



Drought



Economic crisis



Resourceful city



Flexible city

Building economic resilience to water scarcity: Cape Town's response to a severe drought



Purpose

This case study focuses on Cape Town's response to the recent drought (2015-18) and is written for cities and regions facing similar challenges.

The case study discusses:

- the challenge that Cape Town faced in terms of the drought and its potential economic impact;
- how the city responded through collaborative partnerships; and
- the impact of this work in terms of avoiding a jobs crisis.

It specifically demonstrates **the importance of collaborative approaches to minimise the economic impact of droughts** and **highlights lessons learned** during the drought response.

KEY INSIGHTS:

In order to build resilience to droughts and minimise economic impacts, cities should work with and collaborate across the public and private sectors.



KEY STRATEGIES TO SUPPORT ECONOMIC RESILIENCE TO DROUGHT

- ✓ Experienced leadership & broad participation through partnerships
- ✓ Effective inter-government alignment for quick decision making
- ✓ Prioritisation to assist the most vulnerable businesses
- ✓ Frequent, transparent and evidence-based communication with the public
- ✓ Clarity on resilience strategies
- ✓ Well-considered messaging for international audiences

Cape Town aspires to be a resilient city and is working in partnership with 100 Resilient Cities (100RC), pioneered by the Rockefeller Foundation. Cape Town is developing a roadmap to enable the city to become more resilient to growing physical, social and economic challenges. This case study is part of a series highlighting how Cape Town is building resilience.





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Problem

The main catchment region that supplies Cape Town with water was hit with an unprecedented drought, starting in 2015. By the end of the 2017 rainfall season, there were serious concerns about the city's ability to survive the dry summer months of 2017/18.

In response, severe restrictions were enforced by the national Department of Water and Sanitation - 60% on agriculture and 45% on urban users. Cape Town is the largest user in the system (~63%) so there was considerable pressure on the people and businesses in Cape Town to urgently save water.

The City of Cape Town used water demand management interventions to drive down demand and procured emergency projects to augment water supply. Businesses were hit with punitive tariff increases on their water and sanitation services to drive a rapid and significant decrease in demand.

The graph below shows the increasing severity of the restrictions and the associated tariffs for commercial and industrial users. Tariffs more than tripled between the start of 2016 and 2018, with Level 6 restrictions applied from 1 January 2018 until 30 September 2018.

As the drought continued, there were growing concerns about the potential of reaching Phase 2 of the City's Critical Water Shortages Plan, known infamously as 'Day Zero'. This is the day when the City would have been forced to cut off the normal water supply to 75% of the city's homes.

With residents using the most water (~70%), the City focused on reducing residential demand to 50 litres per person per day. Businesses had to reduce consumption by 45% compared to their 2015 average use and had to pay significantly higher tariffs.

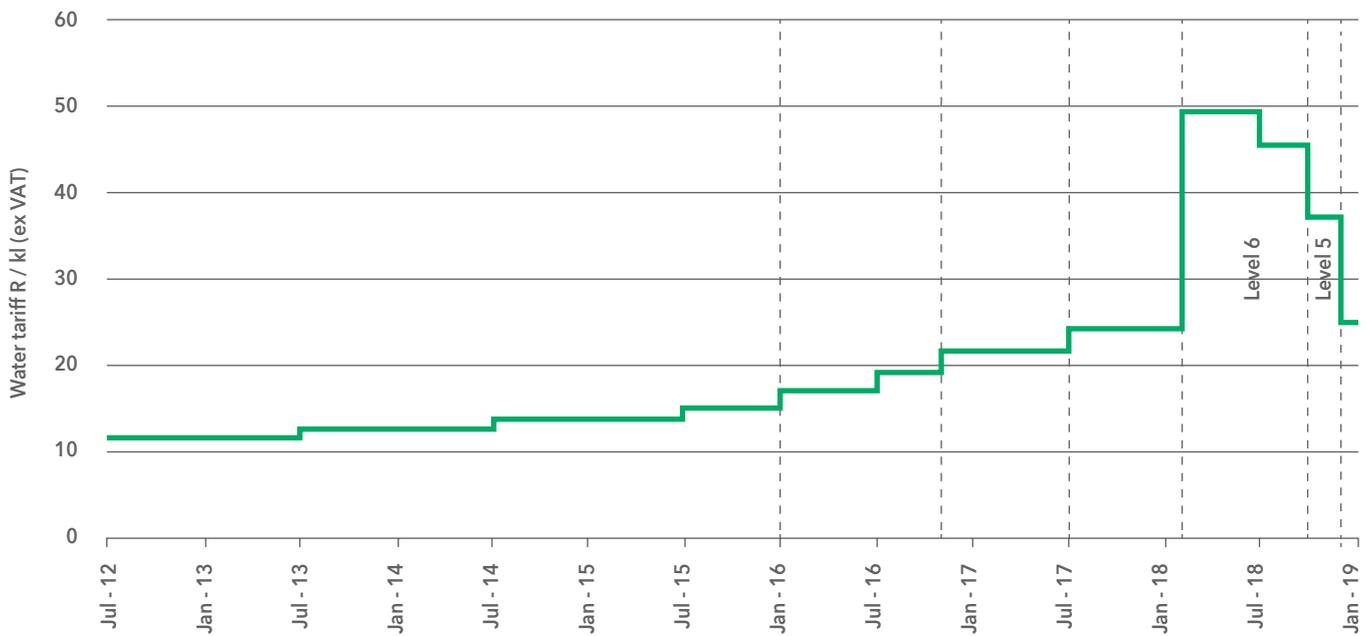


Figure 1: Industrial and commercial water tariffs in the City of Cape Town and their associated restriction level

More than one million households would be forced to queue for a daily allocation of 25 litres per person, which would have a drastic impact on the citizens of the city and, subsequently, on business productivity.

The prospect of a Day Zero highlighted the potential economic impacts of the drought and future water scarcities, in particular on investor confidence and risk to business operations. Job losses were a major concern, with the high unemployment rate (21.3% in 2018), and Cape Town's contribution to provincial employment (65% in 2018) and GDP (70% in 2017).

It became clear that to build economic resilience to the drought, an inclusive intervention would be needed - one that created an enabling environment for collaboration between private and public partners. This has now been identified as a crucial foundation to overcome current and future risks of water scarcity, and is discussed next.



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Solution

The enabling environment for promoting economic resilience to water scarcity was created in two ways:

- First, by developing partnerships and networks between and within the public and private sector, to drive collaboration on resilience efforts and unlock barriers as they arose.
- Second, by prioritising and coordinating the efforts of the various role players.

1. Develop resilience partnerships and networks to drive collaboration

Building a **resilient city is not the sole responsibility of the state; it also requires citizens and stakeholders to take action and jointly solve problems.**

Partnerships were therefore an important component of the strategy to support the City's economy in the face of water scarcity and restricted consumption.

To effectively partner and coordinate with the business sector, the City of Cape Town (CCT) and **Western Cape Government (WCG)**, formulated an approach together with key partner organisations.

The partners on the 'Economic Water Resilience Task Team' included:

- the WCG's **Department of Economic Development & Tourism (DEDAT)** and **Department of Environmental Affairs & Development Planning (DEADP)**;
- the CCT's Enterprise & Investment and Water & Sanitation Directorates;
- **GreenCape**, a technical not-for-profit organisation which supports the growth of green businesses;

- **Wesgro**, the tourism, trade and investment promotion agency for Cape Town and the Western Cape;
- the **National Business Initiative**, a voluntary coalition of South African and multinational companies; and
- the **Western Cape Economic Development Partnership (EDP)**, a non-profit organisation focused on providing partnering solutions to improve economic performance.

This partnership is shown in Figure 2. The specific role that **GreenCape** played in this task team to support businesses will be outlined in a separate case study.¹

WHAT IS RESILIENCE?

Resilience is the "capacity of individuals, communities, institutions, businesses and systems within a city to survive, adapt and grow no matter what kind of chronic stresses and acute shocks they experience." (100 Resilient Cities, 2019)

WHY BUSINESSES WERE PRIORITY PARTNERS

Businesses were seen as a critical partner in the drought response activities because they:

- needed to significantly reduce their water use to meet restriction targets and to reduce pressure on the municipal water supply system (for this to happen in a manner that reduced the negative impact on their productivity, they quickly need to make investments in water efficiency and augmentation);
- could provide an important awareness raising function, and promote water savings with their supply chains, customers and staff;
- could assist their broader communities through corporate social investment (CSI) initiatives and by supporting staff with water savings interventions at home; and
- could also be used in disaster scenarios, e.g. retail and logistics could be used for the distribution of emergency supplies.

Commercial and industrial businesses were identified as priority partners.

¹ Building economic resilience to water scarcity in Cape Town: supporting industry through severe droughts

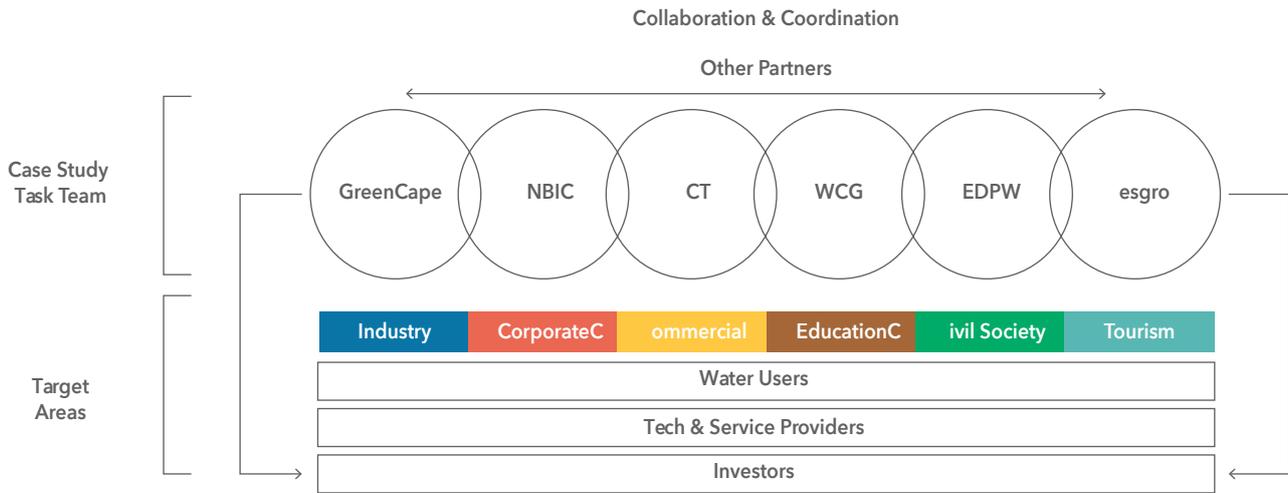


Figure 2: Partnerships to build water resilience in Cape Town

It's important to note that the task team was not officially mandated to assist businesses in the water crisis, with the exception of:

- the WCG DEDAT, which was tasked with heading up the economic resilience in the WCG Disaster Management Centre; and
- the CCT's Enterprise and Investment Department, to coordinate efforts with the business sector as it related to the drought.

This task team was primarily a group of interested and involved **organisations who wanted to contribute to the drought response activities in whichever way possible**, in addition to supporting their various constituencies or stakeholders.

The task team was **action-oriented** and moved swiftly through tactical operations and responses, **adapting as the crisis evolved and more information came to light**.

The key activities of the task team are highlighted to the right:

MOBILISE BUSINESSES TO TAKE ACTION	GUIDE & SUPPORT BUSINESSES	PROVIDE COLLECTIVE ACTION PLATFORMS
Raise awareness, share info on the crisis, impacts of running short of water & the role business could play.	Provide advice to help prioritise strategic activities & investments.	Organise workshops with prioritised sectors, industries & geographic areas to promote industrial water collectives & sharing of sector-specific insights
Highlight opportunities for leak detection & repair; behaviour changes, process changes, technology changes & how businesses can implement own water supply systems.	Provide advice to help to engage with employees, supply chains & customers.	Provide relevant case studies to help share lessons learned.
		Provide a feedback mechanism to highlight business concerns to government.



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2. Prioritisation and coordination of efforts

The crucial factors for this task team to consider were:

- Response time: Businesses needed to act quickly, which meant that the team had to prioritise resources and efforts. Many people from the partner organisations were provided part or full time to provide all hands on deck.
- Collaboration to address the need for rapid upskilling and sharing of information; and
- Coordination to ensure that consistent messaging reached the largest audience with the available resources, while avoiding duplication of efforts.

In order to enable this response approach, the team held weekly coordination meetings at the height of the crisis, with each partner

prioritising this work above all other activities and contributing significant resources to the drought response task team.

The partners prioritised sectors and areas of support; shared resources amongst the task team; and made every effort to ensure a dynamic management approach.

In addition, DEDAT acted as the liaison between the task team and the provincial Drought Joint Operations Committee (in the WCG Disaster Management Centre); and the CCT acted as the liaison with the other CCT drought crisis workstreams including agriculture, disaster planning, government facilities and municipal water supply augmentation.

This allowed for intra-governmental coordination and alignment, and helped to ensure the consideration of economic impacts.

“Without all parties working together in a highly dynamic way, there is little chance that we would have reached as many businesses as we did in as effective a way as we did.”

The approach required all to be selfless and to prioritise as a collective to ensure that the most urgent and important needs were met as quickly as possible. The frequent reviews of challenges, effectiveness of interventions and reassignment of resources enabled the team to improve its approach in a rapid manner.”

Helen Davies, Chief Director: Green Economy, Department of Economic Development & Tourism, Western Cape Government

Impact

Although some Cape Town businesses experienced profit, investment, job and confidence losses, this has not been evident at a macroeconomic level. This suggests that Cape Town’s water resilience efforts, including those driven or supported by this task team and its partnerships, were largely successful in avoiding a jobs crisis.

In fact, both Cape Town and the Western Cape decreased their 2017/18 annual unemployment rate, despite the drought (see Figure 3), and the provincial economy created the most jobs within South Africa.

These results demonstrate that Cape Town’s economy is more resilient than expected and that partnerships between citizens, businesses, government and other stakeholders can have significant positive impacts - for Cape Town, but also for other local and regional economies that benefit from Cape Town’s resilience to climate stresses and shocks.

2017 / 2018 annual unemployment rate

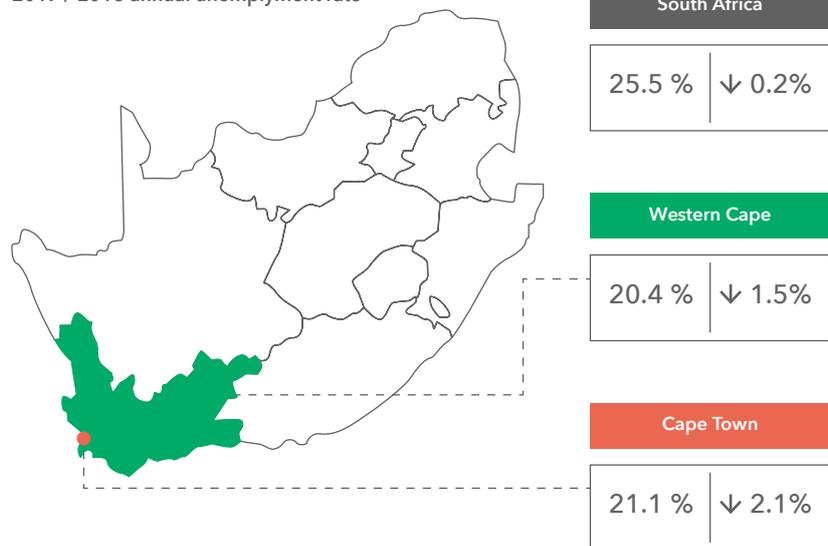


Figure 3: Annual unemployment rates from SA’s Quarterly Labour Force Survey for the third quarter of 2018 (StatsSA QLFS Q3 2018)



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Lessons Learned

Although the task team was well-coordinated and collaborated effectively, there was a need for greater alignment within local government and between various levels of government (local, regional and national) to ensure a rapid response during times of crisis.

This is not always possible in highly stressed environments where multiple actions are pursued simultaneously, and so it is important that the task team reflect on what could be improved as drought shocks are likely to become more frequent and intense in the future.

Reflecting on this approach has provided several insights. These are shown below in order to build and improve this process - for Cape Town and other communities and cities facing similar threats to its economy.

LEADERSHIP

- Provide confident leadership
- Ensure flexibility to rapidly redirect resources where needed & leverage significant & rapid action
- Carefully withdraw redirected resources to assess impact & ensure knowledge & skills transfer
- Avoid shifting blame - businesses have little understanding or regard for differences in mandates & accountability at local, provincial & national government levels



PARTNERSHIP

- Establish partnerships with intermediaries that already have the trust of their constituencies to accelerate the process of information dissemination between the public & private sectors
- Communicate business concerns back to local, provincial & national government structures to emphasise the importance of building economic resilience
- Support the development of intermediaries to assist with response & resilience of industries (during the drought, the resilience of businesses appeared to be directly related to the strength of their existing associations)
- Sustain current partnerships developed during the crisis in order to draw on them for collaborative planning & building system resilience

COMMUNICATION

- Government needs to provide clear, aligned, frequent, transparent & evidence-based information to build credibility & trust - particularly during a crisis
- Use intermediaries to verify & distribute credible information
- Find the "right" messaging: this is critical to ensure broad participation across the city but carefully consider unintended negative consequences e.g. the impact of "Day Zero" messaging on business investment
- Coordinate communication, particularly where government decision-making processes are complex & businesses require clarity on these processes to inform their own investment decisions
- Use multiple channels; websites with FAQs and other resources such as infographics, case studies, costing & benchmarking tools & technology supplier databases; ensuring experts are available for presentations, panel discussions, industry/area-specific workshops & one-on-one meetings etc.



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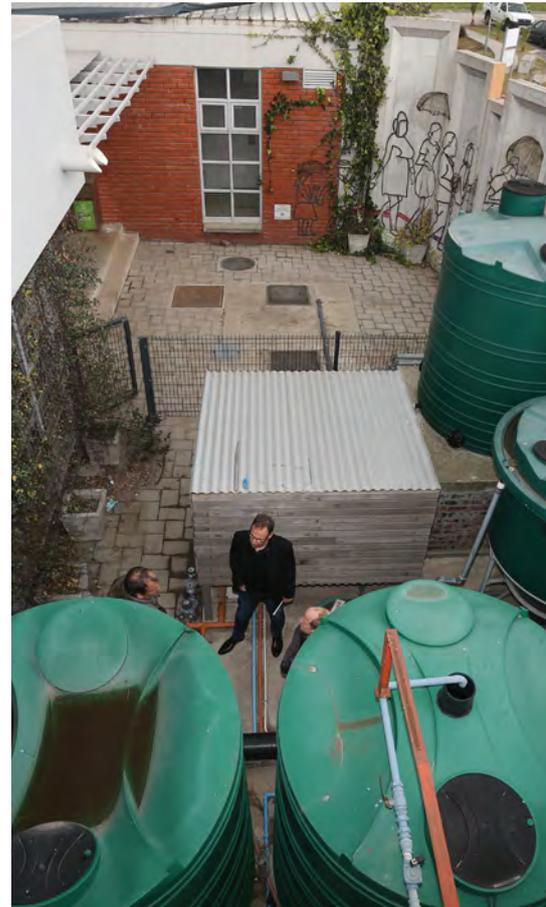
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STRATEGY & RESPONSE

- Develop a clear strategy & response in collaboration with partners & their wider community networks
- Prioritise & coordinate interventions: actively drive short-term interventions to stabilise the economy & align short term interventions to longer term resilience strategies
- Improve the streamlining of water allocations & installations
- Ensure the collection of appropriate data & ensure timeous access in order to rapidly prioritise water users
- Ensure consistency between the city & other regional municipalities in terms of restriction levels, actions aligned to restriction levels & water tariff structures & levels to avoid confusion for businesses with a regional footprint

COMMUNITY

- Ensure feedback loops to leaders in order to assess the impact of economic resilience-building initiatives
- Improve the clarity of regulatory & water pricing to encourage further investments in resilience & promote the local establishment & growth of water sector related businesses
- Disaggregate & categorise business water users to better minimise the economic impact of restrictions & tariffs – e.g. insights from the drought suggest that industrial & commercial water users should be split & differential restrictions & tariffs applied due to the difference in water intensity of their activities



As shown on page 7, communication was the key component of this approach and was essential for coordination of an effective response.

However, getting the message right was challenging and it was clear that nuanced messaging isn't particularly effective i.e. local targeted messaging has wider implications due to the power of social media.

For example, there were both positive and unintended negative consequences from the use of the "Day Zero" narrative: although it rapidly brought about significant behaviour change and improved the public and business' understanding of the 'new normal' and the need for building water resilience; the narrative also harmed the tourism industry, investor sentiment

and business' trust in government, as the messaging prior to the Day Zero campaign had largely been that things were under control (as long as everybody played their part in saving water).

In this particular case, the economic impacts of running out of water would have been much higher than the cumulative effect of stricter restrictions and higher tariffs, however the net impact needs to be carefully considered in messaging campaigns.

"Confronting the reality of Day Zero and the potentially disastrous impacts it would have on our economy and the lives of our citizens galvanised us into doing whatever we could to avoid such a scenario. Ultimately what saved us from the worst impacts of this crisis was the willingness of our citizens and our businesses to act together to drastically reduce water usage. The partnerships that, in many ways, organically formed around this crisis shows the inherent resilience of our region that exists within its people. It is hoped that we can draw on this again to confront the other challenges facing us."

Lance Greyling, Director: Enterprise and Investment, City of Cape Town

For more information and support contact GreenCape's energy sector desk: water@greencape.co.za or call (021) 811 0250. Additional resources on improving water resilience are available from: www.greencape.co.za/content/focusarea/drought-business-support