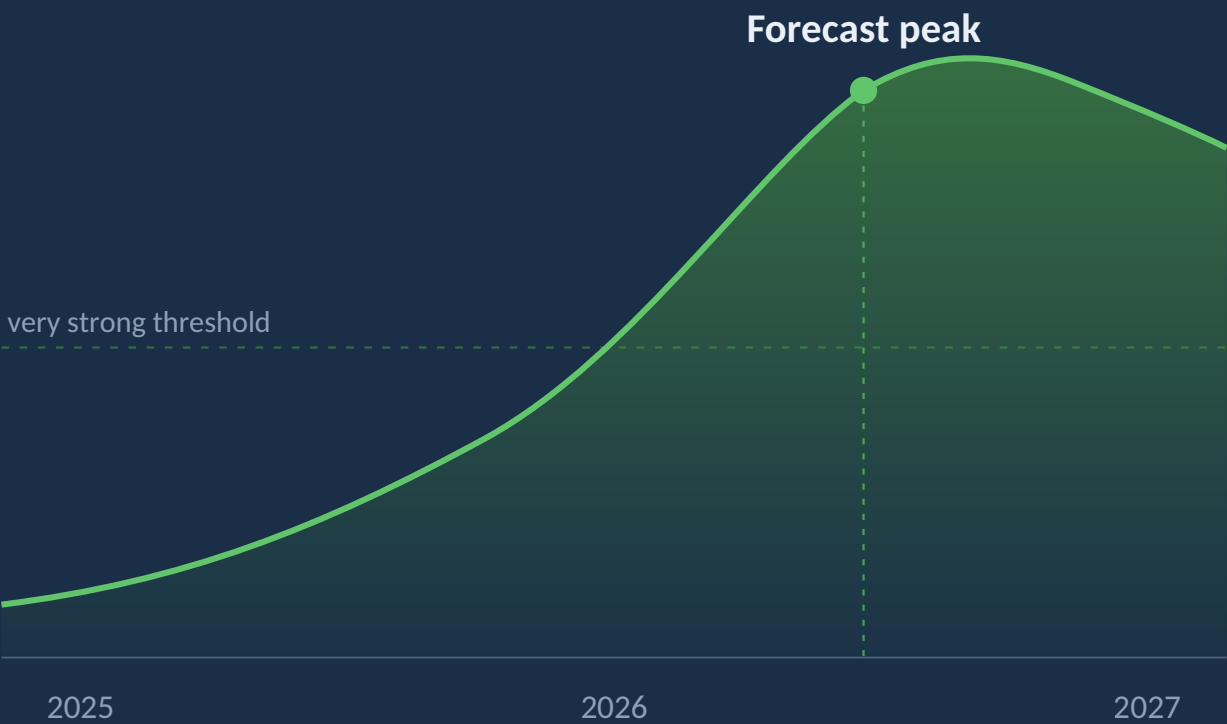


The Dry Season Ahead

El Niño, dust and the South African mine, and how to be ready before the 2026-27 dry season.

A briefing for mine managers and health, safety and environmental teams, prepared by Benmarc Environmental.



90%+

chance of a very strong El Niño by late 2026

Oct to Dec 2026

forecast peak of the event

Since 1950

it could be the strongest on record

01

A strong El Niño is forming

By the time the summer rains should arrive in late 2026, much of the interior is likely to be drier than it has been in years. The reason is a strong El Niño building in the Pacific.

El Niño shifts rainfall away from Southern Africa during the summer growing season, roughly October to April, which is when the interior mining regions receive most of their water. The current outlook is unusually firm. Forecasters put the chance of a very strong event above 90 percent through the end of 2026, with the signal peaking between October and December. There is close to a 69 percent chance the event becomes historic, stronger than any El Niño measured since 1950, and the models expect it to hold into the first months of 2027.

Greater than 90%

chance of a very strong El Niño through late 2026, peaking October to December, with a roughly 69 percent chance of the strongest event on record since 1950.

Sources: US Climate Prediction Center and IRI ENSO outlook, August 2026; World Meteorological Organization.

02

Full dams today, a thinner buffer tomorrow

The honest picture is not a crisis this week. South Africa enters this event with storage close to full. In early August 2026 the country's dams sat at about 96 percent overall, and the Vaal system, which supplies the economic heartland, was near capacity. A full buffer is exactly what carries an operation through one poor season.

The risk is a strong and prolonged event that draws that storage down through the dry months, with the sharpest effects arriving later, into 2027. Water stored today is the cushion for the season ahead. That is why the useful moment to prepare is now, while the buffer is still full and there is time to plan, rather than during the drawdown when options narrow.

~96%

national dam storage in early August 2026. The buffer is full now. A strong, prolonged dry season is what draws it down.

Sources: South African dam-level records and Department of Water and Sanitation statements on the Integrated Vaal River System, 2026.

03

What the last one did

We do not have to guess how this plays out. The El Niño of 2023 and 2024 gives a recent, well-documented benchmark. A dry spell of more than 50 days ran from late January into early March 2024, the longest mid-season break in over a century in some central areas, and several places recorded their lowest February rainfall in about a hundred years.

Six neighbouring countries, Botswana, Lesotho, Namibia, Malawi, Zambia and Zimbabwe, declared drought states of emergency, and more than 30 million people across the region were affected. South Africa's maize harvest fell about 22 percent. The clearest lesson for any operation is the one about buffers: sites that had stored water and reliable power carried through, while those that depended on the season as it came had no cushion when it did not arrive.

50+ days

the longest mid-season dry spell in over a century, early 2024. Six neighbouring countries declared drought emergencies.

Sources: NASA Earth Observatory; World Weather Attribution; United Nations OCHA and World Food Programme regional reporting, 2024.

04

Why a dry season is a dust season

A drought does not only take water away. It changes the air. Drier, windier conditions with lower humidity lift more dust from stockpiles, haul roads, tips and exposed ground, and the same conditions make water-based suppression less effective because the water evaporates faster than it can hold the surface. Operations tend to reach for more water at exactly the moment there is less of it to spare.

The first cost of that is not regulatory, it is human. Fine airborne particles, the PM10 fraction and smaller, are linked to respiratory and cardiovascular harm, and a dustier dry season raises the exposure that workers and nearby communities carry. Protecting people is the reason to plan for dust before the season turns, and it is a reason that does not wait for an inspection.

3%+ moisture

is what water-only suppression typically needs to reach around 80 percent dust reduction, and it evaporates faster as humidity falls through a dry season.

Sources: RWDI and industry air-quality literature on fugitive dust; peer-reviewed dust-suppression research.

05

The water squeeze on the Northern Cape belt

Nowhere is the pinch clearer than the manganese and iron-ore belt of the Northern Cape, an arid region whose mines already run on a strained supply. The Vaal-Gamagara scheme, which pipes water from the Vaal River to Postmasburg, Kathu and Hotazel, was built to deliver about 34 million litres a day but supplies closer to 24 million. The pipeline is ageing and under a multi-billion-rand upgrade, and the industry has put its own money in to keep it running.

Into that already-tight system a dry season adds pressure from two sides at once. There is less water in the rivers and schemes that feed the mine, and there is more demand for water at every point where dust has to be controlled. Water for production and water for dust control end up competing for the same shrinking supply. The operations that manage this best are the ones that reduce how much water dust control needs in the first place.

24 of 34

million litres a day. The belt's main water scheme already delivers well below its design capacity, before a drought is added.

Sources: African Mining, Engineering News and South African government reporting on the Vaal-Gamagara Water Supply Scheme, 2023 to 2026.

06

Scarcer water costs more to move

There is a cost dimension worth naming plainly. Moving water depends on grid power, and power has become more expensive: electricity tariffs rose by roughly 9 percent in 2026. Load-shedding has eased, so the pressure this year is on cost rather than supply. When water is scarcer it has to be pumped further and lifted higher, and every additional litre used for dust suppression carries that rising cost with it. Using less water for the same dust control is therefore both an environmental and a financial saving.

~9%

rise in electricity tariffs in 2026. Scarcer water pumped further costs more, so every litre saved on dust control counts twice.

Sources: Eskom and National Energy Regulator of South Africa tariff decisions for 2026/27.

07

How to get ahead of the dry season

The good news is that a dry season is predictable, and a predictable problem can be planned for. Four practical steps, taken now while the buffer is full, put an operation in a far stronger position when the air turns.

Step	What it means in practice
Plan before the season	Review the dust-management plan for the coming dry months, confirm water sources and allocations, and identify the transfer points, roads and stockpiles that will become the worst dust sources when it dries out.
Monitor and forecast	Combine on-site dust monitoring with weather forecasting so high-dust days can be anticipated and suppression targeted where and when it is needed, rather than applied everywhere by habit. This alone saves water.
Reduce reliance on water alone	Water-only suppression fails fastest in the exact conditions a drought brings. Methods that bind dust at the source, using chemistry that holds through handling, keep material under control with far less water and far less reapplication.
Protect people first	Treat worker and community exposure as the measure that matters. A drier, dustier season is a health and safety issue before it is anything else, and planning for it protects the workforce through the months when exposure is highest.

None of this requires waiting for a bad month to act. The independent evidence is encouraging: well-designed suppression can cut water use by more than 80 percent while holding or improving dust control, and treated surfaces can stay bound for far longer than a water cart can manage. The operations that come through a strong El Niño in good shape will be the ones that treated the dry season as a plan, not a surprise.

80%+ less water

the water saving achievable with well-designed suppression, at equal or better dust control. A predictable dry season can be planned for, not reacted to.

Sources: Applied Particle Technology; Envirosuite; industry dust-management practice.

The most reliable way to get this right is to plan the dry season with a dust-control specialist who can assess the site, model where the dust and water pressure will land, and design suppression that works at low water. The page that follows introduces one.

Benmarc Environmental

Benmarc is a South African dust-control specialist built for exactly the squeeze a dry season brings: more dust to manage, with less water to manage it.

Operating since 1997, Benmarc provides Total Dust Management (TDM®), its integrated model that brings the audit, the chemistry, the engineered system, fabrication, installation, maintenance and 24-hour callout together under one supplier. Rather than adding water and hoping it holds, Benmarc treats dust at the source so that fine material is bound to larger particles and stays controlled through downstream handling, which is what allows dust to be managed with far less water.

90%+

dust reduction at 0.5% moisture, against roughly 80% for water-only at 3%

~85%

less water than water-only suppression for equivalent or better control

250+

installations worldwide, with 98% historical system availability

~35M

tonnes of material treated a year in South Africa

Benmarc has managed manganese and iron-ore dust across the Northern Cape belt for years, including material held dust-free on the long haul from the Kalahari to the coast. The company is a Broad-Based Black Economic Empowerment (BBBEE) Level 2 contributor with 51 percent Black Women Ownership. If a dry-season dust-and-water plan would be useful before the 2026-27 season sets in, Benmarc is set up to assess a site and design for it.

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Benmarc Environmental (Pty) Ltd, August 2026. Forecast and water-storage figures are drawn from publicly available sources current at the time of writing and will change as the season develops. Performance figures are Benmarc's own documented monitoring results and should be validated against actual parameters for any specific site. This briefing is educational and does not constitute regulatory or engineering advice.