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Water in the Time of the Coronavirus

Introduction

The world is currently in the grips of a global pandemic with far-reaching consequences, including devastating effects on poverty, inequality and unemployment in South Africa.

It is difficult to imagine how this context could be heightened by other difficulties. But indeed, the threat of an unfolding water crisis is part of the current national landscape. However, rather than despair, now is the chance to see with clarity the value that water brings to public health and commercial enterprise alike, and to foster the water-related opportunities that will assist with economic recovery and strengthen our wellbeing, now and in the future.

Facing the dust storm

The stark reality is that water requires urgent action in South Africa. Drought and poor water service delivery are already constraining economic growth and hampering livelihoods. Reliable water access stands at just 64% nationally.

In 2017, the National Business Initiative (NBI) described our current water context as having all the facets of a perfect dust storm, a description that still holds true (NBI, 2017). This perfect storm is made up of five overarching, but interconnected challenges, relating to:

- Governance and institutional capacity
- Infrastructure investment and maintenance
- Financial sustainability
- Climatic variability and climate change
- The decline of the natural system

Governance and institutional capacity

Concerns related to the capacity to effectively deliver water services are most keenly felt at local government level. At least a third of the municipalities that deliver water services in South Africa are regarded as dysfunctional (DWS, 2018).

Issues in this regard range from difficulties in attracting and retaining skilled personnel, through to political appointments, corruption and mismanagement.

Infrastructure investment and maintenance

There is a need to refurbish and better maintain existing infrastructure, as well as to invest in new assets. Much of our current water infrastructure was designed for a much smaller population than it currently serves. Roughly 56% of South Africa's wastewater treatment works are dysfunctional and require urgent refurbishment, while almost half of the country's water treatment works are in a poor or critical condition (DWS, 2018).

Financial sustainability

Artificially low water tariffs, poor revenue collection and varying customer service levels are also undermining the financial viability of water provision. Many water institutions are not credit-worthy and accumulated municipal water debt is now over R13 billion.

At a national scale, the water sector funding gap is currently estimated at R330 billion for the next decade. This implies that a significant amount of the funding needed for water infrastructure has yet to be found.

Climatic variability and climate change

South Africa is a semi-arid country that receives roughly half the world's average rainfall. Persistent drought from climate variability has been a concern for decades. There is also little doubt that climate change will exacerbate this physical risk further, resulting in higher evapotranspiration and more extreme droughts in certain parts of the country.

The NBI's [Climate mApp](#), which provides publicly accessible climate change projections for smart devices, provides a sobering illustration of our potential climate future.

The decline of the natural system

While most water experts and commentators tend to focus on built infrastructure, there has also been a steady associated decline in the country's natural infrastructure. In particular, there has been a significant degradation of South Africa's rivers and wetlands in the past two decades. Between 1999 and 2011, the extent of the main rivers in South Africa found to have a poor ecological condition increased by 500% (Nel & Driver, 2015). An estimated 50% of wetlands have also been lost.

Resilience in the face of adversity

The current situation is clearly disheartening, especially at a time when our economy faces massive upheaval due to the coronavirus and its aftermath. But we should remember that times of upheaval are also sources of new found resilience and a change in mindsets.

As the NBI, we have now provided assistance in two declared disasters in recent times, the first being the severe water shortages experienced in the Western Cape (the infamous Cape Town drought) and the second being the current national COVID-19 epidemic. Confirmed in both instances, is that a crisis can quickly galvanise partnerships and build lasting bridges between business, government and civil society. And these lasting bridges are critical when the dust settles and the new growth begins.

One need look no further than the current COVID-19 crisis to see this resilience and partnership at work. The NBI's dedicated [COVID-19 page](#) is filled with the efforts of corporate South Africa to help reduce the impacts of the pandemic on many facets of life. The NBI itself has been working steadfastly to provide people in high density settlements with safe access to handwashing facilities, often for the first time in their lives, given that good hygiene is the first line of defence against infection.

The NBI's COVID-19 response, backed by AECl, Astron Energy, the Grundfos Foundation and the Netherlands Embassy, has been undertaken in collaboration with Business for South Africa (B4SA), the City of Ekurhuleni and the City of Cape

Town, demonstrating that practical partnerships can work and deliver safe handwashing solutions to those who are most vulnerable.

During our COVID-19 response we have seen companies using their transport fleets to help deliver water to isolated rural communities that municipalities struggle to reach. We have also seen the provision of *pro bono* technical assistance from firms, support in the development of new groundwater sources and the large-scale donation of sanitisers to municipal water and service delivery teams.

We witnessed similar responses from the private sector during the Western Cape drought, with companies making great strides in reducing their operational water usage, donating significant volumes of water and assisting all spheres of government with disaster planning and preparedness.

For companies, the work related to water security begins within the factory fence, by reducing their consumption, increasing water recycling and ensuring that discharges are minimised and of an acceptable standard. But no company is an island, and operational improvements are just the start of the journey. True water risk mitigation and value creation can be found in supporting improved catchment management and city or community-level water partnerships. Sectors in South Africa such as food and beverages, retail, banking, forestry, chemicals and mining have already played a key role in supporting their supply chains and operations in water stressed areas, while enhancing their relationships with customers, communities and regulators.

The NBI has been an important aid and ally for many companies in this process. Through our member-based capacity building programme we have provided businesses with a means to learn from national and global water experts, and probably most importantly, from each other. Through CDP (formerly the Carbon Disclosure Project) we have assisted companies to ask the right questions and disclose effectively to their investors on their water practices. We have also served as a partner in implementation, whether in the Western Cape, northern Kwa-Zulu-Natal, or in the national COVID-19 response. You will thus find excellent examples of corporate water leadership and disclosure on the NBI's [water page](#).

These company efforts are to be commended, but they alone will not address the substantial risks facing the South African water sector. To address this need, the risks must become opportunities, so that the value at risk becomes value created.

Renewal and new growth

We know that water is essential for economic development, food security and public health. But water and sanitation also create opportunities for job creation, small business development and large-scale commercial industry. One of the biggest commercial opportunities lies in tackling water leakage within municipal reticulation networks. Staggeringly, about 40% of all potable water is lost through leaks before it even reaches a consumer. This lost water is estimated at a R9.9 billion opportunity at present.

Another key opportunity lies in wastewater. Run correctly, wastewater is a business that has several revenue streams. Revenue options include treatment charges, the use of nutrients in fertilisers, the generation of biogas and opportunities for water reuse. Current examples of large-scale water reuse, specifically the eMalahleni Water Reclamation Plant and Durban Water Recycling Project, provide different examples of how industry can both support and benefit from water reuse projects.

Turning wastewater into new water (as they say in Singapore) is going to be essential in adapting to future water scarcity in our country. Storing this new water in underground aquifers as part of managed groundwater development (to limit evaporation losses) provides a powerful solution that will make our cities more resilient to both shocks and long-term change.

Water leakage and wastewater are well-known opportunities, but in many ways they only scratch at the surface. The sanitation economy, ranging from the extraction of high value chemicals, the development of animal feed, the sale of waterless and innovative sanitation solutions, and sanitation-derived biogas are some of the areas unlocking commercial interest in Africa and Asia, including in pockets of South Africa. The opportunity for South Africa to be the sanitation economy leader on the continent has already been highlighted by the Water Research Commission (WRC). The NBI is working with just one of these innovative local sanitation companies in our COVID-19 response, a company that currently exports across Africa.

In addition, preventing the degradation of our natural capital holds the tantalising prospect of finding ways to finance improved land and catchment management, through the restoration of degraded landscapes, the use of cleared alien vegetation and through improved cattle grazing. These ideas are not new, and many have been supported by government for some time, but the scale of the opportunity seems far bigger in a post COVID-19 world, where the large-scale benefits for tackling unemployment and poverty are so clear.

Unlocking finance and investment

Closing the water funding gap in South Africa will arguably require two main things: the raising of municipal water revenues and the attraction of private sector capital.

Improved billing, collections, credit control and customer service has the potential to raise municipal revenues substantially. The NBI, for its part, has commenced with a new programme referred to as Technical Assistance, Mentorship and Development (TAMDEV), supported by business, to enhance the capacity of the State. A key focus of this programme is to assist municipalities in enhancing their financial management and procurement capacity.

TAMDEV includes a network of retired engineers, accountants and managers, and although a relatively new programme, has already made good strides in the Eastern Cape and Gauteng, including in the development of a fully foot-operated public handwashing facility as part of the NBI's COVID-19 response.

Leveraging private sector expertise and finance through long-term Public Private Partnerships (PPPs) provides a further means to revitalise water investment. In our work on water PPPs under *Kopano ya Metsi*, the NBI argued that PPPs can, if well designed, create a channel for private capital to flow into the sector, thereby supplementing government spending and freeing up public sector resources for other purposes.

In assessing the PPP potential at the municipal level, we further identified that 28 South African municipalities currently demonstrate good PPP potential in one form or another (NBI, 2019a). These 28 municipalities include large Metropolitan Municipalities ('Metros'), secondary cities and small towns, suggesting that PPPs can be applied across a range of contexts. South Africa's water PPP track record, while fairly limited, is also largely very successful and a source of encouragement.

Where PPPs are not viable, it will remain important not only to focus on strengthening municipal water delivery and financial management, but hopefully, also to blend water-related government grants with private finance, in a way that effectively quadruples the funds that are available (NBI, 2019b). The much talked about global concept of 'blended finance' is a real opportunity for South Africa, given the prospect of combining our considerable public sector grants with a well-established commercial banking and finance sector.

The private sector can be a powerful partner in development. This is certainly also the case in the water sector, where the combination of company in-house efforts, collaborative partnerships and large-scale private investment are all needed to achieve a resilient future.

Conclusion

Whether the answers lie in company interventions, the scaling of emerging businesses or the provision of commercial finance, the water sector offers substantial opportunities to tackle inequality, poverty and unemployment in South Africa.

The vision for the sector is also clear. Out of the current COVID-19 pandemic and its accompanying water crisis, an environment emerges in which new relationships have been formed, and a realisation that collective will is needed in the face of adversity. Change and innovation have taken place. New knowledge, products, business models and services have emerged out of difficult circumstances. The water sector is increasingly recognised as fundamental to economic activity, public health and human livelihoods. There is resilience, renewal and new growth.

Author's note:

An edited version of this article appeared in the **Dialogue Business in Society Handbook 2020**. To access the Dialogue Business in Society Handbook 2020, please click [here](#).

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