

## MAKING CHENNAI A WATER-WISE CITY

Relevant for: Geography | Topic: Distribution of key natural resources - Water Resources incl. Rivers & related issues in world & India

An operator filling his water tanker at a Metrowater station in Chennai in June. Even if there are bountiful monsoon years, it is unlikely that the southern metro will become a water-surplus city.

| Photo Credit: [Atul Loke](#)

The public discourse on Chennai's ongoing water crisis has been along predictable lines. Source augmentation, deepening of waterbodies and giving rainwater harvesting a renewed emphasis are among the suggestions being made, apart from demand-side management. But these ideas, however well-meaning they may be, have their limitations. There is a compelling need for a paradigm shift in the way the water crisis is being viewed.

When it comes to source augmentation, in the last 40 years, a couple of major projects were taken up for Chennai to tap both fresh water and sea water.

The Krishna Water Supply Scheme or Telugu Ganga Project (1996) and the New Veeranam Project (2004) were implemented using two important inter-State rivers — the Krishna and the Cauvery, both of which depend on the southwest monsoon (June-September).

Though the Krishna Water Supply Scheme, if realised fully, can take care of at least half of the Chennai Metropolitan Area (CMA)'s projected water demand of 1,721 million litres a day (MLD) for 2020, Tamil Nadu has not received the assured quantum from Andhra Pradesh even once in the last 20+ years. As regards the Cauvery project, the 'upper-riparian attitude' of Karnataka determines the flow to Tamil Nadu. In effect, realisation of water by Chennai hinges on nature and inter-State ties, both of which are, more often than not, unpredictable.

Another source since 2017 for the city has been the abandoned stone quarries located on the outskirts, from where water is drawn for public water supply after treatment.

Further, two desalination plants of 100 MLD each were commissioned in 2010 and 2013. Work has begun on another desalination plant of 150 MLD while steps are on to set up another 400 MLD unit. However, given the costs and environmental concerns, it is unlikely that Chennai can afford to stretch this option beyond a point.

Deepening of tanks and lakes, a popular option, is easier said than done. Issues such as the costs involved in removing and transporting the silt and inadequate disposal arrangements have bothered the authorities to such an extent that nothing much has been done.

As regards rainwater harvesting (RWH), it cannot be a panacea and site-specific requirements will have to be kept in mind while putting up RWH structures. The model of storing rainwater and reusing it may demonstrate the efficacy of RWH.

Many of the options being suggested to overcome the distress situation faced by Chennai have been tried out in the past. Yet, just one bad monsoon has pushed the city to yet another water crisis. This scenario may get repeated in the future too.

Even if there are bountiful monsoon years, the prospects of Chennai becoming a water-surplus city are remote. An official document prepared a few years ago estimated that the CMA, which covers not only Chennai Corporation but also nearby municipalities, town panchayats and

village panchayats, will have a shortfall of 1,089 MLD in 2020. Even assuming that the southern peninsula experiences good southwest and northeast monsoons this year, the gap can come down only by a maximum of 400 MLD.

A note available on the website of The Energy and Resources Institute states, quoting the Central Public Health and Environmental Engineering Organisation, that the average water supply in urban local bodies of the country is 69.25 litres per capita per day (LPCD) against the service level benchmark of 135 LPCD. For a metropolitan city like Chennai, the benchmark goes up to 150 LPCD. If one were to go by the admission of Chennai Metrowater, the service level achieved in March 2018 was 112 LPCD. This is why the need for a paradigm shift becomes all the more important.

Just as in many other Indian cities, the concept of waste-water recycling and re-use has not yet caught the imagination of either the authorities or the public in a big way. The demand-supply gap will be a permanent feature of urban India unless society realises the critical importance of recycling and re-use of water. It needs to be noted here that on an average, 85 litres of water goes waste for every 100 litres utilised.

There is also another reason why the concept ought to be popularised. According to information furnished by the Centre, while urban areas of the country generate 61,948 MLD of sewage on a daily basis, the installed capacity of sewage treatment plants (STPs) is just 23,277 MLD. This means that only 37.5% of sewage generated can be treated. As per a conservative estimate, Chennai generates about 930 MLD of sewage, whereas its STPs can handle 727 MLD. With rapid urbanisation, the space for new plants is hardly available in peri-urban areas of Chennai, a scenario applicable to any other city in India. As a result, the city's rivers and canals have been reduced to carriers of raw sewage. Over and above these reasons, one of the targets set under the 2030 Agenda for Sustainable Development, adopted by UN member-countries in 2015, is to halve the proportion of untreated waste water.

There are numerous ways through which waste water can be treated at the point of generation. Several Information Technology companies, located outside the city limits, have adopted the concept as they have their own STPs and use the treated water for non-consumptive purposes such as gardening and flushing toilets. Some high-end residential apartments too have begun implementing the idea.

Realising the potential benefits, Chennai Metrowater has at last launched work on establishing two tertiary treated reverse osmosis plants of 45 MLD each. The process will involve sewage treatment in three stages and will use reverse osmosis system through which most of the dissolved solids and bacteria will be removed from the treated sewage.

Besides, projects are on to experiment with the idea of conjunctive use of fresh water and treated sewage — mixing treated sewage with fresh water by letting it into the lakes of Porur and Perungudi. These are only some modes of water treatment, the scope for which is enormous and still untapped.

All said, a wise society cannot allow itself to become complacent once the rainy season starts. The present debate needs to be taken forward so that waste water is reused and recycled in an imaginative and optimal way. This way, Chennai can take pride in being a water-wise society.

ramakrishnan.t@thehindu.co.in

Support quality journalism - [Subscribe to The Hindu Digital](#)

Please enter a valid email address.

The commitment to end the AIDS pandemic by 2030 needs strong and fearless leadership

Already a user? [Sign In](#)

To know more about Ad free news reading experience and subscription [Click Here](#)

or Please whitelist our website on your Adblocker

**END**

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

CrackIAS.com