Never let a good crisis go to waste”

Origin disputed
Promoting Economic Resilience in Water Scarce Cities

Lessons from Cape Town

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Claire Pengelly

In partnership with GreenCape
GreenCape works with business, government and academia, removing barriers to catalyse the large-scale uptake and spread of economically viable green economy solutions and infrastructure. A non-profit organisation, our vision is a thriving prosperous Africa, mobilised by the green economy
GreenCape

Demand
Water User – drought support

Supply
Technology / solution providers – market intelligence

Regulatory / Research / Finance
Unlocking opportunities
The drought was a big wake-up call

Climate change is here and impacting us now. Are you ready? We weren’t.....
Cape Town had experienced droughts before, but not like this....

Probability ~ 0.3%
### Dam levels of the biggest six dams

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tbody>
<tr>
<td></td>
<td>102.9%</td>
<td>103.5%</td>
<td>72.4%</td>
<td>60.1%</td>
<td>34.7%</td>
<td>20%</td>
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![Graph showing percentage levels of the biggest six dams over time.](image-url)
“Day Zero” campaign to drive down demand – when dam levels reach 13.5% and supply is cut to 75% of the City.

Highly successful campaign – demand reduced by over 50%, but negative socio-economic impacts

So how do you effectively mobilise action from businesses in a drought?

Some ideas from Cape Town and Western Cape…..
Restrictions and Tariffs

- Commercial and Industrial Water users had to reduce consumption by 45% and faced highly punitive tariff increases.

Tariffs are linked to restriction levels – as restrictions increase so do the tariffs.

Cape Town commercial and industrial water tariffs are more than 3½ times higher than they were in 2015.
How to avoid an economic crisis on top of a water crisis?

Cape Town’s unemployment rate is 21.3%

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

- significantly **reduce their overall water usage** in order to meet the water restriction targets
- **awareness raising** function, and promote water savings with their supply chains, their customers and their staff;
- assist their broader communities through their **corporate social initiatives** (CSI) efforts and by supporting their staff with water savings interventions at home; and
- utilised in **disaster scenarios** e.g. the existing networks for certain businesses (e.g. retail and logistics) could be used for the distribution of emergency supplies.
Economic Water Resilience Task Team was formed

- **TASK TEAM**
  - GreenCape
  - NBI
  - CCT
  - WCG
  - EDP
  - Wesgro
  - Other partners

- **TARGET AREAS**
  - Industry
  - Corporate
  - Investors
  - Commercial
  - Civil Society
  - Tourism

- **Water users**
What can businesses do?

Understand water uses and risks
- Appoint task team
- Water audits
- Meter and monitor, (incl. leak detection)
- Understand water quality requirements

Reduce water use
- Behaviour change
- Efficient processes
- Efficient fittings & technologies

Water reuse on-site
- Grey water
- Industrial effluent
- Basement “sump” water
- HVAC condensate
- Black water

Alternative water supply
- Rainwater / stormwater
- Treated effluent
- Groundwater

Increasing cost and complexity
Business case had improved but plenty of no-regret options

Selected water solutions for a medium-sized inorganic industry in Cape Town:

Source: [https://www.greencape.co.za/assets/Uploads/WATER-INTERVENTIONS-INDUSTRY-BRIEF-8-2.pdf](https://www.greencape.co.za/assets/Uploads/WATER-INTERVENTIONS-INDUSTRY-BRIEF-8-2.pdf)
Smart metering and sub-metering

Growthpoint

- The Estuaries (office park) achieved 70% water savings, largely due to smart metering:

Growthpoint mobile app measures every property’s energy and water consumption in near real-time to identify any issues.
Old Mutual goes off-grid using only wastewater

Cape Town’s largest office park (9,000 employees) has gone completely off-grid by connecting to treated effluent and reusing wastewater.
Offices using “basement water” to reduce water usage

The Towers, ReDefine

Basement water is treated and circulated in building for toilets and basins (no potable water)

Woolworths Head Office

Basement water is stored in parking garage, treated and pumped to the roof. Reduced water usage by 70%. Used for cooling, sanitation and car wash.
Smart Water Meter Challenge

http://www.schoolswater.co.za/
Case Studies and more @ www.green-cape.co.za

- Textile manufacturing
- Hospitality industry
- Commercial offices / office parks
- Commercial retail
- Pharmaceutical industry
- Beverage industry
- Cement manufacturing
- Plastics manufacturing

Reducing water use at shopping centres

Bayside Mall
Cape Town

Rainwater harvesting resulted in a 93% reduction in water consumption for public toilet flushing and landscape irrigation.
Everyone played their part and we are out of the crisis!

International Water Association awards Cape Town with a certificate to acknowledge that this is the first time a city has reduced its consumption by 50% in 3 years without water shedding.

Latest dam levels – out of the danger zone
The response from business was impressive

Survey of supported companies (~60 respondents of 400 businesses directly supported by GreenCape over past year):

- Invested €7.3 million in water projects
- Responsible for supporting 52,000 jobs
- 41% average reduction in water consumption

The Cape Town economy created 74,000 jobs in the past year and the unemployment rate fell by 1.4%
Final Word

This crisis has presented us and government officials an opportunity to work with businesses in a new way and build longer-term water resilience in the City of Cape Town
Thank You
Claire Pengelly – Water Programme Manager
claire@greencape.co.za
www.green-cape.co.za