vaal Dam	Vaal River	Free State	2 560.97	122.3	104.7	-17.6
Pongolapoort Dam	Phongolo River	KwaZulu-Natal	2 395.24	95.7	85.8	-10.2

The Western Cape is experiencing continued decreases in surface water storage levels. Gamka Dam, Clanwilliam Dam and Haarlem Dam were below 20% of FSC at the end of April 2026. While the Miertjieskraal and Klipheuwel Dams had critically low storage levels (<10% of FSC), the dams decreased significantly by -52.2% and –23.0% respectively, compared to the same time last year (Table 3).

Table 3: Dams below 10% of FSC compared to last year.

Reservoir	River	Province	Full Supply Capacity (Mm^3)	27 April 2025 (% FSC)	27 April 2026 (% FSC)	Difference (%)
Miertjieskraal Dam	Brand River	Western Cape	1.43	60.0	7.8	-52.2
Klipheuwel Dam	Tributary of Hartenbos	Western Cape	4.45	29.6	6.6	-23.0

District Municipalities

Figure 8 presents the 24-month Standardised Precipitation Index (SPI) across the District Municipalities (DMs) analysed at the end of March 2026, alongside the April 2026 Dam levels. The SPI map shows that a small part of the Sarah Baartman DM in the Eastern Cape experienced severe to extreme drought in the last 24 months, while some parts of Chris Hani and Garden Route DM experienced a moderate to severe drought.

The year-on-year comparison of surface water storage levels per district municipality is presented in Figure 9. The Mopani DM recorded the most significant increase of 42.5% of FSC in April 2026, followed by Central Karoo DM, which experienced an increase of 13.8% of FSC. The Garden Route DM recorded a significant decline of 43.1% of FSC. Buffalo City, City of Cape Town, Sarah Bartman, Fezile Dabi, Umkhanyakude, Overburg, Sedibeng, Namakwa, Pixley ka Seme and Francis Baard DMs experienced a >10% of FSC decline in dam storage levels.

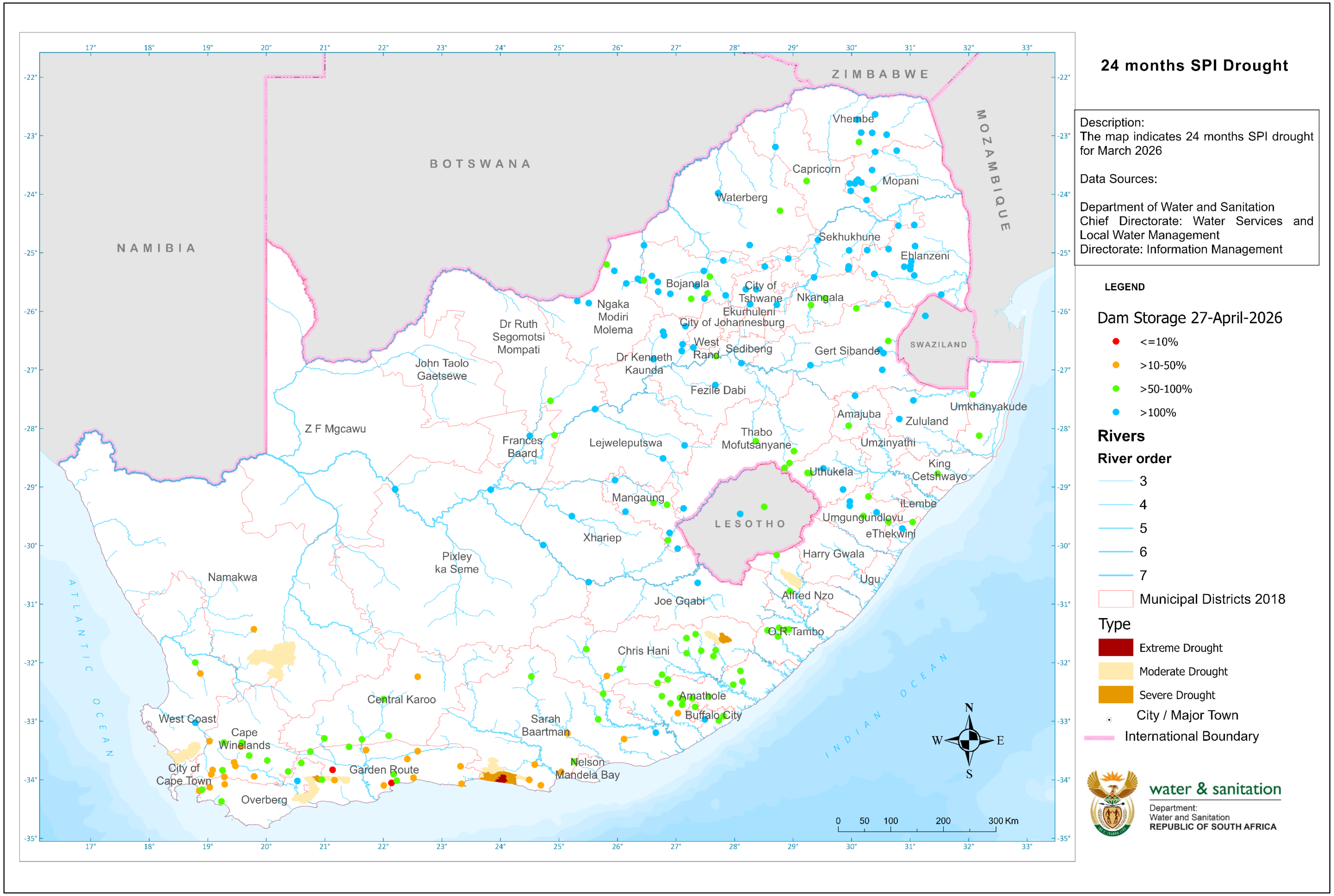

Figure 8: 24-Month Standardised Precipitation Index (SPI) – March 2026

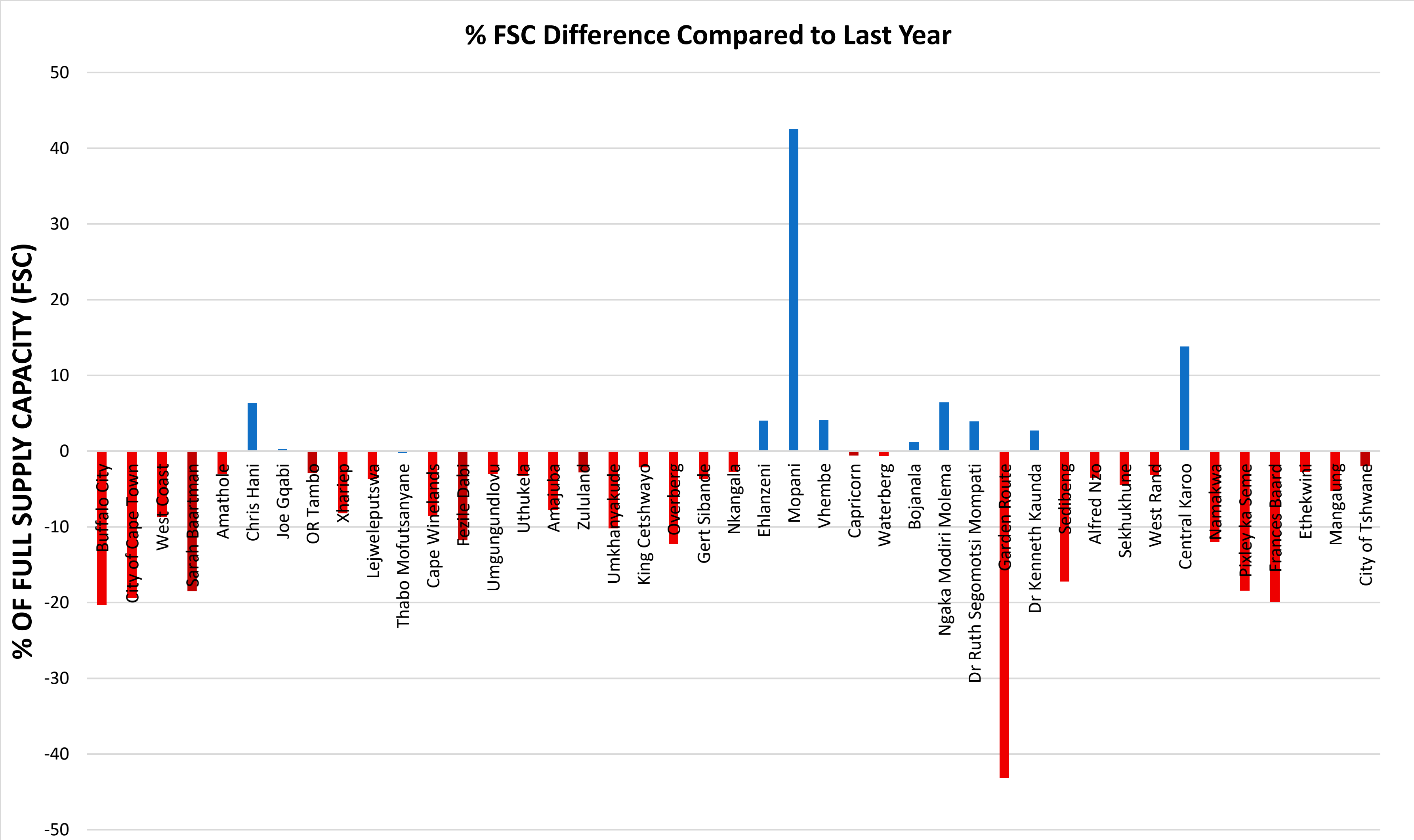

Figure 9: Comparison of water storage levels per District Municipality, April 2025 vs April 2026.

Water Supply Restrictions

The Water Supply Systems (WSSs) respective restrictions are given in Table 4. Domestic and irrigation restrictions are in place in the Algoa Water Supply System (WSS).

Following above-average rainfall in Limpopo, which began in January 2026, dam storage levels in the province increased significantly. This significant recovery includes Middle Letaba Dam, which recorded 101.2% of FSC, compared to 8.8% recorded at the same time last year.

Table 4: Water Supply System with Restrictions.

System Name	Areas	Water Users	% Restrictions	Gazette Information	Next Review
Algoa WSS	Kromme subsystem	NMBM & Kouga LM domestic use Gamtoos Water Irrigation Use	10% domestic 20% irrigation	27 March 2026 No. 54417	November 2026

The dam storage levels for South Africa's national WSSs are presented in Table 5. All WSSs were above 90% of FSC, except Algoa, Bloemfontein, and Cape Town. The Algoa and Cape Town WSSs recorded a substantial decline of -34.5% and -12.9%, respectively, compared to the previous year. The Amathole and Polokwane WSSs also experienced a decrease in storage levels of -13.7% and -8.2%, respectively.

The largest and most economically critical system in the country is the Integrated Vaal River System (IVRS), which comprises 14 dams with a combined capacity exceeding 10 492 Mm³. The IVRS was at 102.4% of FSC at the end of April 2026, this is a 5.4% decrease from the 107.8% recorded at the same time last year. The Orange Supply System, ranked as the second largest, comprises only two dams yet boasts a capacity of 8 040 Mm³. The Orange System's storage level was 101.3% of FSC at the end of April 2026, a decrease of 8.2% from 109.5% recorded in last year.

Table 5: Water Supply Systems storage levels April comparisons.

Water Supply Systems/ Clusters	Full Supply Capacity in 106m³	27 April 2025 (% FSC)	27 April 2026 (% FSC)	System Description
Algoa System	281.57	70.8	36.3	Five dams serve the Nelson Mandela Bay Metro, Sarah Baartman (SB) DM, Kouga LM and Gamtoos Irrigation: 1. Kromrivier Dam 2. Impofu Dam 3. Kouga Dam 4. Loerie Dam 5. Groendal Dam
Amathole System	240.88	91.8	90.6	Six dams serve Bisho & Buffalo City, East London: 1. Laing Dam 2. Rooikrans Dam 3. Bridle Drift Dam 4. Nahoon Dam 5. Gubu Dam 6. Wriggleswade Dam

Water Supply Systems/ Clusters	Full Supply Capacity in 106m³	27 April 2025 (% FSC)	27 April 2026 (% FSC)	System Description
Klipplaat System	57.00	93.9	96.8	Three dams serve Queenstown (Chris Hani DM, Enoch Ngijima LM): 1. Boesmanskrantz Dam 2. Waterdown Dam 3. Oxkraal Dam
Butterworth System	14.43	100.8	98.1	Xilinxa Dam and Gcuwa weirs serve Butterworth
Integrated Vaal River System	10 492.91	107.8	102.4	14 dams serve Gauteng, Sasol, and ESKOM: 1. Vaal Dam 2. Grootdraai Dam 3. Sterkfontein Dam 4. Bloemhof Dam 5. Katse Dam 6. Mohale Dam 7. Woodstock Dam 8. Zaaihoek Dam 9. Jericho Dam 10. Westoe Dam 11. Morgenstond Dam 12. Heyshope Dam 13. Nooitgedacht Dam 14. Vygeboom Dam
Luvuvhu	224.75	100.7	102.8	Three dams serve Thohoyandou: 1. Albasini Dam 2. Vondo Dam 3. Nandoni Dam
Bloemfontein	219.60	89.1	85.9	Four dams serve Bloemfontein, Botshabelo and Thaba Nchu: 1. Rustfontein Dam 2. Groothoek Dam 3. Welbedacht Dam 4. Knellpoort Dam
Polokwane	254.27	114.3	105.8	Two dams serve Polokwane 1. Flag Boshielo Dam 2. Ebenezer Dam
Crocodile West	443.39	100.9	101.1	Seven dams serve Tshwane up to Rustenburg: 1. Hartbeespoort Dam 2. Rietvlei Dam 3. Bospoort Dam 4. Roodeplaat Dam 5. Klipvoor Dam 6. Vaalkop Dam 7. Roodekopjes Dam
uMgeni System	920.9	102.7	99.8	Five dams serve Ethekwini, iLembe & Msunduzi: 1. Midmar Dam 2. Nagle Dam 3. Albert Falls Dam 4. Inanda Dam 5. Spring Grove Dam
Cape Town System	889.3	60.2	47.3	Six dams serve the City of Cape Town: 1. Voelvlei Dam 2. Wemmershoek Dam 3. Berg River Dam

Water Supply Systems/ Clusters	Full Supply Capacity in 106m³	27 April 2025 (% FSC)	27 April 2026 (% FSC)	System Description
				4. Steenbras-Lower Dam 5. Steenbras-Upper Dam 6. Theewaterskloof Dam
Crocodile East	158.65	101.7	101.5	Kwena Dam supplies Nelspruit, Kanyamazane, Matsulu, Malelane and Komatipoort areas & surroundings
Orange	8 040.38	109.5	101.3	Two dams service parts of the Free State, Northern and Eastern Cape Provinces: 1. Gariep Dam 2. Vanderkloof Dam
uMhlathuze	301.25	101	98.9	Goedertrouw Dam supplies Richards Bay, Empangeni Towns, small towns, surrounding rural areas, industries, and irrigators, supported by lakes and transfer from the Thukela River

Polycyclic Aromatic Hydrocarbons

Polycyclic Aromatic Hydrocarbons (PAHs) are a class of organic compounds composed of two or more fused aromatic (benzene) rings made up primarily of carbon and hydrogen atoms. They are hydrophobic, non-polar compounds with low water solubility and high affinity for organic matter and sediments. Due to their stable aromatic ring structures, PAHs are chemically persistent and resistant to natural degradation processes. They are formed mainly during the incomplete combustion or pyrolysis of carbon-containing materials such as coal, petroleum products, natural gas, wood, plastics and biomass. They can originate from both natural sources (e.g. forest fires and volcanic activity) and anthropogenic activities, including vehicle exhaust emissions, industrial processes, coal-fired power stations, domestic fuel burning, oil spills and waste incineration. Table 6 (ATSDR, 2024) lists examples of common PAHs, their sources and health and environmental concerns.

Table 6: Examples of common PAHs.

PAH compound	Number of benzene rings	Common sources	Health/Environmental Concern
Naphthalene	2	Petroleum products, mothballs, fuel combustion	Toxic to aquatic organisms
Anthracene	3	Coal tar, oil combustion	Toxic to fish and algae
Phenanthrene	3	Vehicle emissions, industrial discharges	Bioaccumulative
Fluoranthene	4	Fossil fuel combustion	Toxic to benthic organisms
Pyrene	4	Industrial emissions, urban runoff	Persistent in sediments
Benzo[a]pyrene	5	Cigarette smoke, coal combustion, vehicle exhaust	Known carcinogen
Chrysene	4	Industrial combustion processes	Potential carcinogen
Benzo[b]fluoranthene	5	Diesel emissions, oil burning	Mutagenic and carcinogenic

These compounds are widely recognised as contaminants of concern because several PAHs are toxic, mutagenic and carcinogenic, posing significant risks to both aquatic ecosystems and human health (Berrios-Rolon et al., 2025). Once released into the environment, PAHs can enter rivers, dams and wetlands through industrial discharges, urban stormwater runoff, sewage spills, mining activities, atmospheric deposition and the burning of fossil fuels.

In aquatic systems, PAHs tend to bind strongly to suspended particles and sediments rather than remaining dissolved in water. Sediments therefore act as long-term reservoirs of contamination, slowly releasing PAHs back into the aquatic environment. This persistence allows PAHs to accumulate within food chains, affecting fish, invertebrates and other aquatic organisms. Exposure to elevated concentrations has been linked to developmental abnormalities, reproductive impairment, organ damage and increased cancer risk in both wildlife and humans (ATSDR, 2024).

South Africa's highly industrialised and urbanised catchments are particularly vulnerable to PAH contamination. Rivers flowing through mining regions, industrial corridors and densely populated urban areas often receive continuous pollutant inputs from wastewater treatment failures, informal settlements, landfill leachate, traffic emissions and industrial runoff. Although conventional water quality monitoring programmes focus on nutrients, salts, microbiological indicators and metals, emerging contaminants such as PAHs are increasingly being identified as critical gaps in national monitoring frameworks (Gani et al., 2021).

This concern was recently highlighted in the News24 article, "The river that feeds Gauteng: Toxic sediments found in the Klip", published on 22 April 2026. The article reported findings from research conducted by the University of Johannesburg, which detected elevated concentrations of PAHs in sediments of the Klip River, an important tributary feeding the Integrated Vaal River System - a key water supply network for Gauteng. According to the study (Makobe et al., 2025), some sediment samples contained total PAH concentrations as high as 7.41 mg/kg, which exceeded internationally recognised sediment quality guideline thresholds of 4 mg/kg, above which adverse ecological effects on benthic organisms become increasingly likely (Swartz, 1999; McGrath et al., 2019).

The article further highlighted severe ecological impacts associated with the high levels of PAHs found in the sediment samples. Laboratory exposure tests with zebrafish embryos showed delayed hatching, deformities, and mortality rates up to 80%, demonstrating the toxic effects of contaminated sediments on aquatic organisms. The study also noted that pollution within the Klip River system is not isolated to a single source/point source, but is driven by cumulative impacts associated with wastewater infrastructure failures, industrial activity, tributary inflows and urban land use pressures.

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Accessible on the National State of Water Reporting Web page:
https://www.dws.gov.za/Projects/National%20State%20of%20Water%20Report/MonthlyBulletin.aspx

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Glossary

Term	Definition
DM	District Municipality
ENSO	El Niño-Southern Oscillation
FSC	Full Storage Capacity
IVRS	Integrated Vaal River System
LHWP	Lesotho Highlands Water Project
PAHs	Polycyclic Aromatic Hydrocarbons
SAWS	South African Weather Services
SPI	Standardised Precipitation Index. A widely used index to characterise meteorological drought on a range of timescales. On short timescales, the SPI is closely related to soil moisture, while at longer timescales, the SPI can be related to groundwater and reservoir storage
WSS	Water Supply System. A typical town/city water supply system consists of a gravity or pumping-based transmission and distribution system from a local or distant water source, with a water treatment system

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