



Drought



Economic crisis



Resourceful city



Flexibility city

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



## Purpose

This case study outlines how GreenCape, a not-for-profit organisation, supported Cape Town industries during the severe drought of 2015 -18. It is written for organisations that provide drought, adaptation or resilience-building support to businesses.

The case study discusses:

- the background to **GreenCape's** work with businesses,
- GreenCape's specific approach to building resilience through business support, and
- the impact of this work within the sector.

It also demonstrates the importance of proactive and collaborative approaches, and highlights lessons learned during the drought response.



### THREE KEY STRATEGIES ARE IMPORTANT WHEN SUPPORTING BUSINESSES THROUGH A DROUGHT.

- ✓ Use partnerships and networks to drive collaboration
- ✓ Prioritize and coordinate efforts
- ✓ Drive short term solutions initially, while building knowledge and capacity for long term solutions

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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## Background

In response to the drought and subsequent water crisis, the **City of Cape Town (CCT)** and **Western Cape Government (WCG)** partnered with several organisations to form an **economic water resilience task team**. These partnerships and their role in

building economic resilience are discussed in the first case study in this series<sup>1</sup>.

This case study focuses on the role that one of the partners, GreenCape, played in **building resilience in Cape**

**Town's industrial sectors**. GreenCape is recognised as an expert facilitator of regional green economic development and specifically supports businesses to remove barriers to growth.

## Approach

GreenCape's role was to support water intense businesses in the industrial sector. The goal was to help businesses reduce their water use, so they could sustain business operations while meeting the 45% water restriction.

The team used **four compounding** strategies to build resilience in the industrial sector, with partnerships forming the foundation. In this case study, we look at how these strategies were applied.

### 1. Developing resilience partnerships and networks

GreenCape targeted four audiences for partnerships:

- GreenCape's existing networks and relationships, with the aim to quickly mobilise support across the city,
- industry associations, with the aim to mobilise their members,
- industrial areas with high cumulative water use, and
- individual high water users.

### 2. Prioritising & coordinating efforts

#### Prioritise sectors for targeted business support

To maximise impact, GreenCape focused on **moderate-to-heavy water users that also supported significant employment numbers** in the City. This prioritisation process resulted in **seven prioritised industries** (see graph on page 4).

#### Internal coordination

GreenCape's drought response team comprised of experts from its **Water Programme**, funded by WCG's Department of Economic Development and Tourism (DEDAT), and its **Western Cape Industrial Symbiosis Programme (WISP)**, funded by the CCT.

Utilising in-depth water expertise, with the additional capacity and extensive networks provided through WISP\*, GreenCape's team proactively engaged individual companies and prioritised sectors. The team gave tailored specialist advice on:

- water-related risks,
- appropriate water technologies, and
- support in terms of understanding and navigating legislation.

GreenCape also ran targeted workshops to encourage users to develop their own water collectives.

#### External coordination

GreenCape coordinated with the CCT, WCG and other partnership members through the economic resilience task team.

This team held regular meetings (weekly, at the height of the crisis) and enabled a better flow of information and feedback, which ultimately improved the consistency of messaging and reduced uncertainty in the business environment.

4. Build knowledge and capacity for longer term solutions

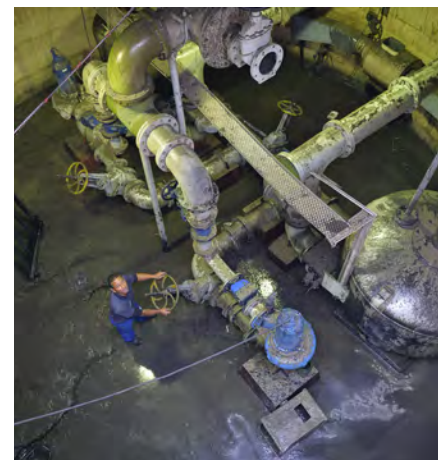
3. Driving uptake of realistic short-term solutions

2. Prioritising & coordinating efforts

1. Developing resilience partnerships & networks to encourage collaboration

### 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)



<sup>1</sup> The first case study in this series "Building economic resilience to water scarcity: Cape Town's response to a severe drought".

\* WISP offers a free facilitation service. They help businesses to identify resource efficiency opportunities in energy, water and waste, and to adopt circular business models to enhance profitability and sustainability. Their well-developed relationships contributed to the scale and rate at which support could be provided.

Stresses / Shocks



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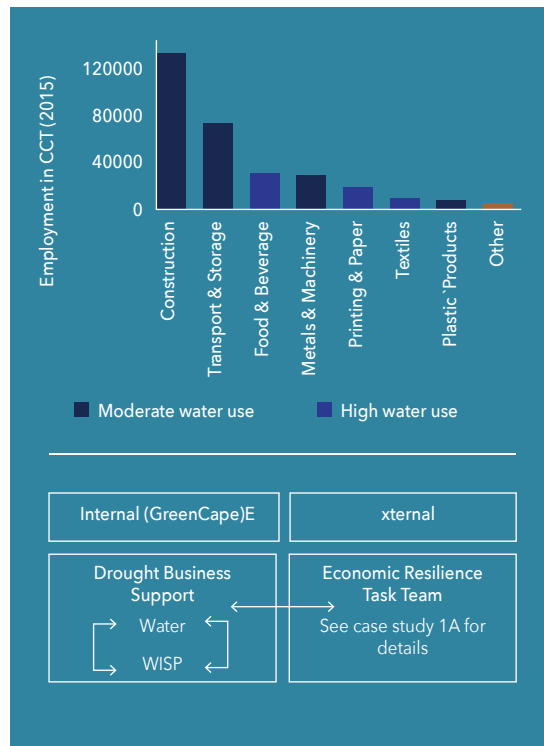
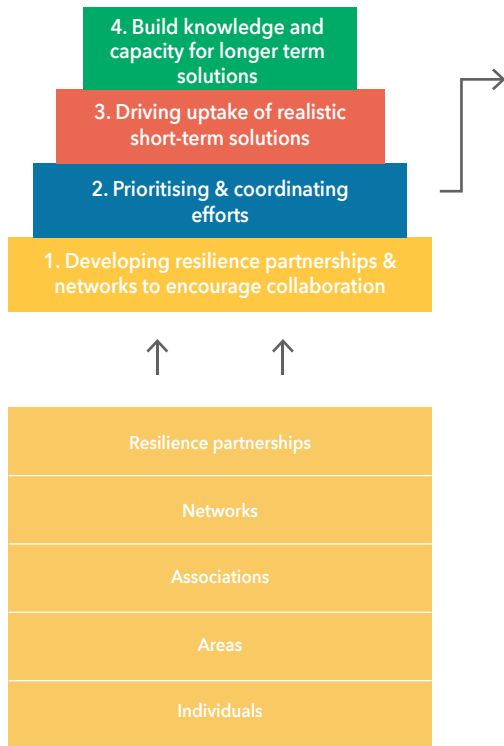
Qualities of a resilient city



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The laundry industry did not emerge in the initial prioritisation process. This water-intense industry was added at a later stage as a priority sector. This is explored in detail in lessons learned.



Stresses / Shocks



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Qualities of a resilient city



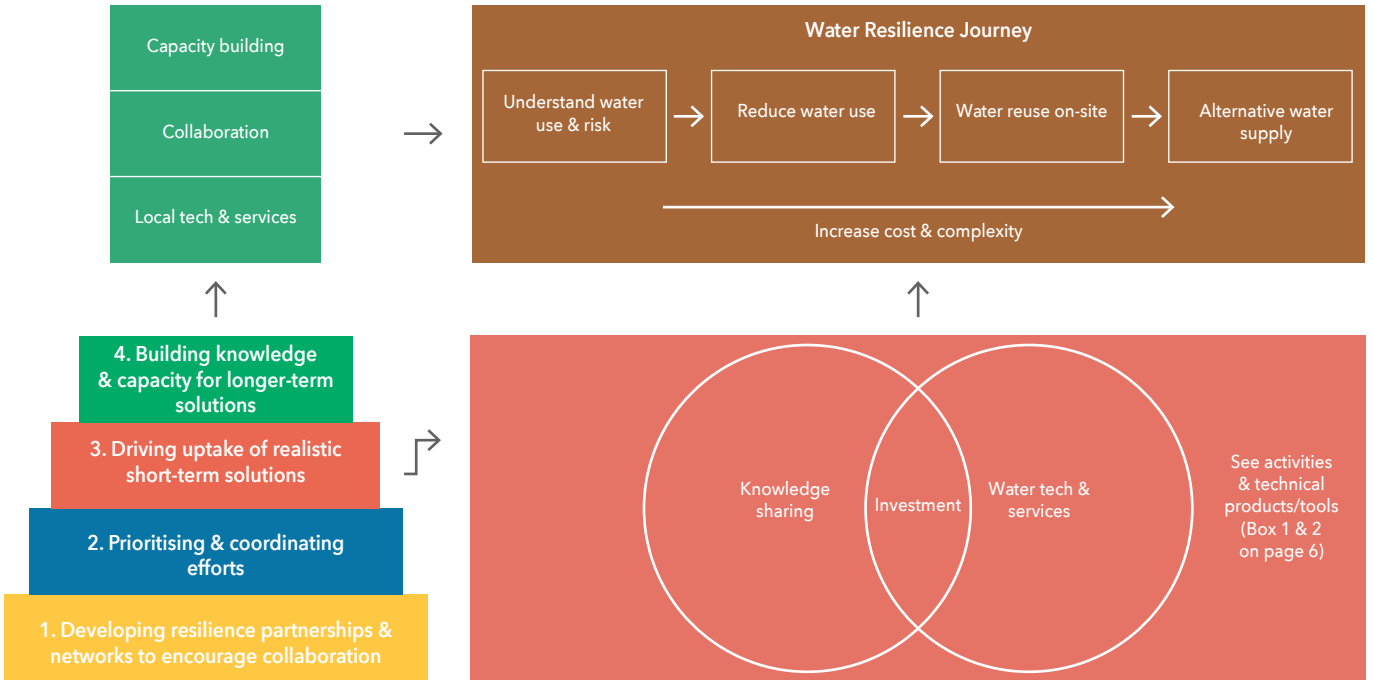
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These solutions were summarised in an overall response methodology called the “**Water Resilience Journey**” which provided simple, clear communication on the need to advance in logical manner through several options (see brown box below).

This was a critical component of the drought response as it clearly emphasised the increasing cost of options, often overlaid with increasing complexity in terms of, for example, regulations and management.





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### 3. Driving the uptake of realistic short-term solutions

GreenCape encouraged solutions from a bottom-up, business-focused manner, focusing on **water resilience interventions that are already commercially available and financially viable** i.e. that could save businesses money and could be financed through commercial loans.

This included water technologies and systems that measure water consumption and improve water efficiency and, if necessary, provide alternative supply.

### 4. Build knowledge and capacity for longer term solutions

The longer term efforts focused on **enabling the development of the wider water resilience ecosystem** to support businesses. This included:

- assisting businesses to collaborate and support one another in their water resilience efforts;
- building capacity within provincial and local government spheres responsible for economic development, in order to

create an enabling environment for water resilience; and

- supporting the development of an effective water technology and services sector, to provide locally-relevant, sustainable and legally-compliant solutions.

Based on business needs, GreenCape drove several activities and provided a diverse array of tools to support short-term water crisis adaptation and longer term resilience. These are described under the sections below.

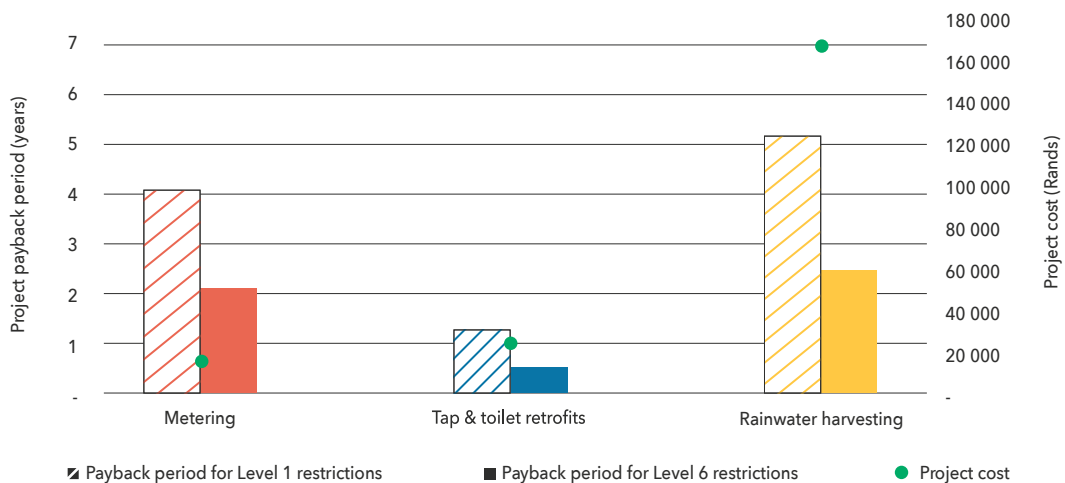
## TECHNICAL PRODUCTS/TOOLS

1. Case studies outlining a business’s strategy for reducing water usage in the prioritised sectors with a clear illustration of financial benefits of investment.
2. A market intelligence report aimed at investors interested in opportunities in the South African urban water sector. The MIR is produced annually and was specifically targeted at the drought in 2018.
3. A business case calculator and industry briefs outlining water use benchmarks and the financial assessment of different water technologies under different tariff scenarios for a range of company archetypes.

An example of such a financial assessment for a specific archetype, in this case a medium-sized office, is shown below. It demonstrated the reduced payback period for several water solutions based on tariffs associated with different water restrictions.

## KEY ACTIVITIES

1. Awareness raising, regulatory guidance, sharing of best practice and encouraging cooperation between businesses through workshops and forums that were sector-specific (e.g. textiles; food and beverages), location-specific (e.g. Epping industrial area) or leadership-specific (e.g. CEO). These workshops also allowed businesses to access government officials and share their challenges.
2. One-on-one meetings for businesses with GreenCape experts to provide tailored advice.
3. A ‘Drought Business Support’ platform to curate and share relevant, credible and updated information. This webpage included FAQs, best practice tips, regulatory outlines and links to water technology and service providers.
4. The development of freely available resources for commercial and industrial businesses, and businesses related to water products and services. These resources included an overall response methodology called the ‘Water Resilience Journey’ (see previous page).



Selected water solutions with costs and payback periods for a medium-sized office



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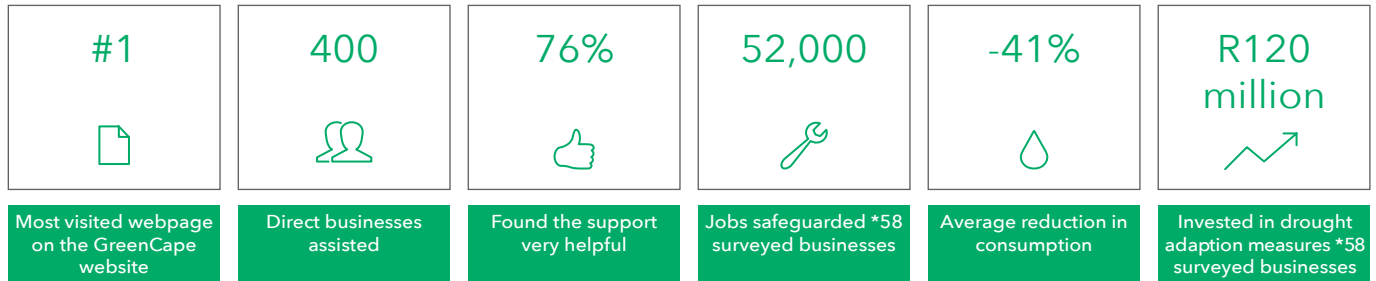


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## The impact of GreenCape's drought business support



Nearly 400 businesses have received direct assistance from GreenCape during just over 15-month period (June 2017 - August 2018), drawing also on expertise and support from the CCT and WCG officials where required.

A survey<sup>2</sup> showed that the vast majority of responding companies found GreenCape's business support very helpful in assisting them to adapt to the drought, with the impact on job security and investment shown above.

Surveyed businesses invested in:

- the monitoring and measurement of water usage (73%);
- implementation of efficient behaviours (73%);
- the reuse of water onsite (66%); and
- alternative water resources (79%).



## Lessons learned

### 1. Prioritise when time and resources are scarce

GreenCape's approach and collaboration with partners ensured that activities were as streamlined and coordinated as possible, but targeted according to agreed metrics: high water use and safeguarding jobs.

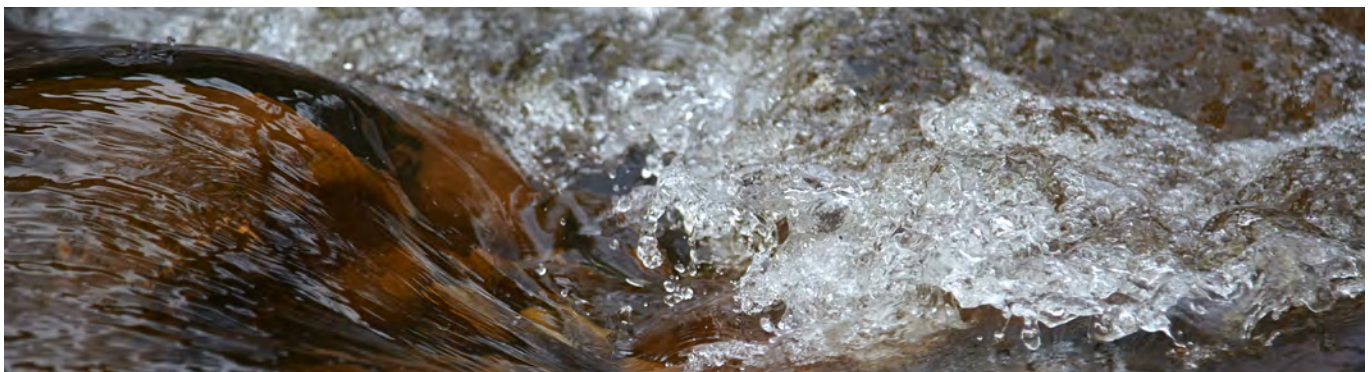
### 2. Improve the availability of data

To prioritise efforts and focus on the most vulnerable industries, the team needed local and disaggregated data on the water intensity of industries, which was not available at the time.

This was particularly problematic for relatively water-intense industries e.g. laundry services as described in the box on page 8.

### 3. Support the development of industry bodies

Industry bodies can lobby government for help and ensure a coordinated response, particularly for sectors that have a relatively high proportion of SMMs. This was one of the contributing factors that delayed the prioritisation of the laundry industry and its ability to build knowledge and capacity for improved resilience, in comparison to other industries.



<sup>2</sup> The survey received responses from 15% of assisted businesses. Very helpful was indicated by a score of 8/10 or above.



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THE VULNERABILITY OF THE LAUNDRY INDUSTRY

The prioritisation process initially excluded the laundry industry, despite their dependence on high water users as clients for their products and services.

This was because:

- it was not clearly highlighted within the aggregated industry categories used in GreenCape’s prioritisation process; and

— the lack of an industry body made it harder to detect the widespread vulnerability of the laundry industry.

This industry was increasingly vulnerable to the impact of the drought

- both directly in terms of the economic impact of increased tariffs; and

— indirectly due to the gradual decline in demand for their services, specifically due to the decline in tourists and increasing local response to “Day Zero” campaigns (e.g. customers increased the reuse of clothing).

Although the laundry industry was prioritised at a later stage, it highlighted a critical gap in the prioritisation process.

4. Speak the right language

To build trust and work effectively with industry, those supporting need to:

- effectively address business’ immediate risks and concerns; and
- communicate the impact of resilience-building interventions in terms of the financial risks and returns for the business in question (see GreenCape water case studies).

5. Build in flexibility and rely on rapid learning

GreenCape applied an adaptive management approach to quickly adjust

its response as the crisis evolved (see below). This flexibility meant that the team could adapt their approach as the businesses became more knowledgeable about the crisis and what they could do in response.

6. Let businesses help

Consider the multiple roles that businesses play in society and leverage them in a crisis. Businesses use water but they are also employers, suppliers, customers and investors. The team highlighted ways that businesses could contribute to the crisis mitigation efforts, which yielded creative solutions and impactful rewards.

A good example is the Smart Water Meter Challenge, which allowed several businesses to support the community by installing smart water metering devices at schools. By February 2018, 110 schools had meters installed and had saved 21 million litres of water, which translate to R1.1 million. By November 2018, 93 companies had pledged their support and the initiative had reached 358 schools<sup>3</sup>.

This demonstrated how the city can leverage the role of businesses as ‘corporate citizens’ to improve their own resilience, and to contribute to improving the resilience of their employees and the communities in which they operate.

Evolution of the crisis & GreenCape’s adaptive response

| Period             | Jul - Dec 2017   | Jan - Feb 2018   | Mar - May 2018                                    | June 2018  |
|--------------------|--|--|---|--|
| Business mood      | Is this really a crisis?   | Day Zero hysteria  | From panic to planning                            | Adjust to the “new normal”                                 |
| GreenCape approach | Basic awareness raising & advice<br>Independent verification of status | Keep calm!<br>Reduction is critical<br>Don’t just secure your own supply | Provide specific & detailed information by sector | Assist with long term resilience & lobby for tariff relief |

<sup>3</sup> See <http://www.schoolswater.co.za/> for more details

For more information and support contact GreenCape’s water sector desk: [water@greencape.co.za](mailto:water@greencape.co.za) or call (021) 811 0250. Additional resources on improving water resilience are available from: <http://www.greencape.co.za/water-business-support>

