



A story of drought in Cape Town

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THE CONTEXT

Cape Town: 2018 drought

Government response
and civil action

Long term resilience



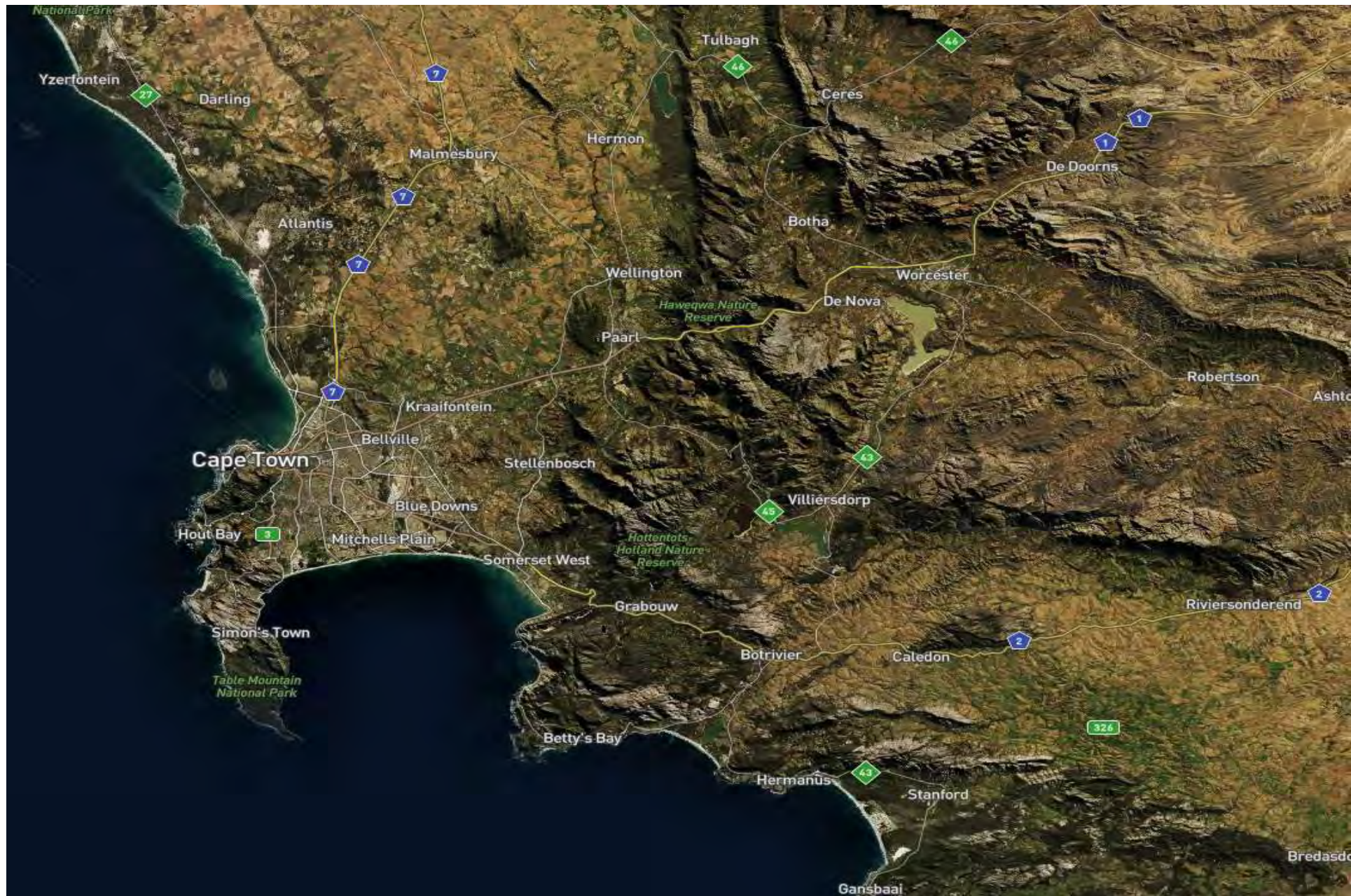
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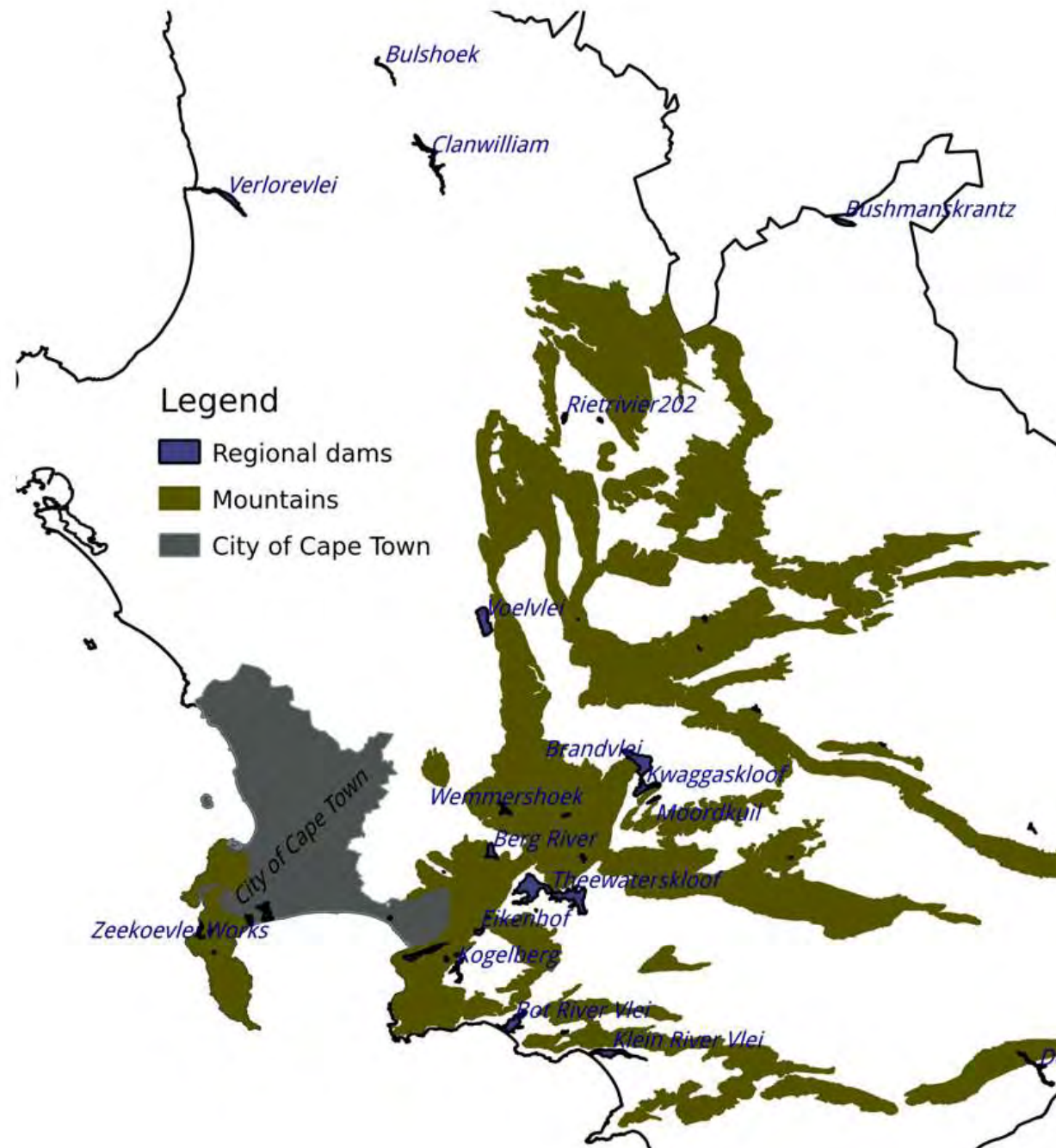




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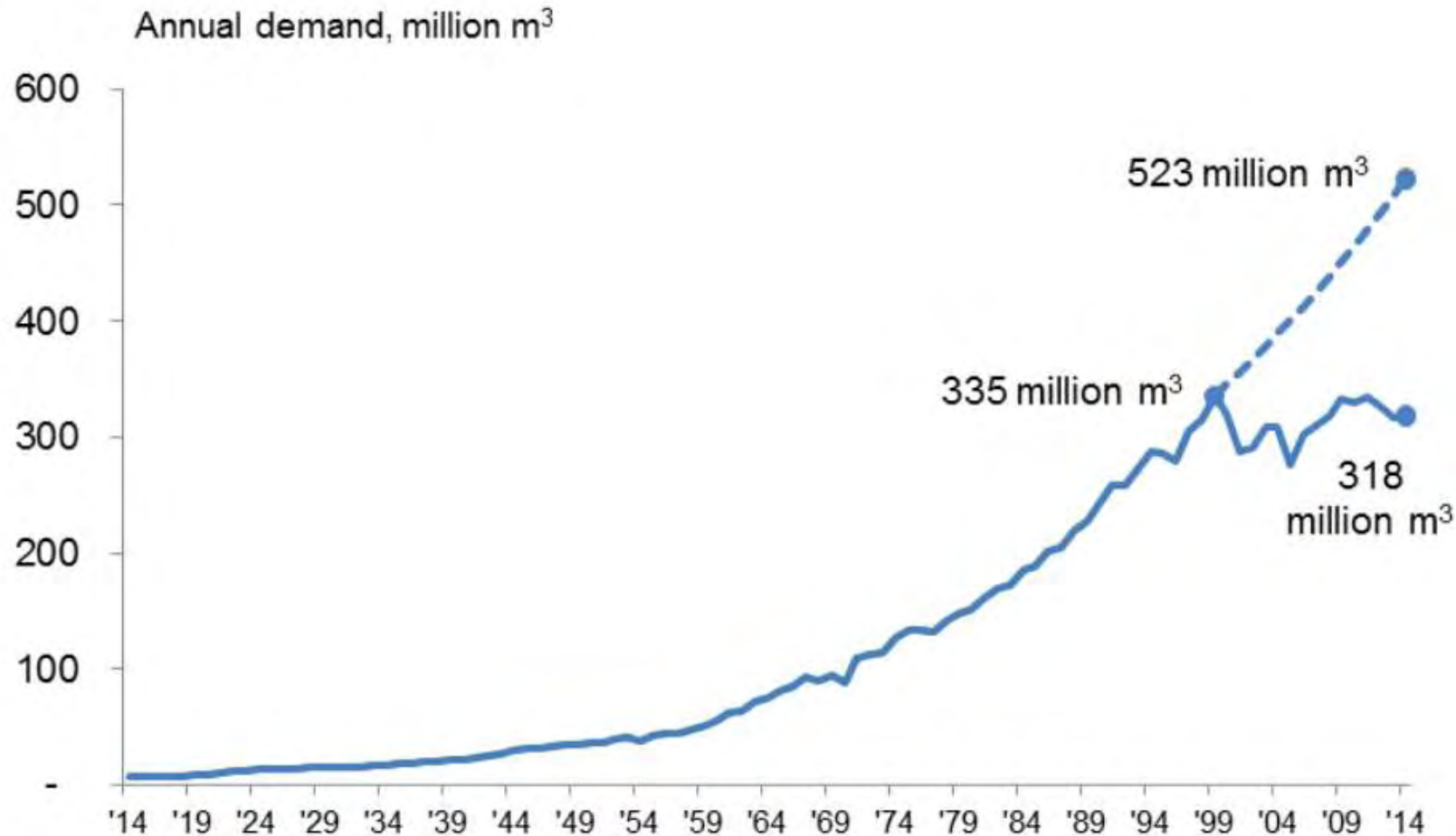




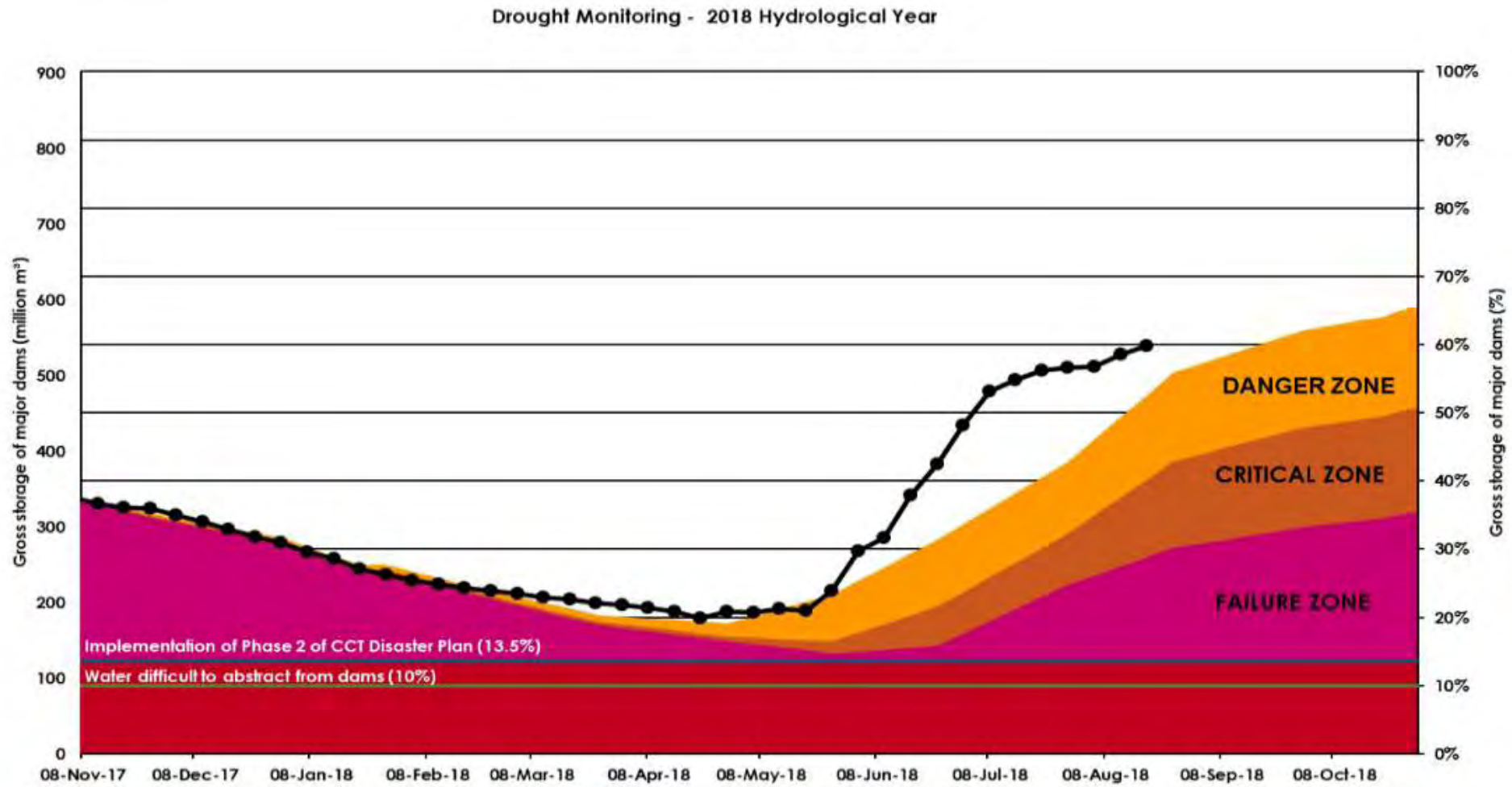


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Actual demand growth 1999 – 2014 vs Unconstrained growth



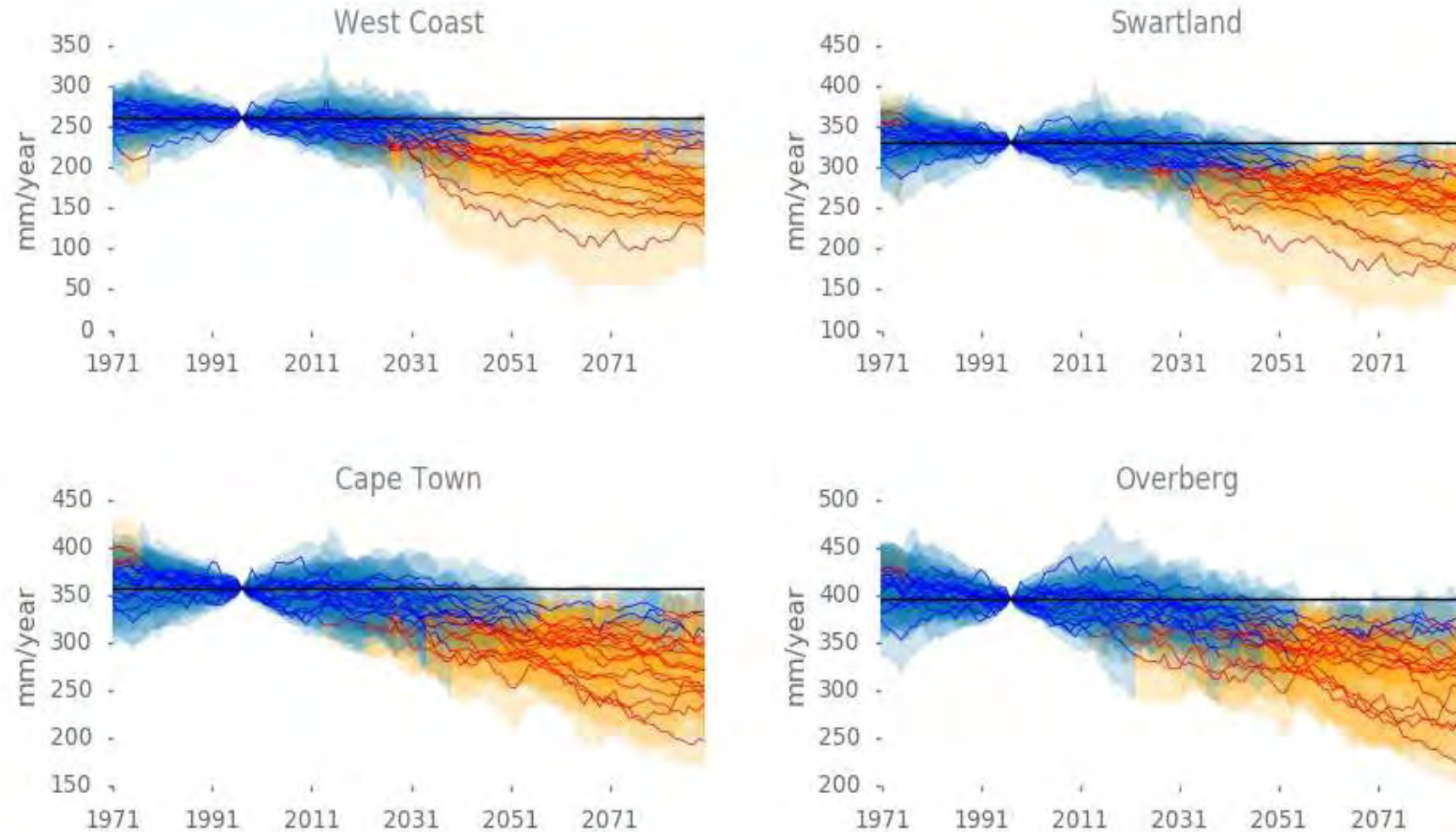
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Danger Zone: Less than average rainfall; system failure less likely in next year but need to manage demand closely
Critical Zone: Less than average rainfall; Potential system failure
Failure Zone: Worst rainfall conditions; System failure likely

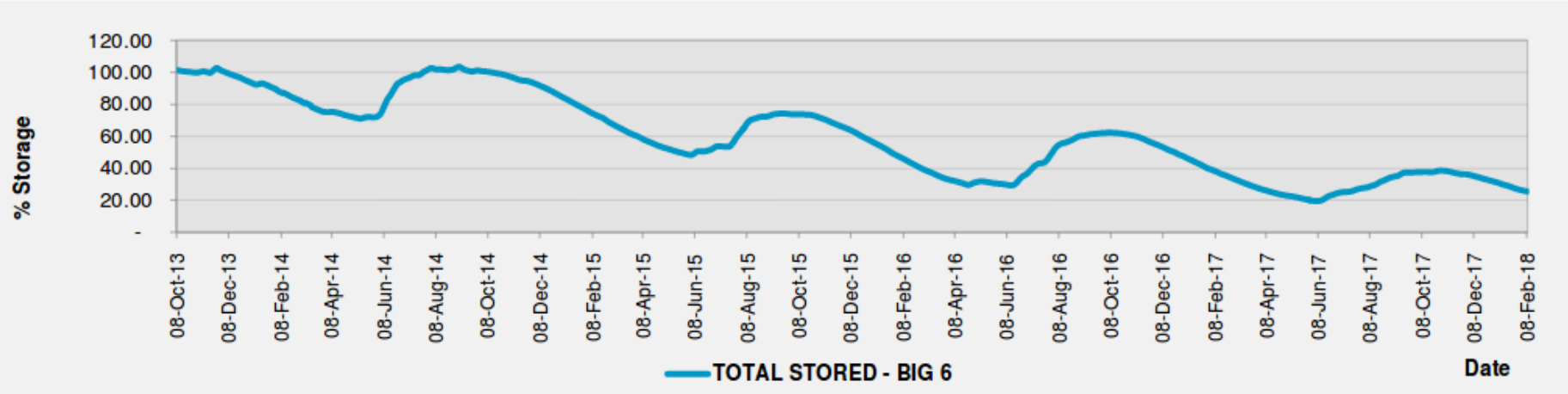
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Temporal evolution of total annual rainfall
in CMIP5 GCM MME (rcp85)

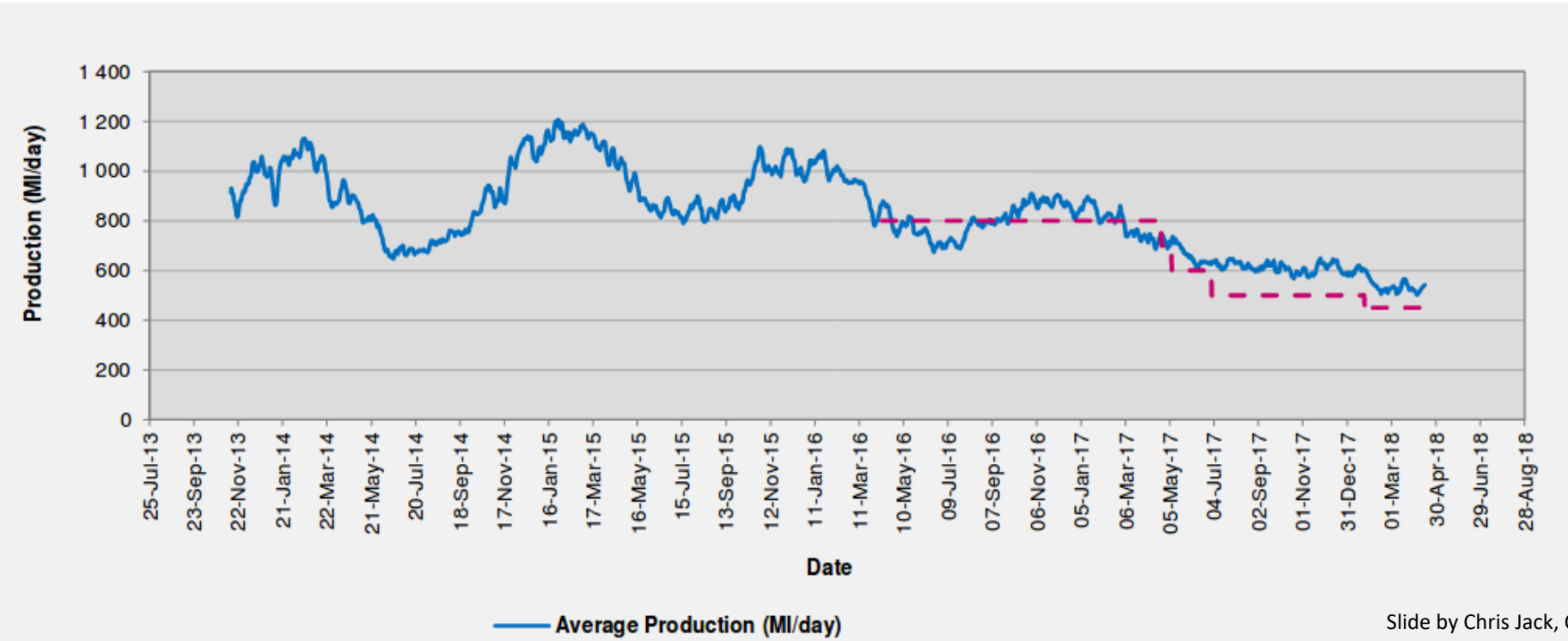


— 20-year moving average and its 95% confidence interval — as previous, when significant at $p=0.05$ — mean value in reference period(1986-2005)

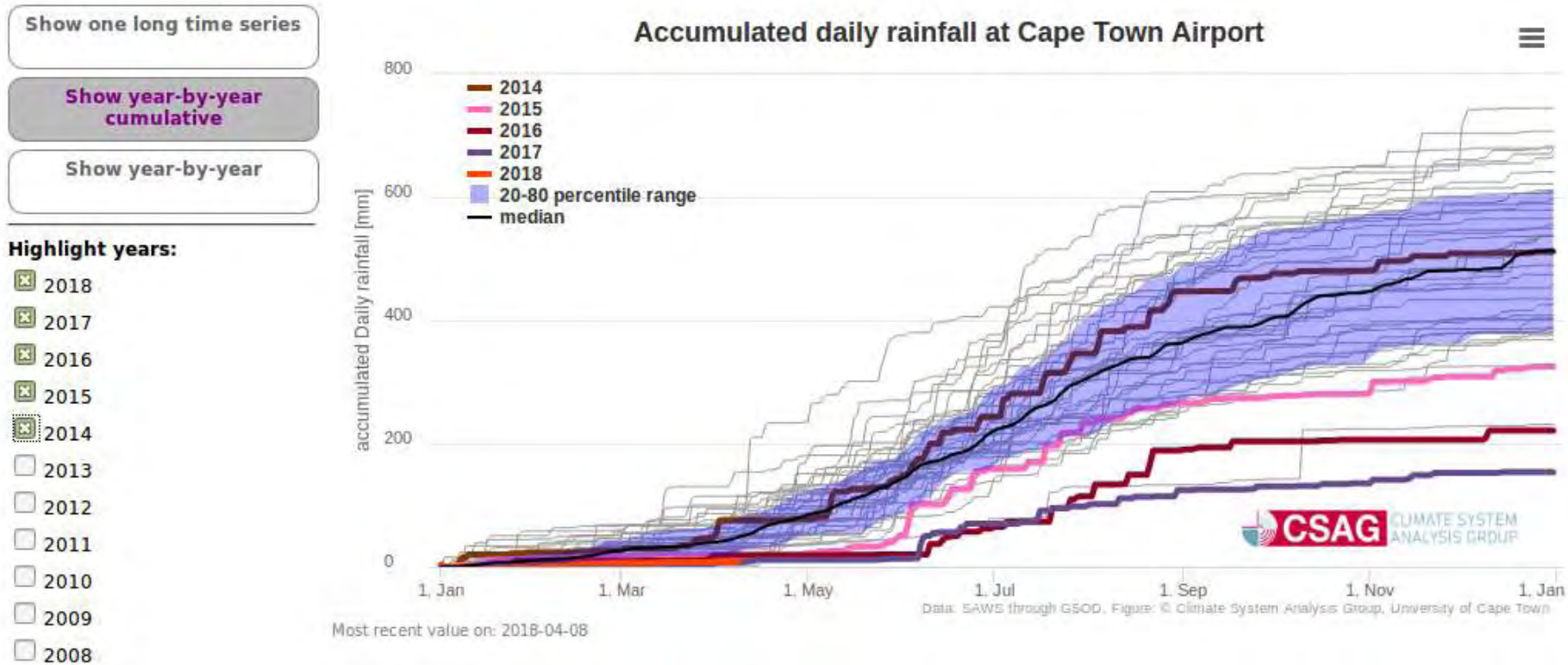
Percentage Water Stored in Major Dams (WCWSS)



CCT Daily Average Water Production (7 Day Avg)



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*“Finally, what the report, the narratives, and the engagement workshop have all shown is that the City of Cape Town needs to **prepare in earnest for a drier warmer future** over the next decades. While there remains uncertainty in the climate science, the **evidence for drying and warming is strong** and planning that ignores this evidence is at **significant risk of vulnerability to a changing climate**. There is **now sufficient science evidence to motivate** for serious consideration of climate adaptation planning and implementation in the city.”*

- 2016



🕒 This article is more than 5 years old

Cape Town faces Day Zero: what happens when the city turns off the taps?

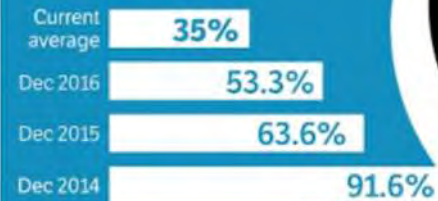
📷 The severely low water level at the Newlands municipal swimming pool in Cape Town, South Africa, in November. Photograph: Bloomberg/Bloomberg via Getty Images



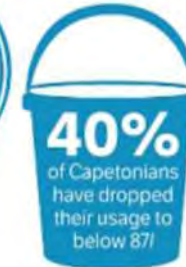
BY THE NUMBERS

Cape Town's drought

Water available



87l
is what the city has asked residents to cap their daily usage at



May 20 is when the average water level of dams supplying the city is expected to drop to 13.5%, making it difficult to draw water



Source: City of Cape Town Water Dashboard

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HOW FAR CAN 87ℓ A DAY GO?

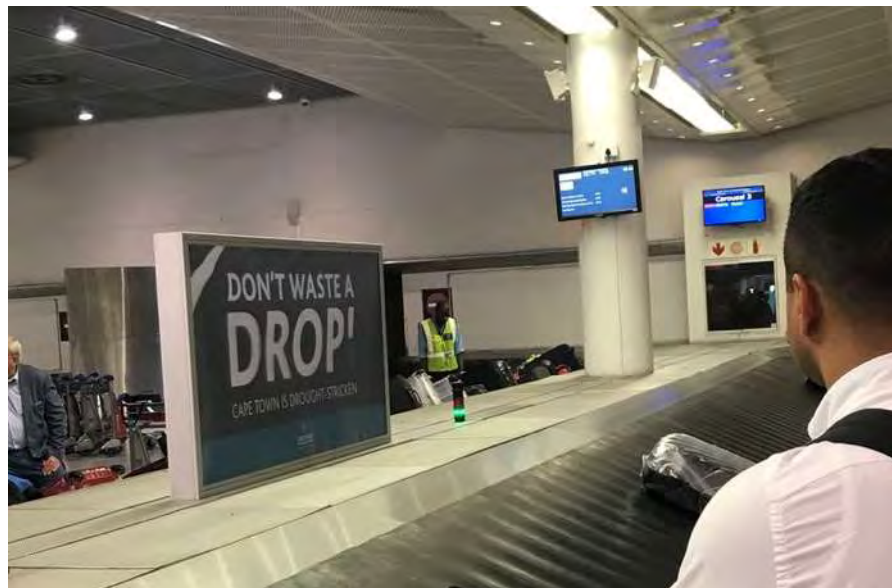


YOUR GUIDE TO 50l OR LESS PER DAY



This is a guide for 50l per person per day. Your actual usage will depend on your appliances and personal preferences.

Source: www.capetown.gov.za/thinkwater





Brand Showreel



The Album That Got People Singing to Save a City

We took on Day Zero with the help of SA's top recording artists.

As Cape Town experienced the worst drought in a century, we urgently needed to find a way to **help Capetonians reduce their showers to two minutes or less**. We all like to sing in the shower (whether we'd like to admit it or not) so we recruited the nation's top artists and challenged them to create two-minute versions of their most popular tracks. Now, Capetonians could press play and sing along, knowing that when the song ends, so should their showers.

City Water Map

FA

Gie Road or Athlone library



Legend

Themes

Water Use

Water use – Free-stand

● 6 000 or less litres
– Actual meter rea

● 6 000 to 10 500 litr
month – Actual me

City will run out of water 'in 17 years'

By BARRY STREEK
Political Staff

WATER supplies for the Cape Town area are expected to dry up in 17 years' time, the Water Research Commission (WRC) disclosed yesterday.

"It is estimated that known fresh water supplies for the Cape Town metropolitan area will be fully committed by the year 2007," it said in its annual report

conducted to establish a data base containing information on water intake, raw materials, products, effluent quality and the amount of industrial waste from all types of industries using more than 150 cubic metres of water a day.

On water supplies, the commission reported that a survey was launched by the University of Cape Town's Department of Community Health to establish early

coming increasingly unacceptable worldwide for discharge of sewage systems or to the environment because of their toxic content.

"In South Africa the position is even more critical because the bleaching process effluents may be discharged by inland pulp factories after 1990."

The commission said 12 million animals were slaughtered at almost 300 abattoirs, which resulted in about 80 000 tons of kra

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Managing demand

Governmental restriction levels

Communication campaigns

Pressure reduction


Household flow regulators

Punitive tariffs

Adaptation and water smart city

Agriculture water restrictions (60%)

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- 
- Collaboration and engagement across all sectors of society
 - ✓ The solution was not technical/engineering
 - ✓ Citizens and private/agriculture “saved the day”
 - ✓ Engagement (eventually) with research
 - ✓ Communication, communication, communication

Timelines

Past events

Current

Near future

Long term future



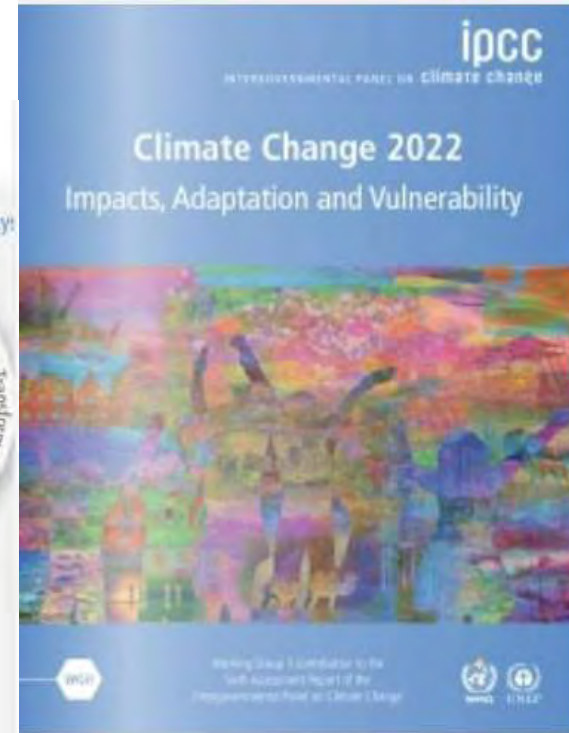
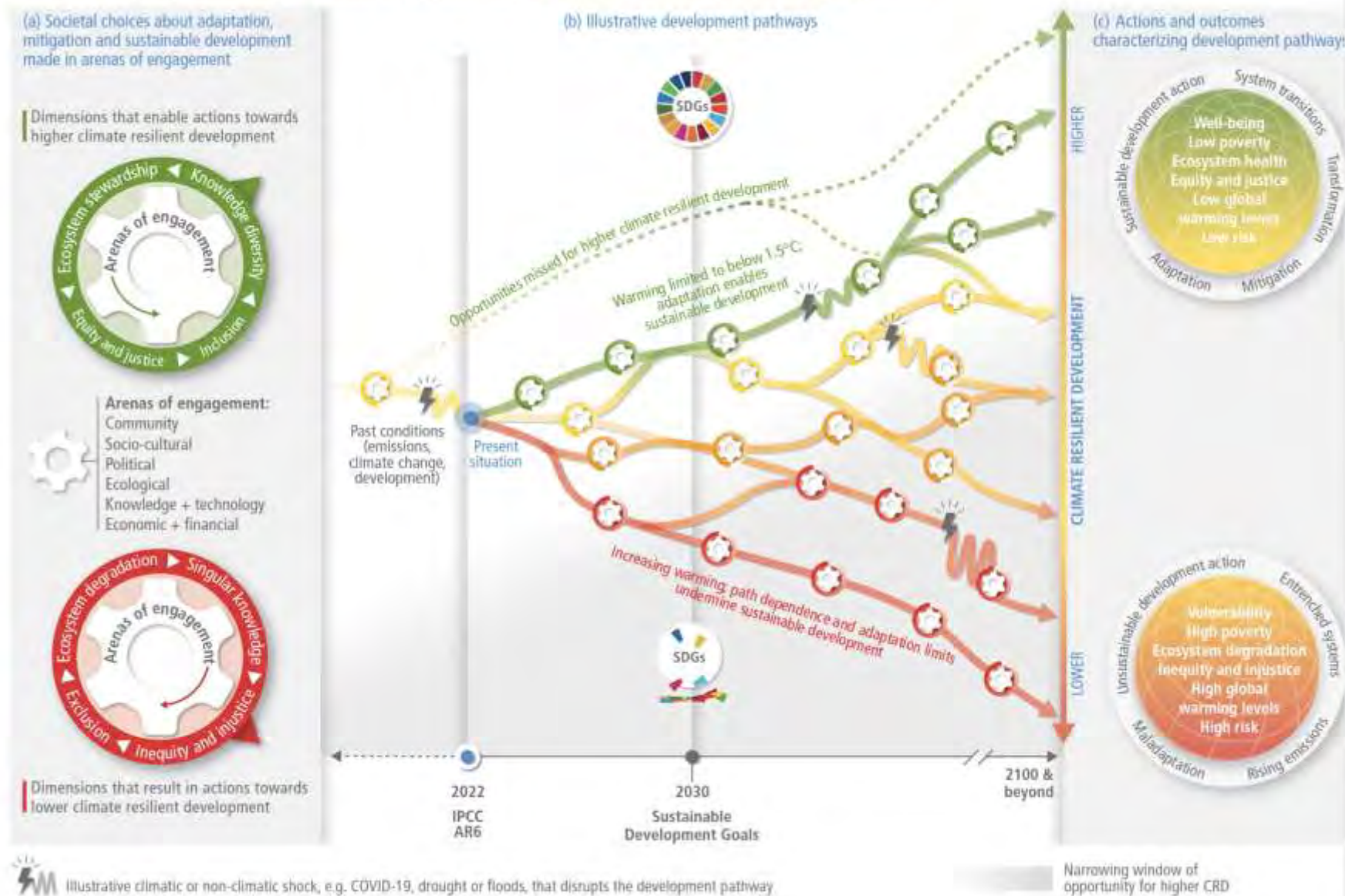
“No need to worry, we have plenty of time.”



No thanks, we're going to create some alternative options
over here. Want to join?

LONG TERM FUTURE

There is a rapidly narrowing window of opportunity to enable climate resilient development



In Summary

We need to embrace and **work with complexity**

We must include a **broad variety of knowledge**

We need to connect

- Global and local
- Past and future
- Systemic approach

**Transformative change is a process
(not a project)**

