

5 ways to start fixing SA's deteriorating water quality

By [Bonga Ntuli](#)

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Poor water quality in South Africa is becoming a major crisis across many municipalities in our country, putting at risk our health and economy.



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Source: Supplied

In June this year, the Department of Water and Sanitation revealed — in findings of its interim *Blue Drop* report — that only 39% of South Africa's water treatment systems were rated as excellent in terms of microbiological water quality compliance, 11% good, 9% poor and 41% bad. To put this into perspective, only 10% of municipalities had bad or poor microbiological water quality in the 2012 *Blue Drop* report, as opposed to 50% in this latest sample.

Rapid urbanisation, income growth (which results in higher demands) and increased levels of pollution in our river systems are among key reasons why South Africa is facing major challenges with its water quality. But some municipalities and districts are also running out of funds for basic operational requirements, such as chlorine, to treat contaminants in wastewater, while others lack sound management and expertise.

Compounding this problem is the fact that South Africa is a water-scarce country and more prone to shock climate change events such as extreme droughts or floods.

To start turning things around, several key measures should be adopted, and five of these are outlined below.

1. Making engineers great again

Over the years, many municipalities have started to rely more on administrators and finance managers than engineers when it comes to critical water waste management and maintenance issues.

The reasons for this are varied, with some municipalities seeking structural changes or cost savings.

To manage water effectively, we do need to start creating an organisational culture of putting engineers more at the centre of decision-making.

These engineers must be of the highest calibre and should lead administrations on key decisions that will result in the best quality water and required sewage management for an area's residents. Good engineers are like the doctors of our water systems.

We also need to acknowledge that South Africa faces a critical skills shortage as experienced professional engineers retire and talent migrates to other industries, such as banking. Investing in education and promoting STEM subjects at school level can help fill this talent gap.

Additionally, embracing technological advancements and exploring water management partnerships between the public and private sectors will further help to promote skills development and capacity building.

2. Reporting and consequence management

Having the right engineers in place is only one part of the solution. Another critical component is reporting and consequence management within our municipalities and districts.

With the Department of Water and Sanitation moving to republish the *Blue Drop* report last year (after it was paused in 2014), this marks a step in the right direction when it comes to reporting, accountability and transparency.

It's important to know that the *Blue Drop* report is not focused solely on water quality but rather with the overall management of water and waste systems. This means that some areas deemed high risk can be just a few steps away from having unsafe drinking water, while others actually already need to issue red notices or warnings to residents.

This provides a gauge of where underperformance is occurring. More importantly, it informs the government of where it must act swiftly.

In instances of neglect, municipal managers should face the consequences, whether it be with fines or even criminal charges. Provincial or national government also then need to step in and immediately fix problems where local government has failed.



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3. Smarter use of wetlands, closing leaks

Local research has shown that wetlands can act as additional, natural water filters for our man-made water systems. This is because the plants, soils and even microbes in our wetlands can effectively absorb and uptake many harmful pollutants.

However, this involves a delicate balance as our wetlands also need to be protected in order for them to protect us.

In this regard, South Africa should take a closer look at ensuring that industry should be more responsible when emitting discharge into rivers. This might require implementing stricter rules regarding the quality of water that is pumped from industrial processes into the environment.

In addition to maintaining wetlands, water leakages contribute significantly to South Africa's water challenges, with over 50% of water losses reported in some metropolitan areas.

Non-revenue water, the water lost before reaching consumers, squanders valuable resources. Effective asset management, improved maintenance practices, and investment in modern technology can help reduce water leaks and conserve precious water supplies.

4. Greater attention to funding, supply chains

Local and provincial governments need to realise that allocating funding for water projects is a long-term investment.

Insufficient capital and operational expenditure at the municipal level hinder infrastructure development and maintenance. Proper planning, investment in projects, and efficient financial management are crucial to ensure that resources are used optimally.

Robust infrastructure development can even attract investment and boost economic growth while providing better services to

the population.

It's also important to pay greater attention to supply chains of water maintenance. Purchasing higher-quality components or investing more in repairs will go a longer way in ensuring longer-term sustainability. We cannot afford to cut corners in this regard, and there must be zero tolerance for maladministration when it comes to procurement of quality services and products.



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5. Better long-term planning

Finally, bringing all of this together is better long-term planning. Our engineers, working together with our municipal managers, need to ensure that there are long-term plans that seek to improve or maintain high-quality water standards for the benefit of citizens.

These plans, such as the building out of new wastewater infrastructure, need to be sound enough that they can stretch over several years and potential changes in administrations. In this regard, we need to become more technocratic as a country when it comes to a precious resource such as water.

As part of this planning, the interconnection between water, energy, and food security cannot be ignored. Disruptions in one sector can have cascading effects on the others, leading to potential riots or dissatisfaction with service delivery. Energy shortages, for example, can hinder water distribution and impact agricultural irrigation, ultimately affecting the economy and people's lives. Adopting innovative technologies, such as efficient irrigation systems, can help reduce water consumption in agriculture and alleviate pressure on the overall system.

As the saying goes, water is life, and we need to do everything we can to ensure that we protect this precious resource so that it doesn't become the next biggest crisis in our lifetime.

Together, we can be intentional about leaving a legacy of quality water for all, especially the vulnerable communities who are most exposed by the threat of deteriorating water quality.

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