

March 2026



MONTHLY STATE OF WATER BULLETIN

WATER IS LIFE - SANITATION IS DIGNITY



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA



Overview

The South African Weather Services (SAWS) Seasonal Climate Watch, April to August 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. The SAWS 2026 report further indicates that the south-eastern and eastern coastal areas are expected to receive above-normal rainfall during late autumn, with only the eastern coastal areas expected to receive above-normal rainfall during the winter season. Regrettably, the south-western and southern coastal parts are expected to receive below-normal rainfall during the winter season. Minimum and maximum temperatures are largely expected to be above normal for most parts of South Africa during the autumn and early winter seasons.

The first 10 days of March continued the wet conditions observed during the last 10 days of February 2026, when more than 50% of the country received rainfall exceeding 200% of the norm. In March, however, these >200% rainfall totals were largely confined to the Northern Cape, North West, Free State, Limpopo, and parts of the Western Cape and Mpumalanga. Despite these heavy downpours, no flooding was reported. In contrast, the monthly rainfall analysis for March shows that conditions were substantially drier across most of the country, with the notable exception of Limpopo.

The national dam levels are at 95.6% of Full Supply Capacity (FSC) by the end of March 2026. This level is 3.7% higher than at the same time last year, when the overall storage level was at 91.9% of FSC. However, the Western Cape Province has experienced a decrease in surface water storage levels. The dam storage level of the Western Cape (total) decreased by 15.8% year-on-year, dropping from 55.9% to 44.1%. The Integrated Vaal River System (IVRS) reached 102.5% of FSC at the end of March 2026, indicating a recovery of +1.5% from the 101.0% recorded at the same time last year. The Orange System's storage level was 100.9% of FSC at the end of March 2026, a substantial increase of +12.8% from the previous year.

Since January 2026, the Limpopo province has experienced above-normal rainfall, largely due to a persistent low-pressure system affecting north-eastern South Africa. A prolonged period of heavy rainfall across the province continued in March 2026, causing several dams, including the Middle Letaba, to reach full or above-full supply capacity.

The water quality segment features Parabens in Water: Emerging Contaminants of Concern. Parabens are widely used synthetic preservatives found in many consumer products, and are increasingly detected in aquatic environments due to continuous discharge through wastewater systems. As a group of endocrine-disrupting chemicals, they can mimic hormonal activity, raising concerns about potential ecological and human health impacts, particularly with long-term exposure. Consequently, there is growing emphasis on improved water quality monitoring and regulatory review.

Rainfall

Figure 1 shows four rainfall distribution maps for March 2026, produced by the South African Weather Services (SAWS). These maps show how much rainfall was received relative to the 1991–2020 climatological normal, expressed as a percentage of normal rainfall. The first three maps show March split into three 10-day period maps. The fourth map shows the March monthly rainfall distribution. The second 10-day period was the driest of the three.

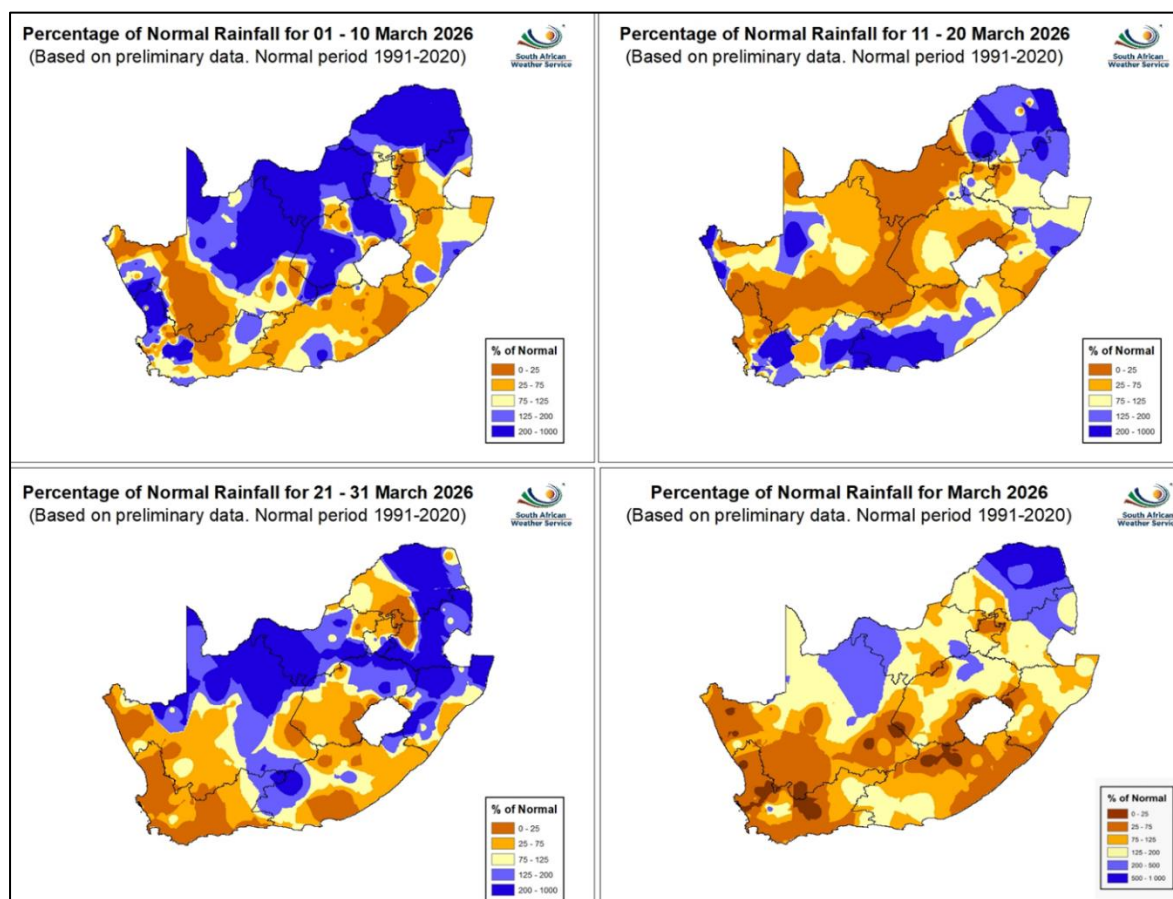


Figure 1: Percentage of normal rainfall distribution for March 2026.

The first 10 days of March continued the wet conditions observed during the last 10 days of February 2026, when more than 50% of the country received rainfall exceeding 200% of the norm. In March, however, these >200% rainfall totals were largely confined to the Northern Cape, North West, Free State, Limpopo, and parts of the Western Cape and Mpumalanga. Despite these heavy downpours, no flooding was reported. In contrast, the monthly rainfall analysis for March shows that conditions were substantially drier across most of the country, with the notable exception of Limpopo.

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 these impacts. 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, April to August 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 continue to strengthen up to spring. Subsequently, this state is expected to impact the next summer rainfall areas in South Africa. However, the ENSO phenomenon predictions are limited during the winter months, hence it is highly recommended to keep track of the forecasts during and after winter.

During late autumn and early winter, significant rainfall typically occurs mainly along the southern and eastern coastal areas. The SAWS 2026 report further indicates that the south-eastern and eastern coastal areas are expected to receive above-normal rainfall during late autumn, with only the eastern coastal areas expected to receive above-normal rainfall during the winter season. Regrettably, the south-western and southern coastal parts are expected to receive below-normal rainfall during the winter season (Figure 2). The maps indicate the highest probability of the above-normal and below-normal categories.

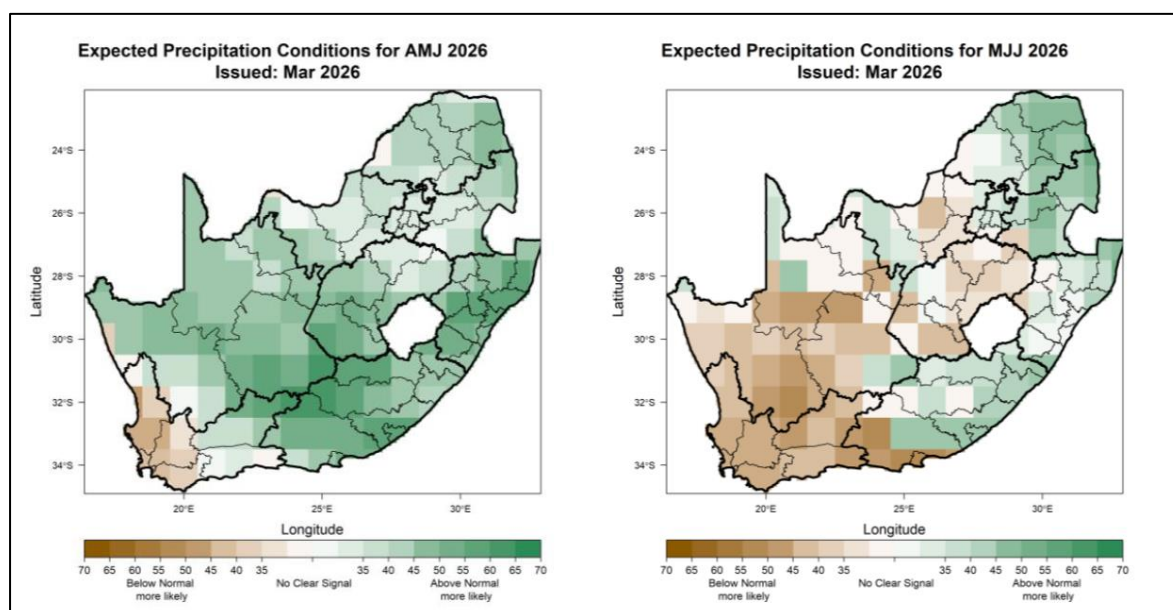


Figure 2: Seasonal precipitation predictions for April-May-June 2026 (AMJ; left), May-June-July 2026 (MJJ; right), (Source: SAWS, 2026a).

Minimum and maximum temperatures are largely expected to be above normal for most parts of South Africa during the autumn and early winter seasons (Figure 3). Maps indicate the highest probability of the above-normal and below-normal categories. We can, therefore, expect a relatively warmer-than-usual winter nationwide.

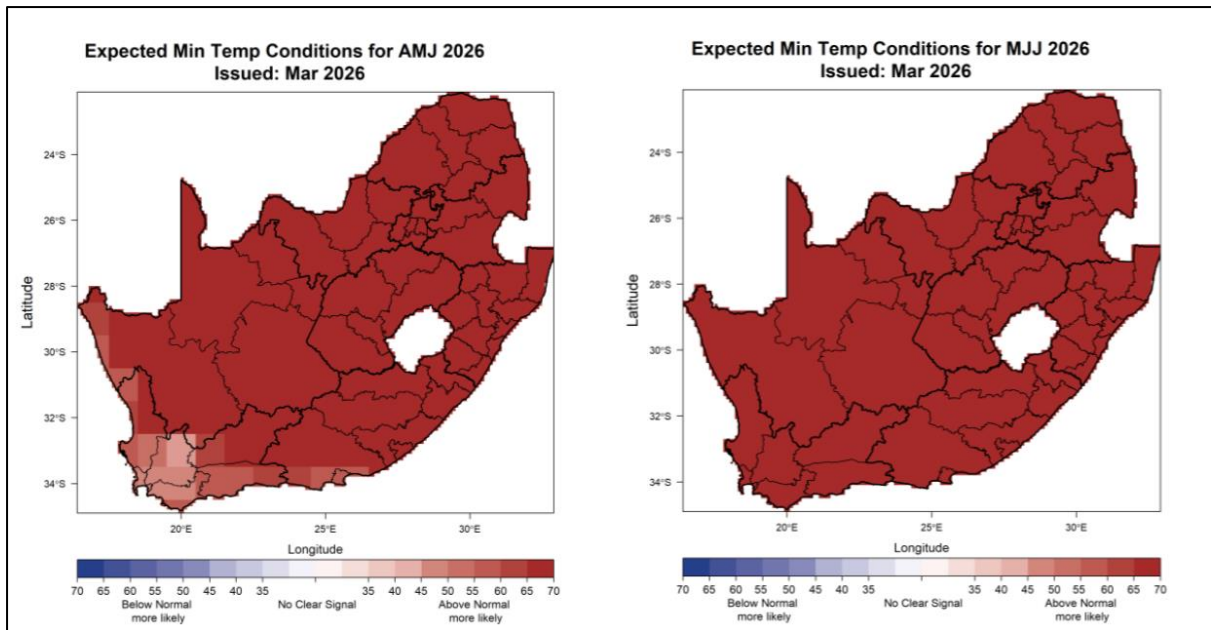


Figure 3: Seasonal maximum temperature predictions for April-May-June 2026 (AMJ; left), May-June-July 2026 (MJJ; right) (Source: SAWS, 2026a).

National Dam Storage

The national surface water storage trends for the current hydrological year (2025/26) are compared to those of the past four hydrological years in Figure 4. The graph shows that at the end of March 2026, the national dam levels were 95.6% of Full Supply Capacity (FSC). This level is 3.7% higher than at the same time last year, when the overall storage level was at 91.9% of FSC. The dam levels have been above 90% FSC since April 2025.

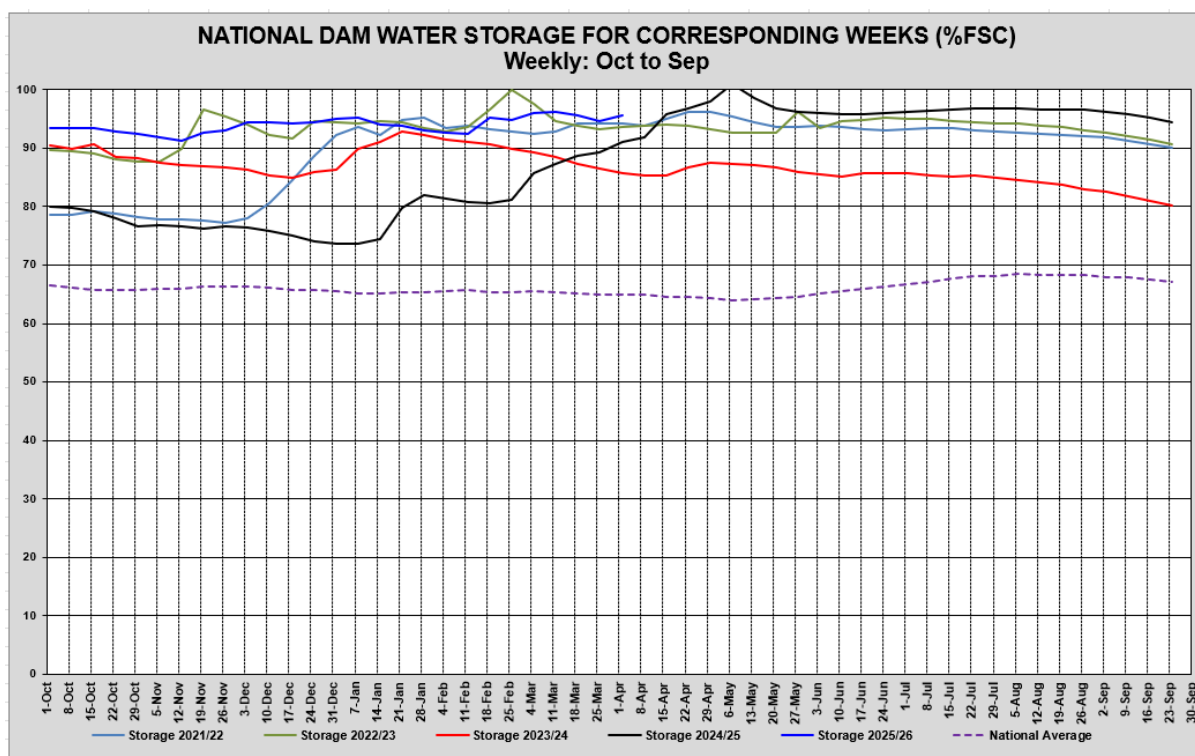


Figure 4: Weekly National Dam Storage at the end of March 2026, for five hydrological years.

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.

Based on dam level data as of 30 March 2026, at least 123 of the 222 national dams were operating above 100% of FSC. However, one dam in the Western Cape recorded storage levels below 10% of FSC. Most provinces reported surface water storage levels exceeding 90% of FSC, with the notable exceptions of the Eastern Cape and Western Cape. In Gauteng, dam levels remained above 100% and have predominantly exceeded full supply capacity since March 2025.

Following above-average rainfall in Limpopo since January 2026, dam storage levels in the province increased significantly, with 26 of the 29 dams exceeding 100% of FSC. Middle Letaba Dam recorded a storage level of 101,2%, compared to 8,8% during the same period in the previous year, representing a substantial year-on-year increase of 92,4%.

Table 1: National Surface Water Storage –30 March 2025 to 30 March 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	This Year
							30/03/2025	30/03/2026
Kingdom of Eswatini	333.75	1				1	100.2	100.5 ↑
Eastern Cape	1 726.24	46		8	22	16	83.9	79.9 ↓
Free State	15 664.61	21			4	17	92.2	101.9 ↑
Gauteng	128.08	5				5	103.4	101.4 ↓
KwaZulu-Natal	4 909.66	19			6	13	96.8	91.9 ↓
Kingdom of Lesotho	2 362.63	2			1	1	98.2	100.7 ↑
Limpopo	1 484.64	29			3	26	91.1	102.4 ↑
Mpumalanga	2 538.4	22			4	18	100.4	100.6 ↑
Northern Cape	149.29	5		1	1	3	81.0	103.9 ↑
North West	866.23	28		1	7	20	100.5	102.1 ↑
Western Cape - Other Rainfall	269.61	22	1	10	9	2	72.6	53.1 ↓
Western Cape - Winter Rainfall	1 596.8	22		11	10	1	57.8	42.6 ↓
Western Cape - Total	1 866.41	44	1	21	19	3	59.9	44.1 ↓
Grand Total:	32 029.94	222	1	31	67	123	91.9	95.6 ↑

For 30 March 2026, the Western Cape shows one dam below 10% of FSC (critically low), down from two dams reported in the February 2026 edition. Notably, 21 out of the 31 dams with >10%–<50% FSC are from the Western Cape, up from 16 recorded in February 2026. The percentage FSC for the Western Cape (total) has fallen 15.5%, from 59.9% down to 44.1% year-on-year. Month-to-month, the dam levels from the winter rainfall region of the Western Cape continue to fall as expected (Figure 5). While at the same time, higher than average rainfall received in the first and second 10-days of March has significantly boosted Western Cape (other rainfall region) from 44.9% to 53.1%. Figure 6 shows the spatial distribution of the 222 national dams and their respective dam storage levels.

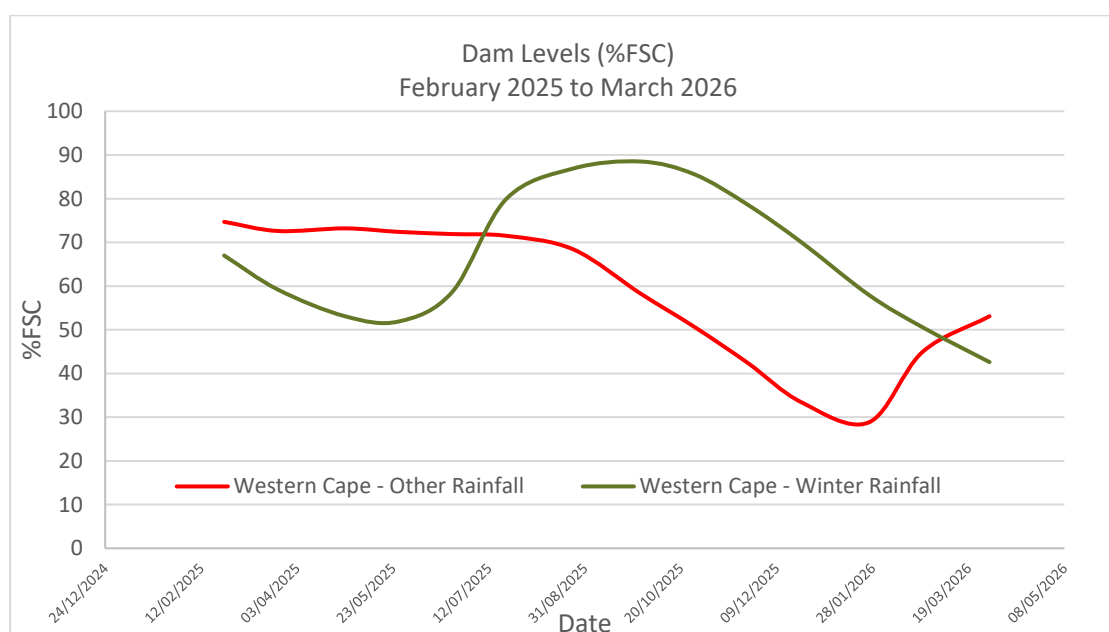


Figure 5: Western Cape dam level trends from February 2025 to March 2026

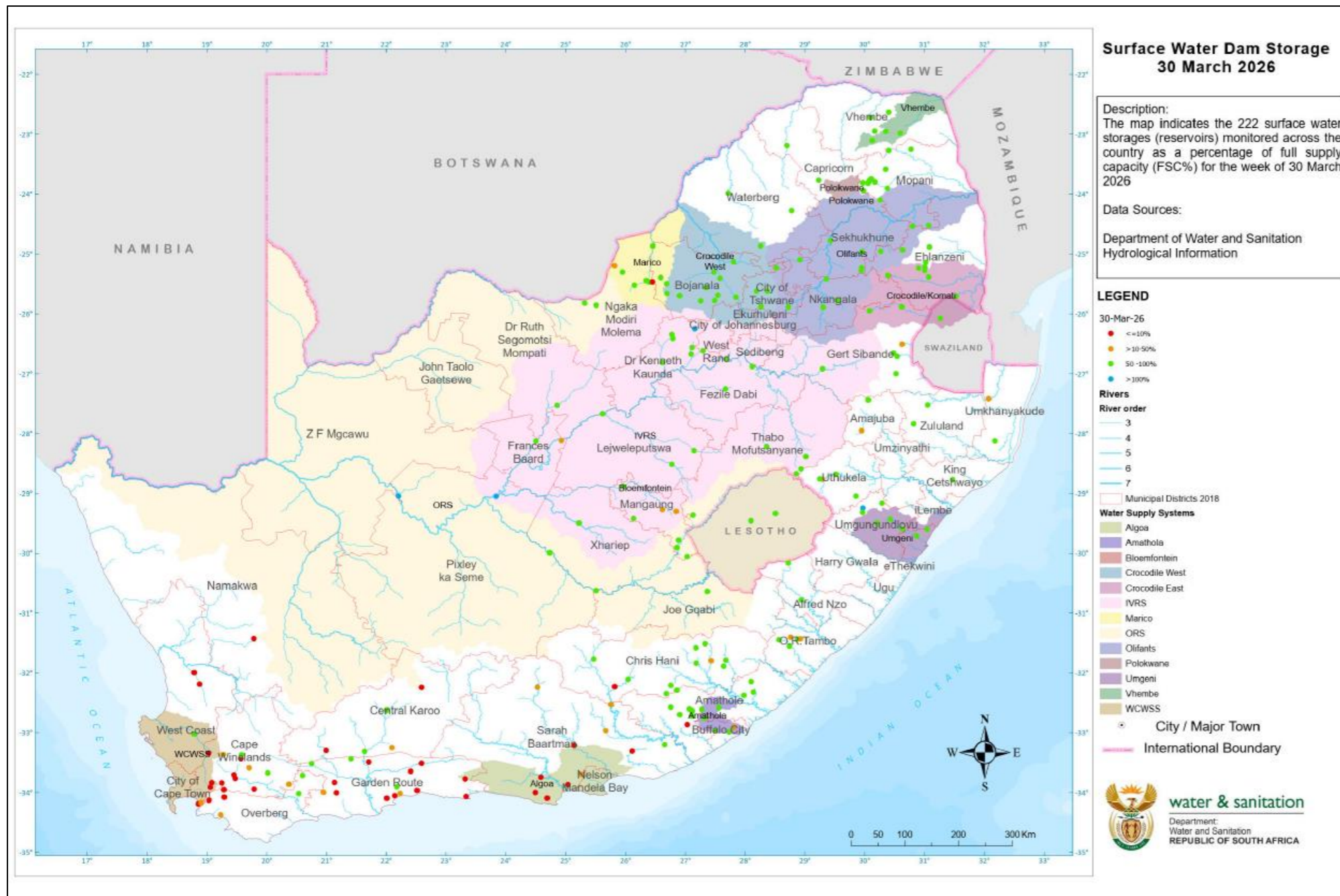


Figure 6: Surface Water Storage Levels – 30 March 2026

Figure 7 graphically illustrates the comparison of storage levels across provinces, including the Kingdoms of Eswatini and Lesotho, for March 2025 and March 2026. The Northern Cape, Limpopo, and Free State showed the most significant year-on-year increase of +22.9%, +11.3%, and +9.7%, respectively. 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 Kingdom of Lesotho also experienced a significant increase of 2.5% during the same time. KwaZulu-Natal, Eastern Cape, and Gauteng recorded slight declines in FSC of -4.9%, -4.0%, and -2.0%, respectively. The Western Cape recorded a more significant year-on-year decline of -15.8%. This substantial decline in the Western Cape indicates the impacts of below-average rainfall received during the region’s winter rainfall season.

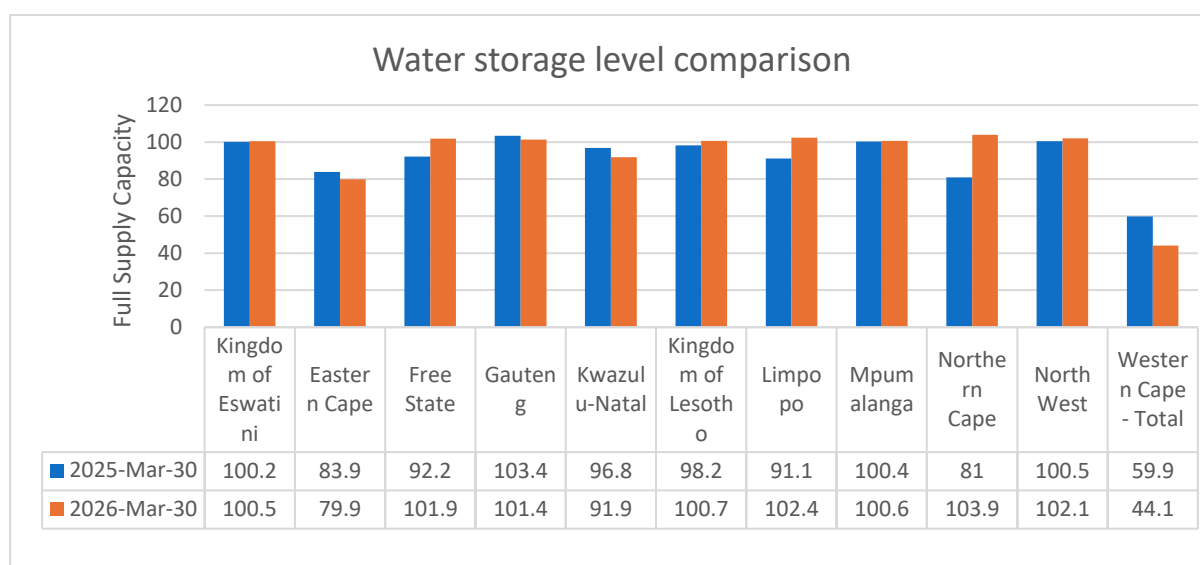


Figure 7: Water Storage Levels March 2025 vs. March 2026.

The comparison between March 2025 and March 2026 of the country's five largest dam storage is presented in Table 2.

Table 2: Storage Levels Comparison for the Five Largest Storage Dams (by volume).

Reservoir	River	Province	Full Supply Capacity (Mm3)	30 March 2025 (% FSC)	30 March 2026 (% FSC)	Difference (%)
Gariiep Dam	Orange River	Free State	4 903.45	98.5	100.6	+2.1
Vanderkloof Dam	Orange River	Free State & Northern Cape	3 136.93	71.9	101.4	+29.5
Sterkfontein Dam	Nuwejaarspruit River	Free State	2 616.90	99.2	99.9	+0.7
Vaal Dam	Vaal River	Free State	2 560.97	107.2	104.5	-2.7
Pongolapoort Dam	Phongolo River	KwaZulu-Natal	2 395.24	92.2	84.4	-7.8

The surface water storage levels at the five major dams in the country exceed 80%, with the Vanderkloof Dam showing a substantial increase of +29.5% compared to the same time last year.

The majority of dams in the Western Cape are experiencing continued decreases in surface water storage levels. Gamka Dam, Klipheuwel Dam and Haarlem Dam were below 20% of FSC. While the

Miertjieskraal Dam had critically low storage levels (<10% of FSC) at the end of March 2026. The dam has declined significantly by -44.8% compared to the same time last year (Table 3).

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

Reservoir	River	Province	Full Supply Capacity (Mm ³)	30 March 2025 (% FSC)	30 March 2026 (% FSC)	Difference (%)
Miertjieskraal Dam	Brand River	Western Cape	1.43	52.5	7.5	-44.8

District Municipalities

Figure 8 presents the 24-month Standardised Precipitation Index (SPI) MAP analysed at the end of February 2026 alongside the March 2026 Dam levels. The SPI drought 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 DM experienced a moderate to severe drought status.

The year-on-year comparison of surface water storage levels per district municipality (DM) is presented in Figure 9. The Mopani, Frances Baard, and Lejweleputswa DMs experienced the most significant increases (>20%) in dam storage levels in March 2026. Also noteworthy, the Eden and City of Cape Town DMs have experienced a significant annual decline (> 20%).

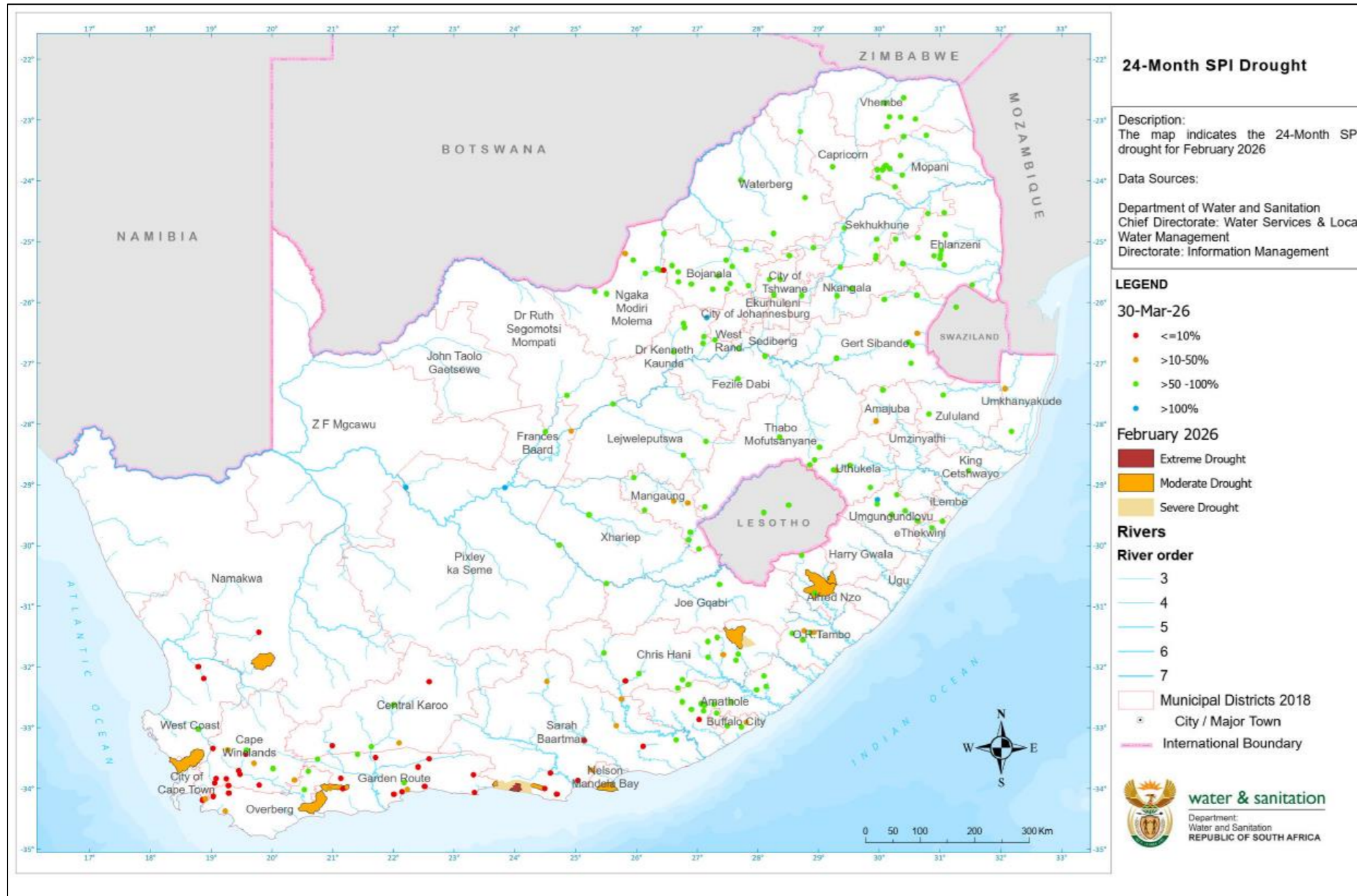


Figure 8: 24-Month Standardised Precipitation Index (SPI) – February 2026.

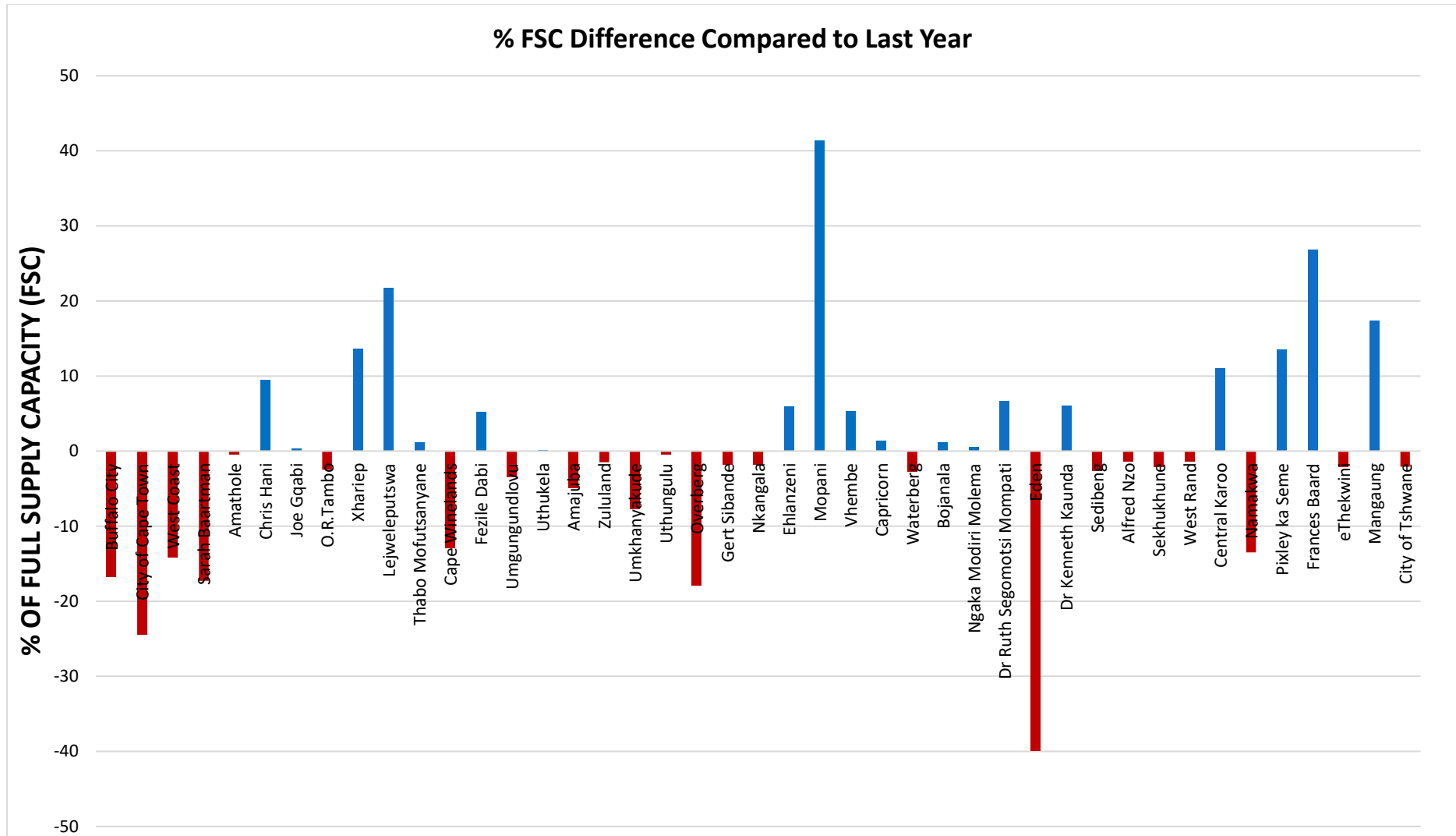


Figure 9: Comparison of water storage levels per District Municipality, March 2025 vs March 2026.

Water Supply Restrictions

The water supply systems and their respective restrictions are given in Table 4. Due to infrastructure limitations, permanent restrictions are applicable for the Polokwane and Bloemfontein Water Supply Systems.

Table 4: Water Supply System with Restrictions.

System Name	Areas	Water Users	% Restrictions	Gazette Information	Next Review
Algoa WSS	Kromme subsystem	NMBM & Kouga LM Irrigation	23% on domestic & industrial use 43% on irrigation	4 July 2025 No. 6392	Nov' 2026
Mangaung WSS	Caledon-Modder	Mangaung Metro	25% domestic & industrial when below 95%	13 Sep 2024 Gazette no.5200	May 2025
Liebensbergvlei River	Run-of-river abstractions Free State towns and irrigation	Towns of Bethlehem, Reitz, Tweeling within Dihlabeng, Mafube and Nketoana Local Municipalities	Irrigation users to abstract water on an alternate-day basis Municipalities to use water sparingly	20 Sep 2024 Gazette no. 5223	Once off until the end of the LHWP tunnel shutdown for the planned maintenance
Middle Letaba/Nsami	Middle Letaba/Nsami	Irrigation Mopani Municipality	100% irrigation 25% domestic	28 June 2024	May 2025
Mutshedzi Dam	Mutshedzi Dam	Makhado Municipality	35% domestic		May 2025
Nzhelele	Nzhelele	Nzhelele Government Irrigation Scheme Nzhelele Regional Scheme	20% domestic 20% irrigation	28 June 2024	May 2025
Nwanedi/Luphephe	Nwanedi/Luphephe	Mutale Local Municipality Irrigation	20% D&I 45% irrigation	28 June 2024	May 2025
Polokwane Water Supply System Letaba System	Seshego, Mashashane, Houtrivier and Chuniespoort Dams, Ebenezer and Groot Letaba System	Capricorn District, Polokwane Local Municipality, Groot Letaba Water Users Association, Mopani Municipality	30% domestic & industrial water uses 27% agricultural use	28 June 2024	May 2025

The dam storage levels for South Africa's national water supply systems are presented in Table 5. All Water Supply Systems were above 90%, except Algoa, Bloemfontein, and Cape Town. The Algoa and Cape Town Water Supply Systems recorded a substantial decline of -33.5% and -17.6%, respectively, compared to the previous year. 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 102.5% of FSC at the end of March 2026, indicating a +1.5% increase from the 101% recorded at the same time last year. The Orange Water 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 100.9% of FSC at the end of March 2026, a substantial increase of +12.8% from the previous year.

Table 5: Water Supply Systems storage levels February comparisons.

Water Supply Systems/ Clusters	Full Supply Capacity in 10 ⁶ m ³	30 March 2025 (% FSC)	30 March 2026 (% FSC)	System Description
Algoa System	281.57	72.2	38.7	<u>Five dams serve the Nelson Mandela Bay Metro, Sarah Baartman (SB) DM, Kouga LM and Gamtoos Irrigation:</u> 1. Kromrivier Dam 2. Impofu Dam 3. Kouga Dam 4. Loerie Dam 5. Groendal Dam
Amathole System	240.88	103.5	92.6	<u>Six dams serve Bisho & Buffalo City, East London:</u> 1. Laing Dam 2. Rooikrans Dam 3. Bridle Drift Dam 4. Nahoon Dam 5. Gubu Dam 6. Wriggleswade Dam
Klipplaat System	57.0	92.1	98.7	<u>Three dams serve Queenstown (Chris Hani DM, Enoch Ngijima LM):</u> 1. Boesmanskrantz Dam 2. Waterdown Dam 3. Ovkraal Dam
Butterworth System	14.43	100.9	100.1	<u>Xilinxha Dam and Gcuwa weirs serve Butterworth</u>
Integrated Vaal River System	10492.91	101.0	102.5	<u>14 dams serve Gauteng, Sasol, and ESKOM:</u> 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	100.8	104.5	<u>Three dams serve Thohoyandou:</u> 1. Albasini Dam 2. Vondo Dam 3. Nandoni Dam
Bloemfontein	219.6	73.1	84.6	<u>Four dams serve Bloemfontein, Botshabelo and Thaba Nchu:</u> 1. Rustfontein Dam 2. Groothoek Dam 3. Welbedacht Dam 4. Knellpoort Dam
Polokwane	254.27	108.2	103.3	<u>Two dams serve Polokwane</u> 1. Flag Boshielo Dam 2. Ebenezer Dam

Water Supply Systems/ Clusters	Full Supply Capacity in 10 ⁶ m ³	30 March 2025 (% FSC)	30 March 2026 (% FSC)	System Description
Crocodile West	443.39	98.6	99.9	<u>Seven dams serve Tshwane up to Rustenburg:</u> 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	103.9	100.7	<u>Five dams serve Ethekewini, iLembe & Msunduzi:</u> 1. Midmar Dam 2. Nagle Dam 3. Albert Falls Dam 4. Inanda Dam 5. Spring Grove Dam
Cape Town System	889.3	64.8	47.2	<u>Six dams serve the City of Cape Town:</u> 1. Voelvlei Dam 2. Wemmershoek Dam 3. Berg River Dam 4. Steenbras-Lower Dam 5. Steenbras-Upper Dam 6. Theewaterskloof Dam
Crocodile East	158.65	101.1	101.4	<u>Kwena Dam supplies Nelspruit, Kanyamazane, Matsulu, Malelane and Komatipoort areas & Surroundings</u>
Orange	8 040.38	88.1	100.9	<u>Two dams service parts of the Free State, Northern and Eastern Cape Provinces:</u> 1. Gariep Dam 2. Vanderkloof Dam
uMhlathuze	301.25	100.6	100.1	Goedertrouw Dam supplies Richards Bay, Empangeni Towns, small towns, surrounding rural areas, industries, and irrigators, supported by lakes and transfer from the Thukela River

Extreme Events

Since January 2026, the Limpopo province has experienced above-normal rainfall, largely due to a persistent low-pressure system affecting north-eastern South Africa. A prolonged period of heavy rainfall across the province continued in March 2026, causing several dams, including the Middle Letaba, to reach full or above-full supply capacity, leading to localised flooding and safety alerts (Figure 10).

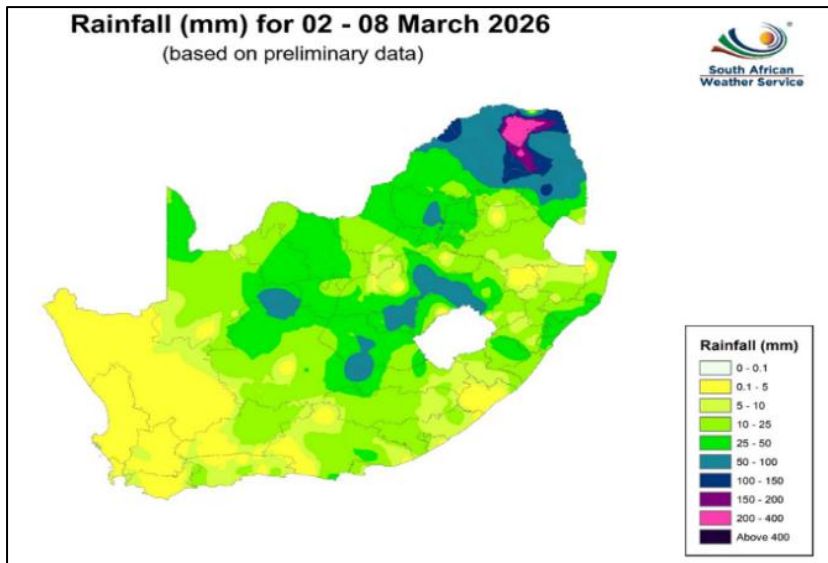


Figure 10: Rainfall accumulation (02 to 08 March 2026) and percentage of normal rainfall (01 to 10 March 2026).

The Middle Letaba Dam (also known as Ngamanungu Dam) is a significant dam with a storage capacity of approximately 171.93 million cubic metres (Mm³). It is situated on the Middel Letaba River, approximately 35 km west of Giyani in Limpopo Province. It has a wall height of 38 m, a crest length of 2711 m, and an uncontrolled ogee spillway (Figure 11) . Middel Letaba Dam is a category III dam, due to its large size and high hazard potential rating (DSO, List of Registered Dams, July 2025).

The dam relies on inflows from the Middle Letaba, Koedoes, and Brandboontjies rivers within the Olifant Catchment Area. It feeds into the Klein Letaba River, which is part of the larger Letaba River catchment. The dam provides raw water to Middle Letaba, Mapuve, and Giyani Water Treatment Works via a 60 km canal.

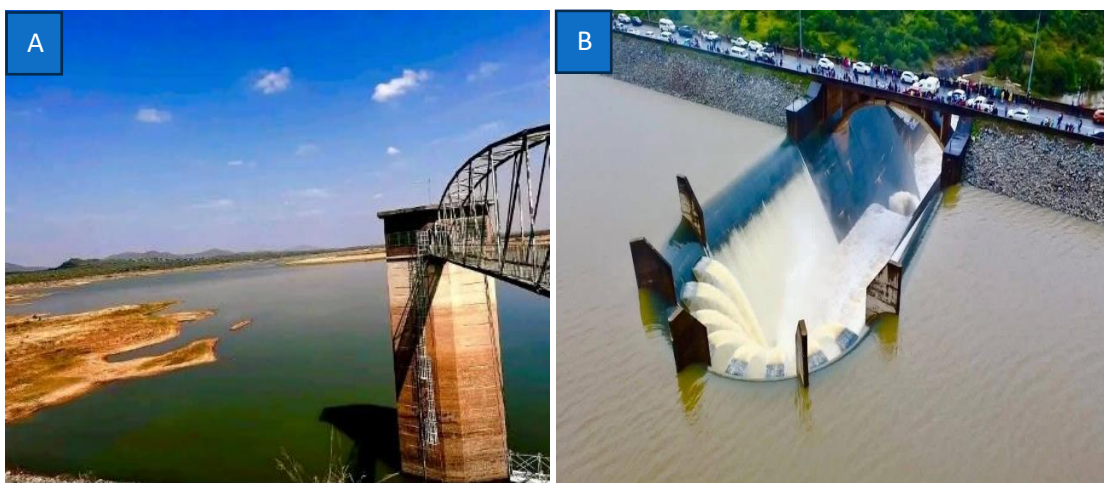


Figure 11: Middle Letaba Dam (A) before flood events (B) after flood events (Photo Credit: Orlando Chauke).

The dam supplies 82% of its water to agriculture, 8% to domestic use, 6% to mining, and 3% to industry. However, the dam has historically experienced consistently low water levels and has rarely reached 50% capacity since 2004, mainly due to prolonged drought conditions. During the drought crisis, tensions rose in June 2024, with downstream farmers accusing upstream users of extracting

more water than their allocated share. This prompted the formation of the Ministerial Independent Investigation Panel to examine the water issues in the Middle Letaba area.

Historical data indicate that over the past ten years (2016 to 2026), the Middle Letaba system has remained below 40% of its full supply capacity, reflecting ongoing water scarcity in the catchment (Figure 12 and Figure 13).

- The notable flood peaks were observed in 1991/01/26, 1995/02/19, 1996/02/10, 2000/02/14, 2001/02/28 and 2026/03/16.
- Between 12 and 19 January 2026, the Middle Letaba increased sharply from 8% to 62%, marking a major recovery. Between 12 and 19 January 2026, the Middle Letaba increased sharply from 8% to 62%, marking a major recovery. This sharp increase is consistent with the scale of inflows from high rainfall recorded in January 2026. Since then, the dam level has continued to increase, and as of 16 January 2026, it has reached 105% of FSC.
- The Middle Letaba Dam last reached 100% FSC in 2000 (Figure 12).

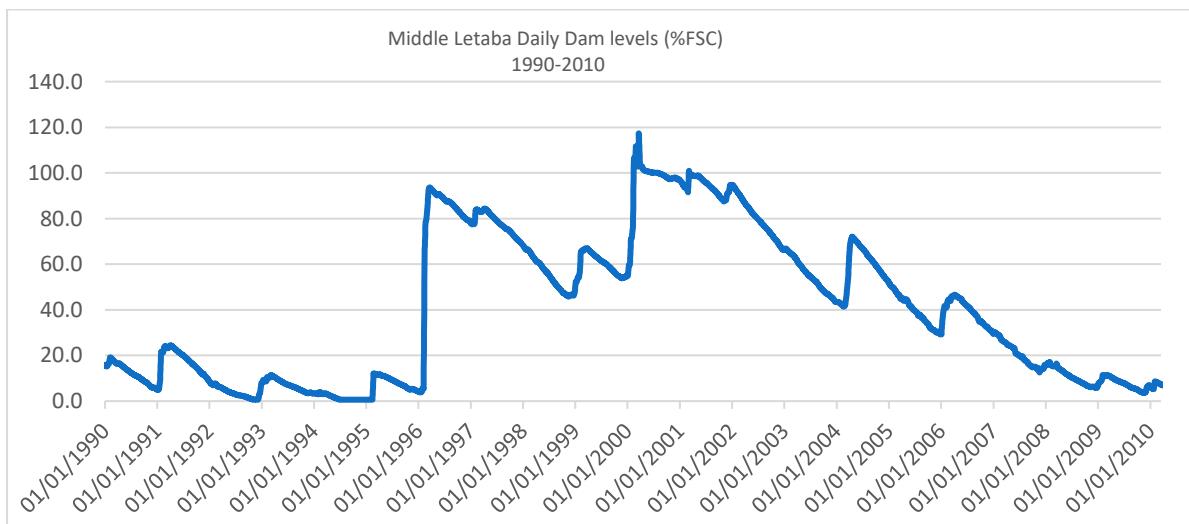


Figure 12: Middle Letaba Daily Dam Levels (1990-2010).

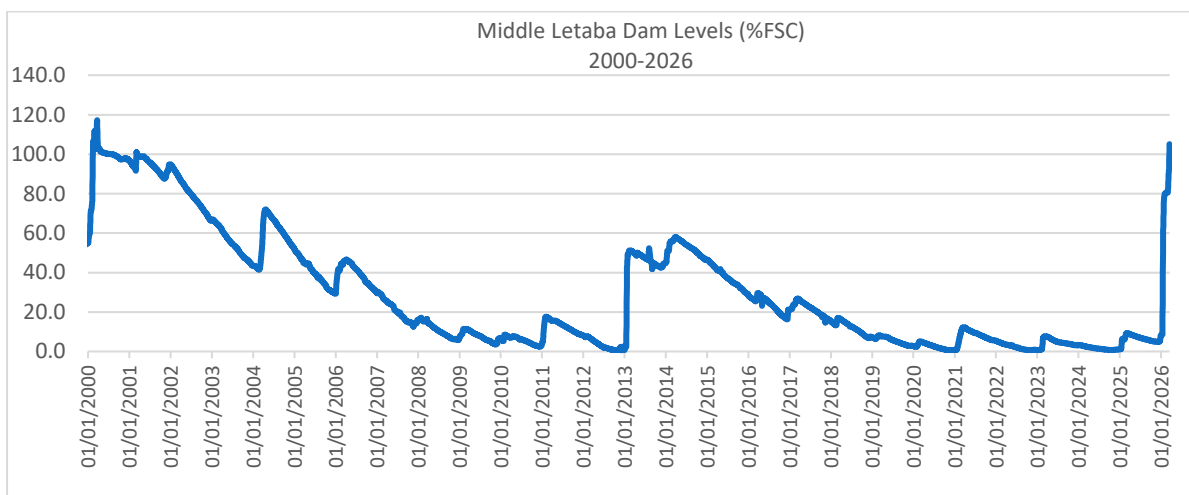


Figure 13: Middle Letaba Daily Dam Levels (2000-2026).

Parabens in Water: Emerging Contaminants of Concern

In recent years, attention has increasingly focused on emerging contaminants such as phthalates, bisphenols, and parabens because of their widespread use in consumer products and their potential impacts on human health and the environment. A key concern is that these substances are classified as endocrine-disrupting chemicals (EDCs) because they can mimic estrogen and interfere with hormonal systems. EDCs have been linked to reproductive toxicity, hormonal imbalance, and cancer (Blignaut *et al.*, 2026). This feature explores parabens in detail.

Parabens are a group of synthetic organic compounds widely used as preservatives in personal care products (such as lotions, shampoos and deodorants), cosmetics, pharmaceuticals, and processed foods. Their primary function is to inhibit microbial growth and extend product shelf life. The most commonly used parabens include methylparaben, ethylparaben, propylparaben and butylparaben. These compounds differ in the length of their alkyl chain, which influences their antimicrobial effectiveness, persistence, and biological activity. The name “parabens” originates from their structure as para-substituted derivatives of benzoic acid, specifically esters of para-hydroxybenzoic acid. Due to their extensive use and continuous discharge into wastewater systems, parabens are increasingly being detected in aquatic environments, raising concerns about their potential ecological and human health impacts. Parabens are moderately water-soluble and can undergo biodegradation (aerobic conditions enhance their breakdown), photodegradation in surface waters and sorption to sediments and sludge.

Parabens can mimic and interfere with hormone systems, particularly estrogenic activity. Their ecological impacts include altered reproductive function in fish and aquatic invertebrates, disruption of endocrine systems, developmental abnormalities in aquatic organisms and bioaccumulation in some species (da Silveira *et al.*, 2024). Human exposure to parabens occurs primarily through dermal absorption from personal care products. Concerns raised include endocrine disruption, potential links to reproductive effects (reduced fertility rates) and association with certain cancers (Liao *et al.*, 2025; Blignaut *et al.*, 2026).

Monitoring emerging contaminants such as parabens is becoming increasingly important for protecting water resources and understanding the cumulative impacts of trace organic pollutants. Parabens are measured in the laboratory using advanced analytical chemistry techniques such as Liquid Chromatography-Mass Spectrometry (LC-MS), which detect trace concentrations in complex environmental matrices such as water, sediment, sludge and biota such as fish tissue. Due to the low levels of parabens present, their analysis requires sensitive, selective and well-validated methods.

In wastewater treatment plants, biological processes reduce paraben concentrations through biodegradation and adsorption to sludge, while advanced treatment methods such as activated carbon adsorption, advanced oxidation processes (e.g. ozonation) and membrane filtration are more effective at removing parabens.

Regulations on parabens in South Africa are managed under the Foodstuffs, Cosmetics and Disinfectants Act (Act No. 54 of 1972). At present, parabens are not universally regulated in drinking water standards. However, cosmetic regulations in regions such as the European Commission have restricted certain parabens in personal care products (European Commission, 2021); The World Health Organisation (WHO) continues to assess emerging contaminants in water (WHO, 2012), and research

initiatives under the United Nations Environment Programme (UNEP) recognise endocrine disruptors as emerging environmental risks (UNEP, 2026). In South Africa, parabens are generally not included in routine compliance monitoring under drinking water standards, which focus on regulated microbiological, physical and chemical parameters (e.g. SANS 241). They may, however, be assessed through research and targeted investigations of contaminants of emerging concern.

Case Study: Endocrine-Disrupting Chemicals in Consumer Products

The University of the Free State's 2026 study on EDCs in menstrual products recently triggered significant public concern. The study found that every product tested contained at least two EDCs (phthalates, bisphenols and parabens), even in those marketed as "safe" or "chemical-free" (Blignaut *et al.*, 2026). This raised widespread anxiety about women's health, product safety, and transparency, with particular focus on long-term exposure risks, such as hormonal disruption, reproductive toxicity, and potential links to cancer. In response to public pressure and media attention, government initiated multi-sector engagement and regulatory review processes, including a joint media briefing led by the Department of Health and other stakeholders to clarify the findings and address public concerns (Media advisory, 2026). Additionally, regulatory bodies such as the National Consumer Commission launched investigations into manufacturers, signalling a move towards greater oversight and possible compliance enforcement (Department of Trade, Industry and Competition, 2026). Parliamentary committees and scientific bodies further emphasised that, while no immediate health risk was confirmed, the findings highlight the need for further research, improved product regulation, and enhanced consumer protection frameworks (Media statement, 2026). The study increased public awareness and prompted government intervention, marking a significant step towards addressing emerging risks of chemical exposure in everyday consumer products.

Compiled by:

Hulisani Mafenya, Mamothe Ramothello, Mirrander Ndhlovu, Judy Reddy, and Joshua Rasifudi.

For technical inputs and inquiries:

Sub-Directorate: Integrated Water Resource Studies

Tel: 012 336 6621

Email: IntegratedWaterStudies@dws.gov.za

Accessible on the National State of Water Reporting Web page:

<https://www.dws.gov.za/Projects/National%20State%20of%20Water%20Report/MonthlyBulletin.aspx>

Department of Water and Sanitation
Private Bag X313
Pretoria
0001

Glossary

Term	Definition
DM	District Municipality
EDCs	Endocrine-Disrupting Chemicals
ENSO	El Niño-Southern Oscillation
FSC	Full Storage Capacity
SAWS	South African Weather Services
LHWP	Lesotho Highlands Water Project
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
UNEP	United Nations Environment Programme
WHO	World Health Organisation
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

References

- Blignaut, J., Kemp, G., Erasmus, E., Visser, H. G., & Schutte-Smith, M. (2026). The presence of endocrine disrupting chemicals in sanitary pads: A study done in South Africa. *Science of The Total Environment*, 1018, 181510. <https://doi.org/10.1016/j.scitotenv.2026.181510>
- Da Silveira, F. F. C. L., Porto, V. A., De Sousa, B. L. C., De Souza, E. V., Lo Nostro, F. L., Rocha, T. L., & De Jesus, L. W. O. (2024). Bioaccumulation and ecotoxicity of parabens in aquatic organisms: Current status and trends. *Environmental Pollution*, 363, 125213. <https://doi.org/10.1016/j.envpol.2024.125213>
- Department of Trade, Industry and Competition, 2026. *The DTIC Welcomes the NCC's Investigation of 9 Suppliers of Sanitary Products*. Media Statement.
- European Commission. (2021). *Scientific Committee on Consumer Safety (SCCS) Opinion on Parabens*. Brussels.
- Government of South Africa (2026). *Government to respond on sanitary pads research study findings*. Media advisory.
- Liao, Y., Li, J., Li, X., Zhu, Z., Gao, Y., Wei, Y., Wang, B., Chen, C., Nong, C., Liu, J., Wei, Q., Li, Y., Li, H., & Peng, Y. (2025). Assessment of human parabens exposure and health risk based on global biomonitoring data. *Environmental Research*, 285, 122461. <https://doi.org/10.1016/j.envres.2025.122461>
- Parliament of South Africa (2026). *Media statement on briefing by UFS and SABS on sanitary pads study*.
- SAWS, 2026a. Seasonal Climate Watch: April 2026 to August 2026 (Issued: 07 April 2026). SAWS, Centurion, South Africa.
- SAWS, 2026b. Monthly Drought Bulletin (Issued January 2026). SAWS, Centurion, South Africa. https://www.weathersa.co.za/Documents/Climate/nr_drought.pdf
- United Nations Environment Programme (2026). Key concerns of endocrine disrupting chemicals.
- World Health Organization (2012). *State of the Science of Endocrine Disrupting Chemicals*. Geneva: WHO Press.