

Why crisis proofing for water preservation in SA should be a priority

This year's theme for World Water Day, held annually on 22 March, is 'Leaving no one behind', aptly revisiting access to water as a critical human right and placing emphasis on previously marginalised groups gaining access to safe water and water services.



© drpnncpp – 123RF.com

In South Africa, while at least 21 million people have benefited from a basic supply of water since 1994, there are still vast areas outside of major cities or towns that are underdeveloped and have limited access to safe water and formal water services. In fact, the All Town Studies of 905 towns – which excluded metros and large cities - found that 28% have inadequate water resources.

Karen King, senior associate, WSP, environment and energy, Africa, says: “Though government has committed to prioritise water projects and infrastructure in the 2019 Budget, challenges to expanding water service infrastructure are further compounded by nuances and complexities in financial and environmental planning to meet the needs of rapid population growth, urbanisation and industrialisation across the country.”

Infrastructure maintenance and development

While South Africa has some of the most sophisticated water infrastructure networks on the continent, there are still several rural areas or areas on the outskirts of major cities or towns that don't have access to water services. Added to this, much of the existing infrastructure was established over a number of decades ago and – whether due to availability of funding or capacity – it hasn't been maintained to standards that would ensure maximum efficiencies. As things stand, demand for water services is outstripping the pace of infrastructure maintenance and development – and it's reported that up to 35% of the country's safe drinking water is lost due to leakages in the infrastructure networks and at properties.

“Adding to the pressures, South Africa generally receives a little more than half of the world’s average rainfall per year, however, among warmer temperatures and extreme weather conditions, there have also been sporadic seasonal changes to rainfall patterns across the country,” says King. “Collectively, this has resulted in less rainfall where we really need it to replenish our dams and ground water resources. So, while we can’t control the weather, without serious intervention to improve how we measure, monitor, management and even restrict use of available water resources, the situation will only worsen.”

Current projections forecast that without serious intervention we could face a 17% gap between supply and demand by 2030. This will have a significant influence on the country’s future economic and social sustainability.

Water needs to be safeguarded

Riaan Graham, sales director for Ruckus Networks, sub-Saharan Africa, agrees and alludes to a quote from Thomas Fuller: ‘We never know the worth of water till the well is dry.’ “Much like the energy crisis that nearly collapsed the economy in 2014, similar consequences may occur should government not act immediately with the country’s water crisis. If we just look at the water crisis and restrictions the Western Cape has been faced with this blankly demonstrates that water is not a renewable resource, but rather is one that needs to be safeguarded.”

Graham suggests that there is a myriad of alternative solutions that need to be considered, including the use of technology to better manage the situation and put preventative measures in place to ensure other regions don’t fall into the same pattern. “In fact, technology such as IoT can be a part of the solution – they are readily available and enabled through Wi-Fi – where they can be used to apply water management systems, including monitoring use, pinpointing leaks and curbing excessive use, for example. Additionally, sensor technology can go a long way in embracing intelligent irrigation and usage, to connecting and optimising to conserve. These in effect are solutions that are currently available and much needed country-wide to ensure responsible usage towards zero wastage – a concept very much in line with smart cities thinking and one we should be moving towards.”

Water is life

“There is no instant quick fix – but what does need to change, and change quickly, is acceptance of change. We cannot continue to overlook the importance of water and the role it has to play in continued development and thereby assisting to eradicate poverty in South Africa. Water is life. We therefore need to be implementing solutions and utilising the infrastructure we have (such as Wi-Fi) that promote the sustainable management of this scarce resource, as water is key to our future prosperity. Only by acting together can we achieve a water-wise country,” says Graham.

“Succeeding in water conservation and management will take input from society, the private sector and the public sector, alike, as water is only growing as a key risk area within South Africa - driven both by local development issues and well increased rapid investment and development growth across certain regions. And though we are seeing market acceptance that climate change is increasing unpredictably and a willingness to look at sustainability risks more broadly - including water - more consideration must be given to how we preserve water resources today and for future generations. We must prepare today for how we manage water in the future,” concludes King.