



CAPE TOWN: AVOIDING “DAY ZERO”

In many ways, climate change also means water change. And our water patterns are already noticeably affected by the onset of global warming. Cape Town is perhaps the most extreme example to date. Last year its citizens experienced a new kind of countdown: the one to “Day Zero,” as in zero water available. As the risk of this day drew closer, the efforts of the municipality, behavioral change – and rain – eventually enabled the city to avoid reaching it. Let’s take a closer look at what happened.

THE RISK OF “DAY ZERO”

It all started in 2015, when the city of Cape Town experienced the onset of an unusually challenging and long-lasting drought. It played out as three consecutive years of low and unpredictable rainfall during the winter rainfall period. The drought mainly affected the Western Cape region, where Cape Town is the largest city with its four million inhabitants. Eventually, the drought caused severe water shortage in the entire region. The situation worsened, and in January 2018 the local government made an urgent call to residents and businesses to reduce their water usage, and started preparing contingency plans for a possible “Day Zero.” It seemed like Cape Town could become the first large metropolitan area to completely run out of water. But the apocalyptic scenario never happened. So how did Cape Town avoid it?

NOT MORE THAN 350 LITERS A DAY

During the water crisis, getting word out to residents was absolutely key, and the city used all available channels and platforms – even going into neighborhoods with loud hailers and recorded messages on the back of utility vehicles. The crisis dominated



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the discussion among citizens and the news, both locally and internationally. Under the tagline “ThinkWater” the city kept its inhabitants updated. All plans and actions taken, as well as behavior advice, were made available to stakeholders through an open source and open access format. The purpose was to raise awareness among all Cape Town residents and keep them working towards the same goal during the shortage period.

In addition to alerting citizens, and altering their behavior voluntarily, there were more technical steps to be taken. One was to make the most of the water that was available. In other words, this was not the time for leaking pipes. The city made a significant effort to identify and fix leaks, and also reducing water flow through its pipes to residents. But restrictions on water use and pricing of this now scarce resource were also important instruments. Water management devices were installed for the highest users, which shut down water access if the household used more than 350 liters over a 24-hour period. This amount indicates that the crisis mainly impacted the behavior of the middle class, rather than the poor in Cape Town who already relied on much less water for their daily use. But changing the environmental footprint of the middle class is an important, if not always easy, task for today’s local governments.

NEW WAYS TO HARNESS WATER

Necessity is often the mother of invention. The threat of running out of water made the city rethink where it gets its water from in the first place. Cape Town commissioned three small temporary desalination plants to obtain water from the sea. These plants can now deliver up to 16 million liters a day, and the city is considering

making arrangements for permanent desalination, which is reflected in the new Water Strategy.

Another, often underused method, is to recycle used water and upgrade it to drinking water again through treatment. New groundwater resources are also being explored throughout the region.

CLIMATE CHANGE MEANS WATER CHANGE

Jeremy Rifkin has argued in his best-selling book *The Third Industrial Revolution* that we should rebrand “climate change” as “water change” so people will understand what is really at stake. Indeed, climate change will increasingly mean a change in water patterns. Just look at what’s happening around the world. Glaciers, which in turn feed many rivers, are receding. Precipitation patterns are changing,

monsoon seasons altering – and so on. And with this comes the inevitable rethinking of our water resources.

In the end, water shortage will mean lifestyle changes. And even though the crisis in Cape Town is over for the moment, the municipality will continue to monitor individual water usage and work for long-lasting behavior change. To them, it is all about moving towards becoming a water-sensitive city where not a drop is wasted and conservation and innovative ways of dealing with water provision are celebrated.

Water is of course the basis for all life on the planet, and one question remains open: how can we make sure that our fellow species get their share of it as well? In Cape Town volunteers set out to rescue thousands of dehydrated flamingo chicks from the local dam that dried out. All chicks recovered – this time. But that’s a story for another day.

➔ Some facts about Cape Town

Main impacts of the water crisis:

- Public health (in particular, risk for vulnerable populations)
- Fire risks
- Poverty (inflation, job losses and increased food prices)
- Businesses (e.g. those connected to agriculture and tourism)

Timeline of the water crisis:

- 2014/15 Cape Town began experiencing droughts
- 2017: low overall rainfall and droughts bringing the city’s water restrictions from level 3B to level 6
- Jan 2018: “Day Zero” plan announced
- June 2018: dam levels increased to 43% of capacity due to good rainfall and behavioral interventions - the city announced “Day Zero” was unlikely during 2019
- Sep 2018: dam levels close to 70% of capacity - the city eased water restrictions

WWF’s One Planet City Challenge is the largest and longest running of its kind. From 2019, participating cities will be evaluated against their alignment with the goal of 1.5°C of maximum global warming. Cities will further be guided to big win impact reductions. Read more here: panda.org/opcc

Resources:

- <http://cip.csag.uct.ac.za/monitoring/bigsix.html> (CSAG website)
- <http://www.capetown.gov.za/Family%20and%20home/residential-utility-services/residential-water-and-sanitation-services/make-water-saving-a-way-of-life> (“Think Water”, from the online website of the City of Cape Town)
- <http://coct.co/water-dashboard/> (The Water Dashboard, from the online website of the City of Cape Town)
- <https://news.nationalgeographic.com/2018/02/cape-town-running-out-of-water-drought-taps-shutoff-other-cities/> (“Why Cape Town is running out of water, and who’s next” - National Geographic)
- City of Cape Town Communication Department, Media Office