NON-REVENUE WATER

Every drop counts – Municipalities answer the call on water losses

South Africa is losing nearly half its treated water to leaks, illegal connections and billing failures, costing the country billions of rand every year. Now, a pioneering Water Research Commission (WRC) initiative is equipping municipal officials with the skills to turn the tide on water losses. With an overwhelming response from municipalities nationwide, the Every Drop Counts programme is demonstrating the power of knowledge and collaboration to tackle one of South Africa's most pressing water challenges. Article by Sarah Slabbert, Nadja Green, Ronnie Mckenzie and Shanna Nienaber.



Leaking pipes, illegal connections, faulty meters and billing failures add up to what the sector calls non-revenue water (NRW) – and the bill runs into billions of rand a year in wasted infrastructure investment and lost municipal income. Speaking in a parliamentary Question and Answer session in June, Water and Sanitation Minister, Pemmy Majodina, put a number on that bill: the national NRW average stood at 47.3%, equivalent to more than 2.1 billion kilolitres of water a year (2 100 million m^3/year). "The average cost of supplying water per kl in South Africa is R12.41/kl and the Rand value of NRW is approximately R26 billion," she said (***BusinessTech***, 18 June 2026).

The tools to fix this are not new, and none of this is rocket science. The methods are well documented and the software already exists. The Water Research Commission (WRC) has spent the past three decades promoting the burst and background water loss methodology first developed by the UK water industry in the late 1980s and building a suite of software models and associated documentation: SANFLOW, BENCHLEAK, PRESSMAC, ECONOLEAK. The WRC's Municipal Water Demand Management Scorecard supports the No Drop programme developed by the Department of Water and Sanitation (DWS) to track municipal performance in water loss management and non-revenue water. What has been missing is not knowledge, but the capacity inside municipalities to put that knowledge to work.

That is the gap the WRC set out to close in July with the launch of a national NRW training and performance challenge for



The course has delivered some impressive results in a short time span.

municipal teams. Developed by the WRC and hosted, for the pilot phase, on the Water Institute of Southern Africa (WISA) learning platform, "Every Drop Counts" is a self-paced, CPD-accredited online course built directly around the WRC's own NRW tools. Officials work through eight modules and five practical assignments covering the IWA water balance, leakage detection, pressure management and demand-side interventions, earning a Certificate of Completion and 3 CPD points recognised by WISA, the South African Council for Natural Scientific Professions (SACNASP) and the Engineering Council of South Africa (ECSA).

The programme launched officially on 22 July at the WISA conference in Cape Town, where WRC leadership, DWS and the South African Local Government Association (SALGA) set out its ambition: a pilot target of 100 municipalities by the end of 2026, and a longer-term goal, called NRW 2030 and launched jointly by the WRC and DWS, of reaching 30 000 water sector professionals by the end of the decade. WISA is supporting 100 subsidised places for the pilot phase – the first 50 free, the next 50 at R1 150 per person.

A fast start

Ten days after registration opened, the numbers told a story the project team had not expected. The campaign drew 601 verified registrations from every one of South Africa's nine provinces, reaching officials in 82 of the country's 144 water services authorities – 55% of the country's municipal water providers, in ten days. Just over half the registrants were municipal officials themselves; the rest came from water boards, consulting engineers, universities and other parts of the sector, evidence that the appeal reached well beyond the original target list.

The shape of the response is itself telling. In some municipalities (eThekwini Metropolitan Municipality alone produced 66 registrations) the message clearly travelled from desk to desk once it landed. In 44 other authorities, a single official signed up, often in small or rural municipalities that national campaigns rarely reach at all. Both patterns matter: one shows depth, the other shows reach.

Engagement has not stopped at registration. A WhatsApp community now links learners across the country, with a weekly update, a provincial leaderboard, and a live Q&A with NRW-expert Ronnie McKenzie, turning what could have been a solitary online course into a functioning community of practice.

What's still to do

Sixty-two water services authorities have not yet registered, and the campaign's next phase is aimed squarely at them. Three provinces, the Northern Cape, Western Cape and Free State, account for nearly three-quarters of that gap. The Northern Cape is the priority: it has the largest number of outstanding authorities and, on the DWS's own No Drop risk assessment, the weakest water conservation and demand management planning in the country.

Reaching it will take direct engagement through SALGA and DWS provincial offices rather than another general campaign; the project team has learned that this audience responds to a direct, personal prompt rather than to sustained general awareness campaigns.

Registering is the easy part

A completed course and a certificate are a start, not an endpoint. The real measure of the programme's success will be whether a technical official in a small Northern Cape municipality, or a plant supervisor in a district municipality with a fraction of a metro's resources, can take what is learned in an online module and apply it to their own metered areas, their own infrastructure challenges, with all the local complications that no generic course can anticipate.

That is where the rest of the water sector has a role to play that goes beyond funding a pilot. If competence in managing non-revenue water is to become normal practice rather than a skill demonstrated once on a certificate, DWS, SALGA, MISA, National Treasury and the Department of Cooperative Governance and Traditional Affairs (CoGTA) need to do two things that municipalities cannot do for themselves.

First, they need to demand it: build NRW competence: a functioning water balance, a credible leakage reduction plan, evidence that a municipality can act on its own No Drop findings, into the conditions attached to No Drop reporting, infrastructure grants, water services authorisations and support arrangements.

Second, they need to reward it: give municipalities and officials who do the work public recognition and preferential access to support, so that the incentives facing a municipal manager point in the same direction as good practice. A leaderboard changes behaviour inside a single course; a policy incentive supported by a clear funding formula changes behaviour across a sector.

Alongside that, the WRC and its partners are exploring what could follow the online modules: some additional courses or modules providing implementation support that will help alumni apply what they have learned systematically and sustainably in their own municipality, rather than leaving them to translate theory into practice alone.

The bigger picture

In ten days, a training campaign reached more than half the country's water services authorities and put officials from South Africa's largest metros and its smallest rural councils into the same online classroom. That is a genuine achievement for a sector not always known for moving fast. Whether it becomes a turning point for South Africa's water losses depends on what happens next, and on whether the institutions with the power to demand and reward competence choose to use it.