



Never let a good crisis go to waste''

Origin disputed

Promoting Economic Resilience in Water Scarce Cities

Lessons from Cape Town

18 October 2018

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CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

In partnership with



**Western Cape
Government**
Economic Development
and Tourism



Waste



Water



Renewable energy



Energy efficiency



Industrial symbiosis



Sustainable agriculture



Atlantis SEZ



Gas



Green finance



Bioeconomy

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



The drought was a big wake-up call



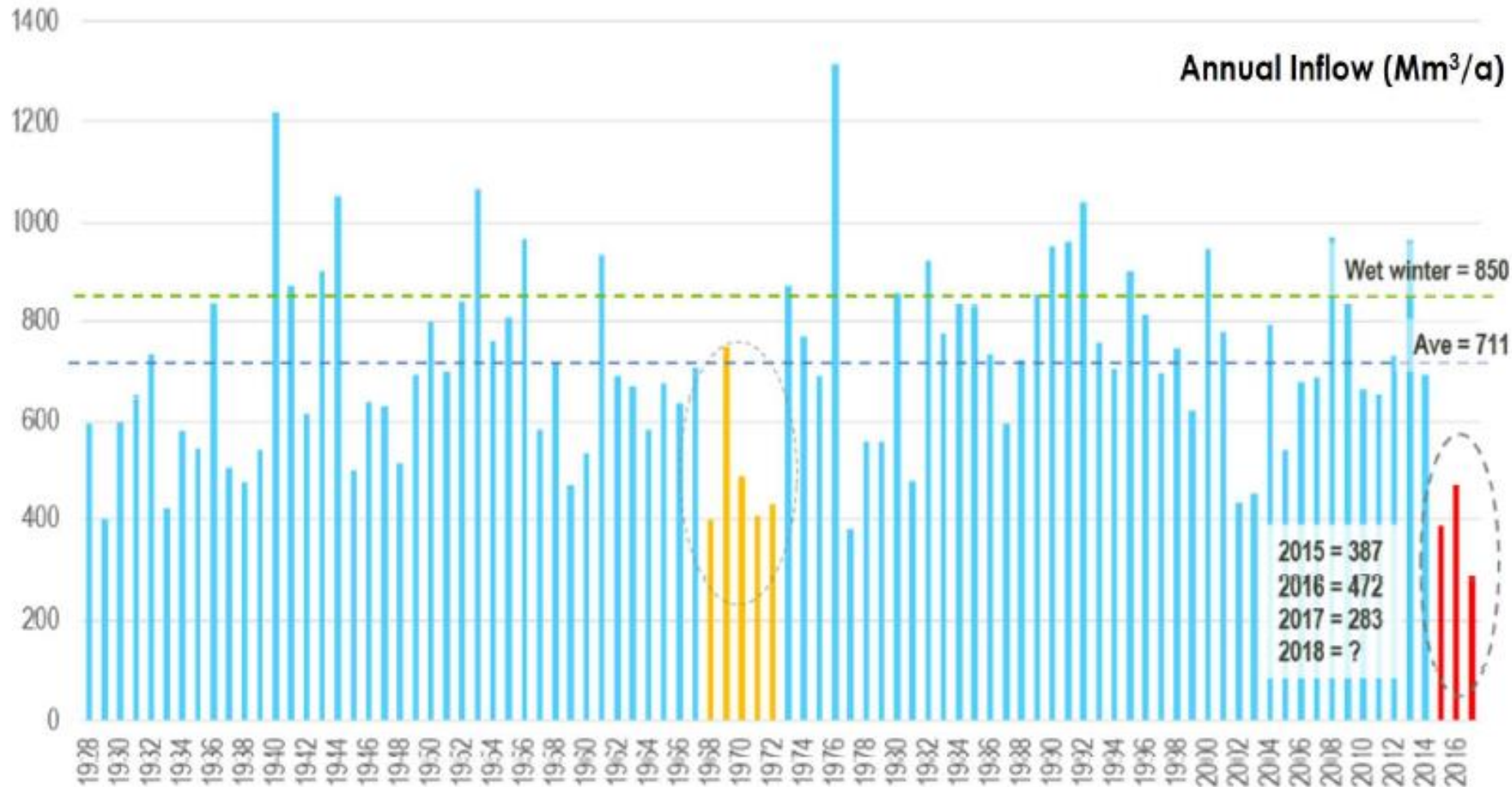
Theewaterskloof Dam – Cape Town's largest dam

Climate change is here and impacting us now.

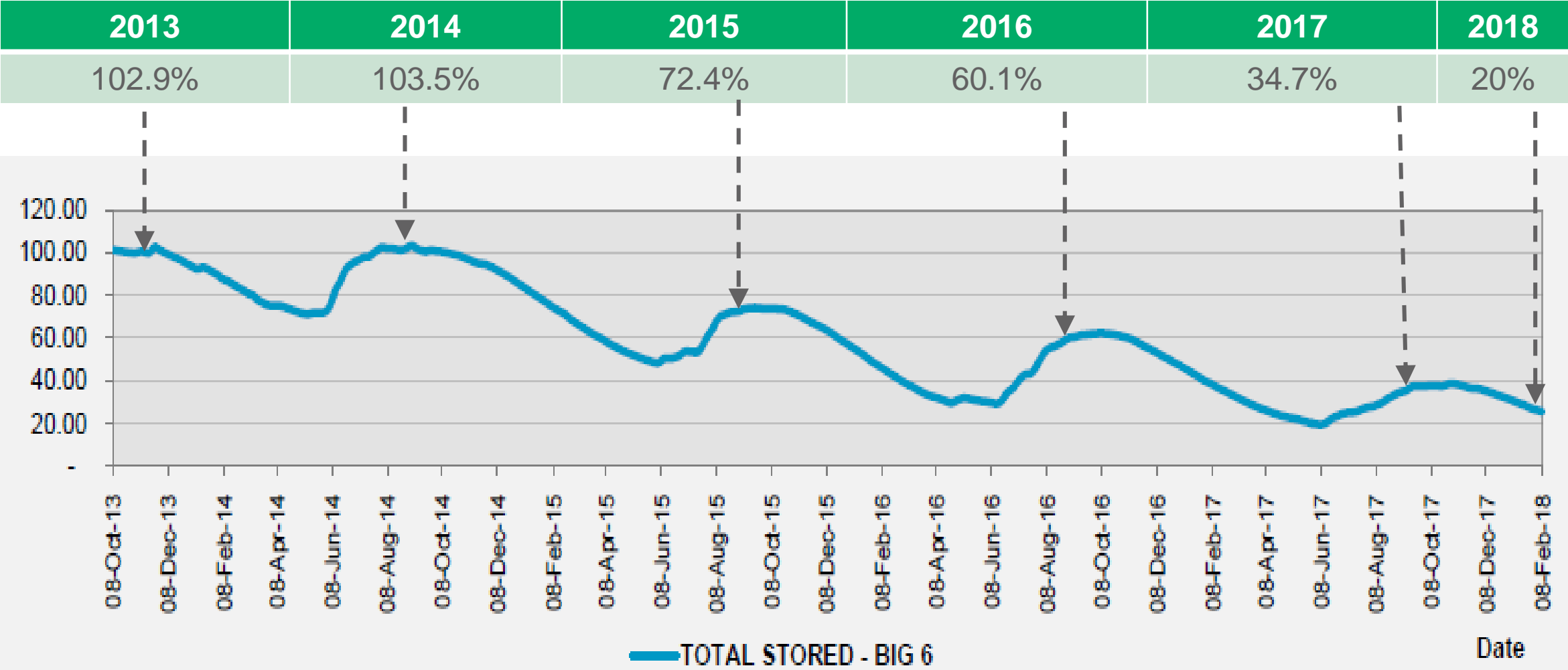
Are you ready? We weren't.....



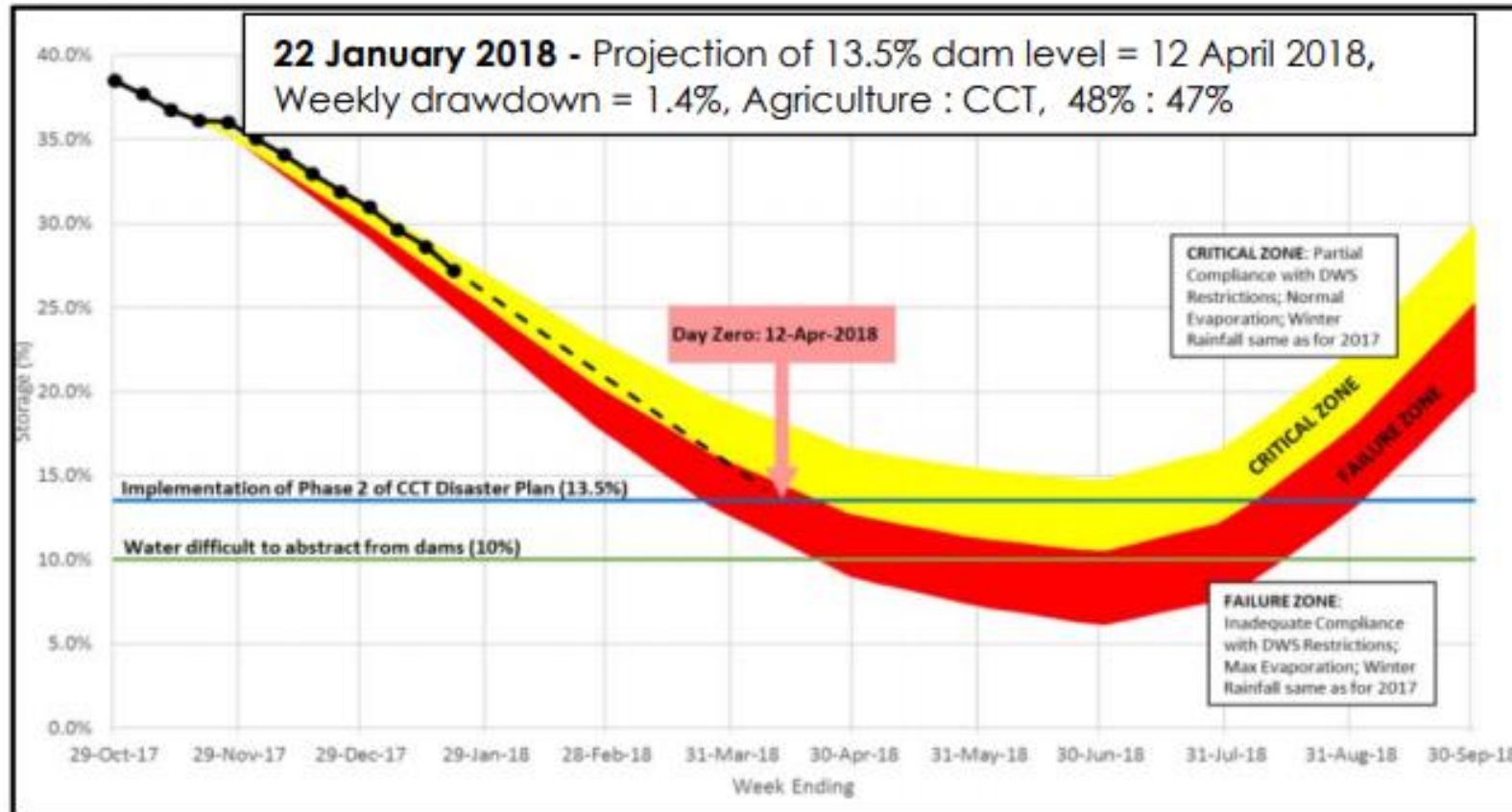
Cape Town had experienced droughts before, but not like this....



Dam levels of the biggest six dams



Day Zero – January 2018



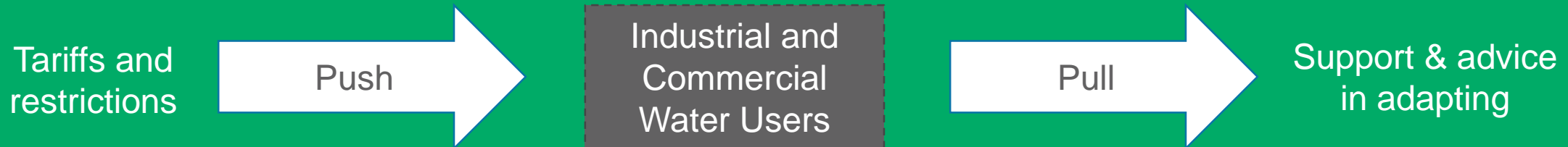
“Day Zero” campaign to drive down demand – when dam levels reach 13.5% and supply is cut to 75% of the City.

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

Source: Water Outlook 2018 (2018-05-20)

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

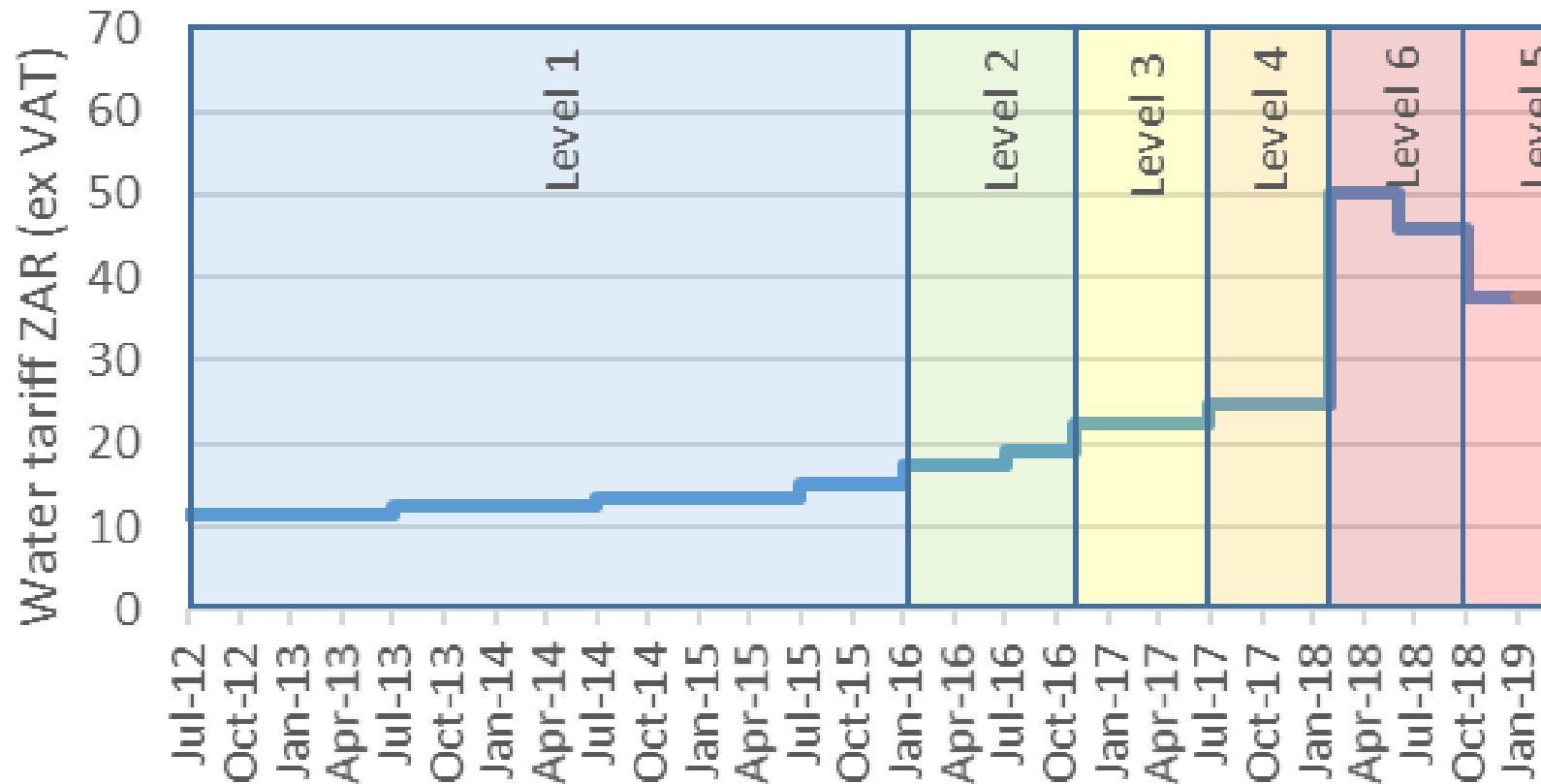
Some ideas from Cape Town and Western Cape.....



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?

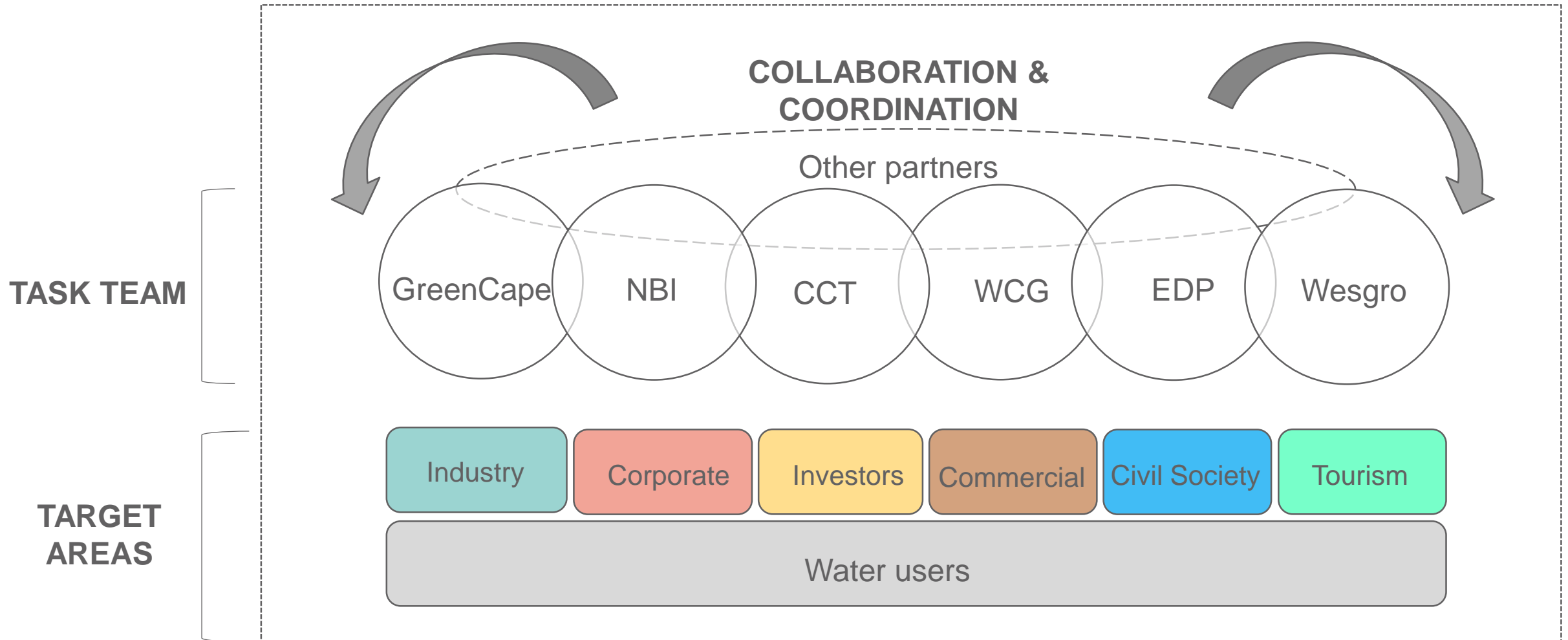
Cape Town's unemployment rate is 21.3%

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

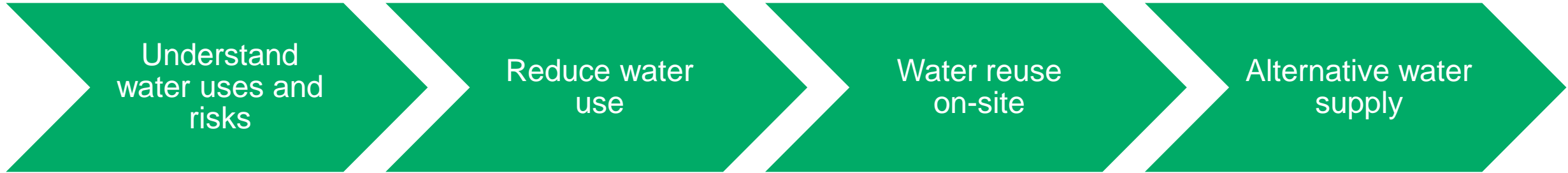
- significantly **reduce their overall water usage** in order to meet the water restriction targets
- **awareness raising** function, and promote water savings with their supply chains, their customers and their staff;
- assist their broader communities through their **corporate social initiatives** (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



What can businesses do?



Some examples:

- | | | | |
|--|--|--|---|
| <ul style="list-style-type: none">• Appoint task team• Water audits• Meter and monitor, (incl. leak detection)• Understand water quality requirements | <ul style="list-style-type: none">• Behaviour change• Efficient processes• Efficient fittings & technologies | <ul style="list-style-type: none">• Grey water• Industrial effluent• Basement “sump” water• HVAC condensate• Black water | <ul style="list-style-type: none">• Rainwater / stormwater• Treated effluent• Groundwater |
|--|--|--|---|

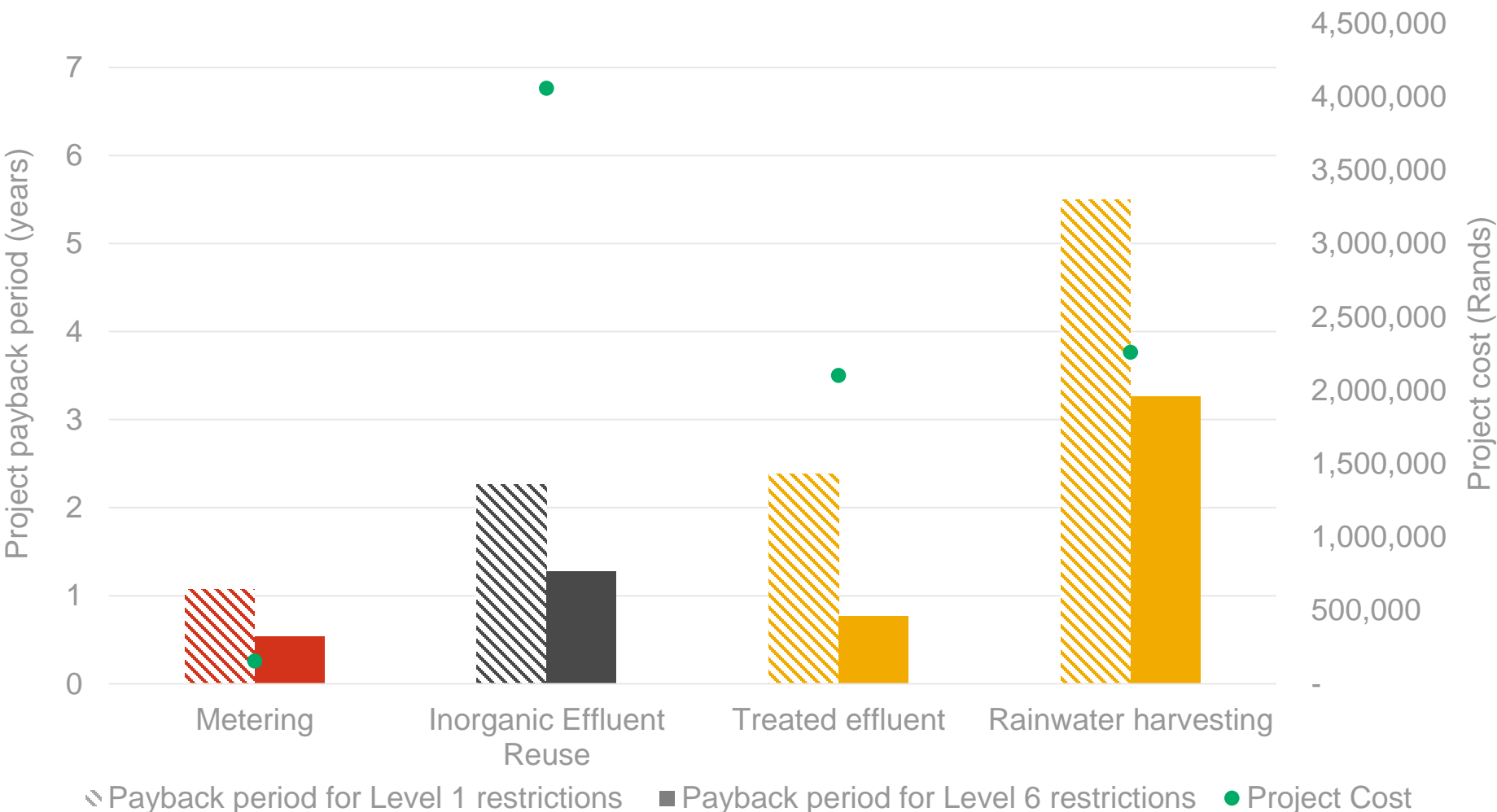


Increasing cost and complexity

Business case had improved but plenty of no-regret options



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

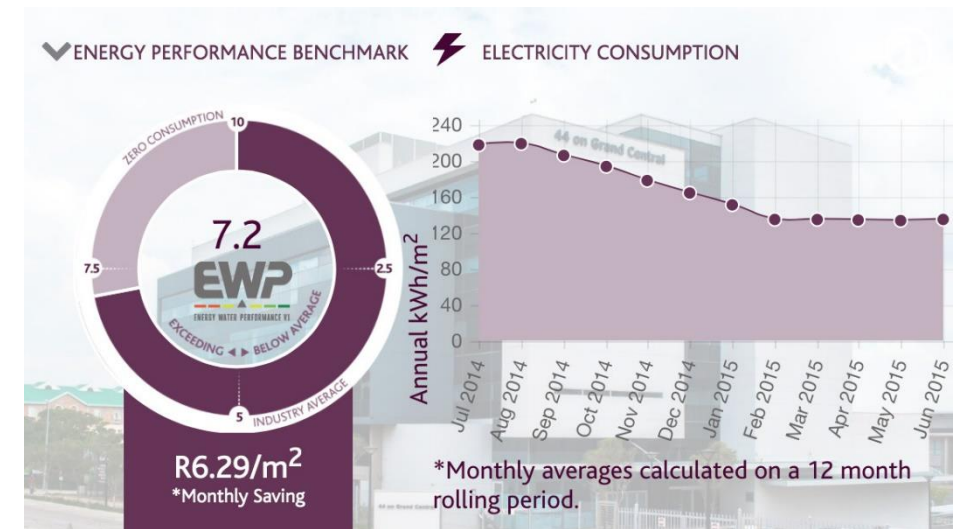
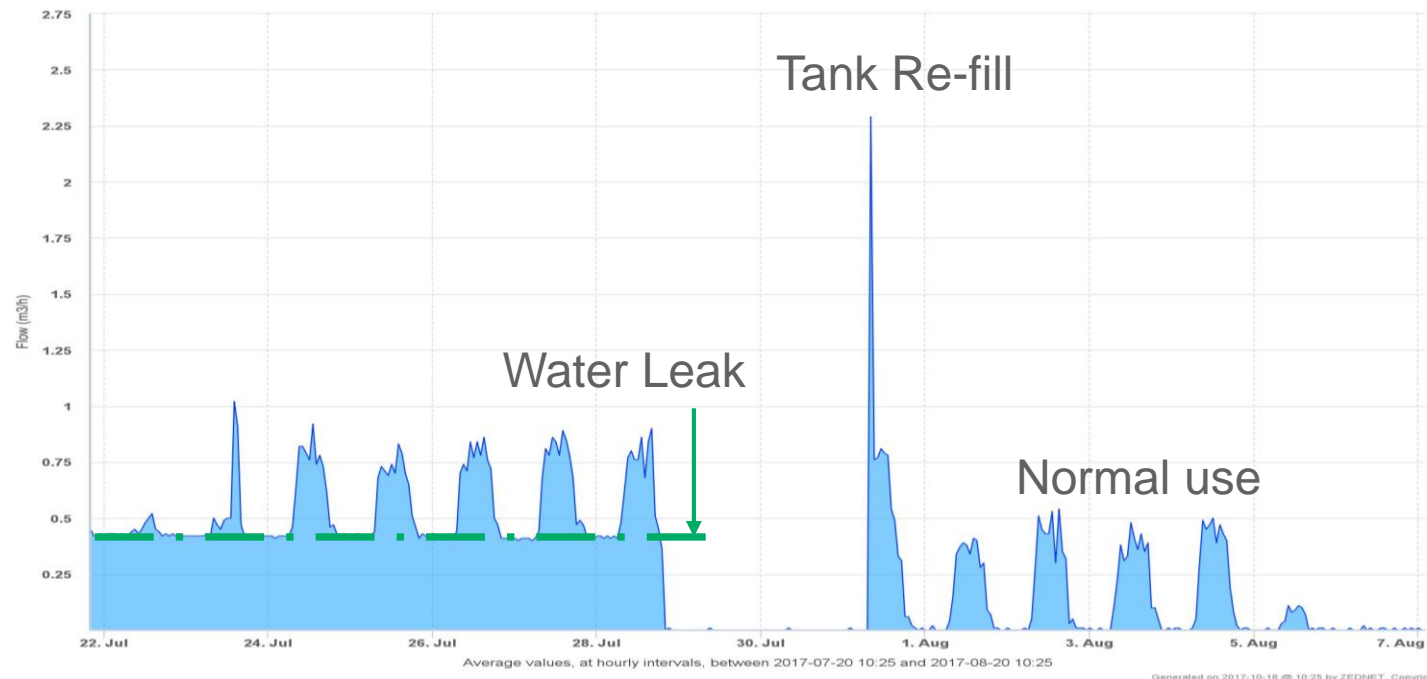


Smart metering and sub-metering



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



	ESTIMATED MONEY SAVED R 19,203,526		ESTIMATED WATER SAVED 218,386,022 L
	ESTIMATED WATER SAVED YESTERDAY 708,229 L		SCHOOLS 342



<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



CaseStudy



Reducing water use at shopping centres

Bayside Mall
Cape Town

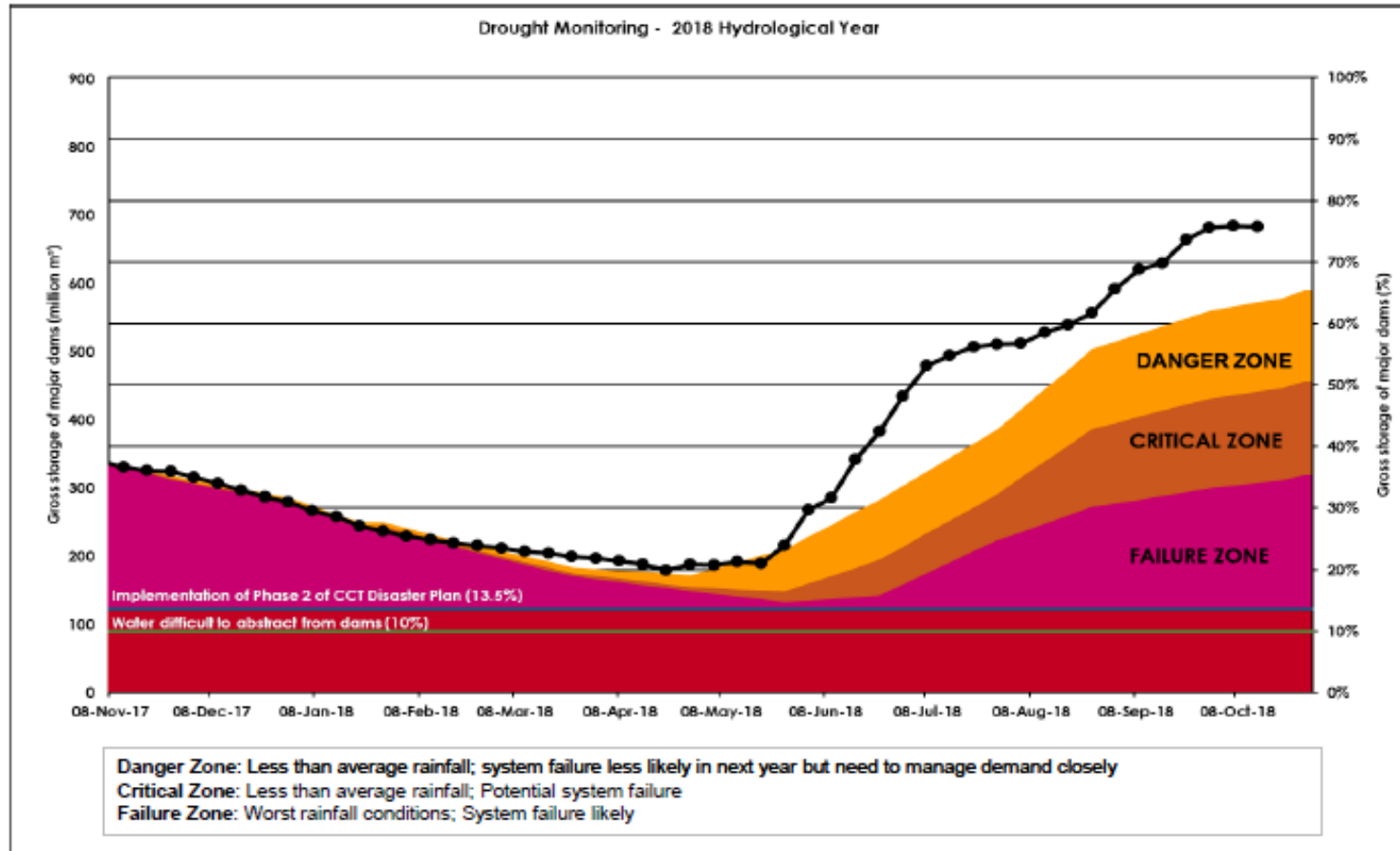
Rainwater harvesting resulted in a 93% reduction in water consumption for public toilet flushing and landscape irrigation.



Everyone played their part and we are out of the crisis!

Western Cape Water Supply System (WCWSS) weekly drought monitoring

This graph depicts total dam storage against potential system risk scenarios. The previous graph monitored the dam level draw down against the 2017 rainfall conditions under different restriction levels.



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

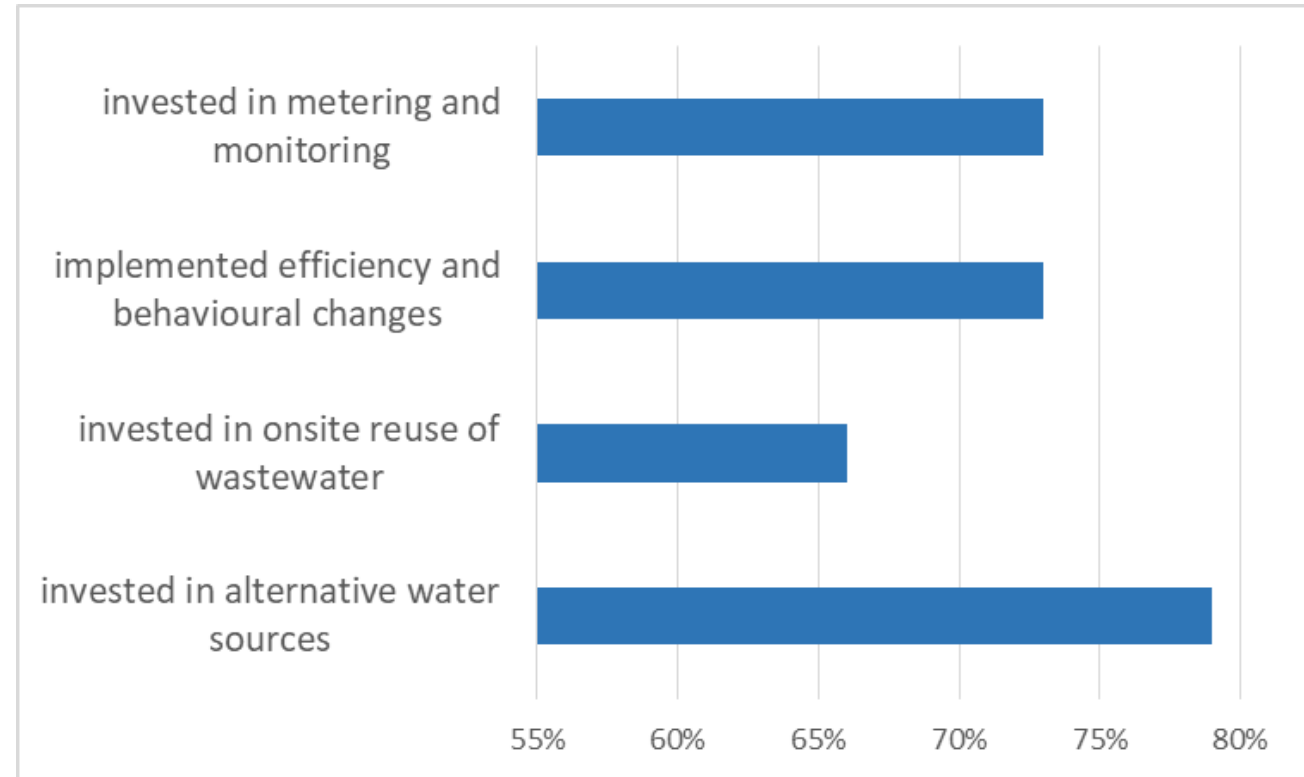
The response from business was impressive



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



Investments made in the past year (% respondents)

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

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