

COUNTRY	CITY	POPULATION	LAST REPORTED EMISSIONS	MITIGATION AND ADAPTATION OBJECTIVES:
SOUTH AFRICA	CAPE TOWN	4,700,000	20,351,323 TCO ₂ e (2018)	GHG EMISSIONS: -9.41% BY 2030. WATER SUPPLY: 99.5% ASSURANCE OF SUPPLY BY 2030.

Three years after a record water shortage, Cape Town has turned into an award-winning water-saving city

Cape Town is renowned around the world for being a city that risked running out of water due to severe drought. In March 2018, at the height of a multi-year drought – the worst on record – the dams supplying the city dropped to one fifth of their capacity. A disaster was only avoided by the combined effort of residents and the city reducing water use through a range of technical and behavioural interventions. Cape Town has since won an award from the International Water Association as the first city to reduce water demand by half in just three years without resorting to intermittent supply, and has become known as the best example of a water-saving city in the world.

Situated on the coast of the southern-most tip of sub-Saharan Africa, Cape Town is particularly vulnerable to climate change induced droughts, and is predicted to see lower and less reliable rainfall in the decades and centuries ahead. At the same time, Cape Town has challenging socio-economic issues, with many of those facing ongoing water stress being economically and socially marginalised. This combination of challenges became particularly visible during the drought, which lasted from 2015-18.

Cape Town's Water Strategy

As a result, the city is now committed to strengthening its water resilience and thereby improving the quality of life of its citizens. This commitment was made official in the [Cape Town Water Strategy](#), which details five separate commitments aimed at achieving 99.5% assurance of water supply by 2030.

Cape Town's drought adaptation and water security strategy is a key pillar of the city's fight against climate change. Cape Town is opting for a multi-dimensional approach, including behaviour change, demand management through pressure management and leak prevention, and implementing supply augmentation interventions such as desalination, groundwater use, water reuse and clearing invasive alien vegetation.

A core commitment in Cape Town's Water Strategy is safe access to water and sanitation. The Water and Sanitation department can make the most difference here by increasing availability of toilets, locating them strategically, and promoting alternative typologies that remove the need to leave the home at night.

Secondly, the city is committed to promoting the wise use of water by all. This is achieved by revising by-laws and planning requirements, managing the water network more efficiently to reduce losses and non-revenue water, and promoting water-saving behaviour. Overall water use has reduced from 250 litres per person per day in 2004 to 140 litres per person per day in 2021.

Another core pillar of the water strategy is to secure a sufficient, reliable supply of water from diverse sources, including groundwater abstraction, water reuse, and desalination. In total, the city is aiming to bring online approximately 300 million litres per day of new water over the next ten years, and in additional increments thereafter. This will be done through new incentives and regulatory mechanisms as well as through the way the city invests in new infrastructure.

A multifaceted implementation

Tapping into groundwater is well underway with two new aquifer abstraction schemes having been established during the drought and an upgrade of an existing one having taken place. Managed Aquifer Recharge will be employed to maximise groundwater recharge and storage and prevent sea water intrusion at the Cape Flats Aquifer project as this is a shallow/unconfined aquifer. Furthermore, the design of desalination and water reuse schemes are well-advanced. Lessons have been learned during operation of temporary desalination and a water reuse demonstration site that were procured during the drought emergency.

Cape Town's relationship with how it uses and consumes water is thus changing rapidly. With the World Health Organisation stating that each person needs 50 litres of water per day for our basic needs, much is still to do to secure a sustainable pathway to the city's water future for all of the most vulnerable members of society. But the city's pro-active measures to reduce the risk of severe drought and its resilience during the water crisis are great examples of local adaptation leadership, preventing a near catastrophe in 2018 and boosting resilience and preparedness for the future.