DECCAN HERALD

# Disappearing lakes

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**Urban India is witnessing a rapid growth with more than 300 million Indians already living in cities and towns. In the coming 20-25 years, another 300 million people will get added to the urban population. If not managed properly, Indian cities will turn into ecological disaster zones. In a hurry to expand, cities have already eaten into their local water bodies, the so-called sponges, which not only help in flood control, but also contribute towards groundwater recharge.**

Take the case of New Delhi, where a survey conducted last year by the Delhi Parks and Gardens Society revealed that out of the 611 water bodies in Delhi, 274 have already dried up and as many as 190 cannot be revived anymore. A number of lakes at the outskirts of Delhi have disappeared too. Rewla Khanpur village in South West Delhi once had seven water bodies, but none exist today. Experts point out that these water bodies in peri-urban villages were filled up when the city expanded and land prices shot up.

This destruction of urban water bodies has been reported across the Indian landscape. A 2012 study, Urban Flood Management – A Case Study of Chennai City, has reported that Chennai had about 650 small and big water bodies, but these are reduced to less than 30 now. As per the records of the Water Resources Department, the area of 19 major lakes in the city has shrunk from a total of 1,130 hectares (ha) to 645 ha. Hyderabad, too, has lost 3,245 ha area of its water bodies in the last 15 years. In 1960s, Bengaluru had 280 interlinked tanks, which reduced to less than 80 in 1993. A recent audit check of 10 lakes in Bengaluru has revealed large-scale encroachment, dumping of debris, release of untreated sewage, delay in restoration work and other lapses.

What is killing our lakes?

The New Delhi-based Centre for Science and Environment (CSE) carried out a study and found that in 2001, 137 lakes were listed in Ahmedabad, Gujarat. But, by 2012, 65 were already destroyed and built upon. Residents of the city are fighting legal battles to protect their water bodies. A PIL was filed in the high court in 2000 to protect Chandola Lake.

Recently, another PIL has been filed to stop encroachment and dumping of waste in water bodies in Thaltej area of the city. There are several threats to the urban water bodies. These include pollution, encroachment, construction activities, illegal-mining activities and ungoverned tourism. In its 7th State of India's Environment report titled, Excreta Matters, CSE has calculated that almost 80 per cent (30,004 million litres daily) of the total sewage generated in class I and II cities is released directly into the water bodies without any treatment. For instance, 500 million litres of untreated sewage is discharged daily into Varthur, Bellandur and Challaghatta lakes of Bengaluru.

Other causes for the destruction of urban water bodies is the encroachment and haphazard construction activities, legal and illegal. In Bengaluru, Akkithimmanhalli Lake is now a hockey stadium; Dharmanbudhi Lake is Kempegowda Bus Station; Sampangi Lake is Kanteerava Sports Complex; and the Koramangala Lake is National Games Complex. The Bengaluru Development Authority has already submitted a report to the Upalokayukta informing that 14 layouts have been developed on the City lakes.

Urban water bodies have also become waste dumping grounds. Deepor Beel, a famous wetland and Ramsar site in Guwahati, Assam is facing acute pollution due to dumping of garbage by the Guwahati Municipal Corporation. Similarly, Pallikaranai swamp in Chennai is threatened due to dumping of garbage by the civic authority. This is not only destroying the water source (including groundwater), but also spreading diseases among the local residents.

A direct impact of destruction of these water bodies is increased urban flooding. Cities are also losing out on other important ecosystem services that lakes offer in the form of drinking water, supporting biodiversity, recharging aquifers, and providing recreational space. As groundwater levels are dipping, cities are sourcing their water from hundreds of kilometres away. Jodhpur's water supply comes from Indira Gandhi Canal, which is 205 km away.

Balsamand Lake, which was once the only source of drinking water for Jodhpur, has been destroyed due to illegal mining for building materials. Mumbai's water supply comes from dams and lakes over 120 km away; Chennai's water is sourced from Veeranam Lake, some 200 km away; and Hyderabad gets its water supply from Krishna River 116 km away. No wonder the municipalities today spend around 30-50 per cent of their money on electricity to pump water, while almost 30-50 per cent of the water is 'lost' in leakages.

Protecting urban water bodies

It was only in 2001 that the Union Ministry of Environment and Forests developed a separate programme called National Lake Conservation Plan to conserve urban water bodies. However, only a few states have developed state-level conservation plans. In spite of releasing Rs 351 crore till March 2011, only 18 lakes have been revived.

Sector experts are demanding more teeth for laws to protect urban water bodies. CSE has prepared a model draft regulation for the protection of inland water bodies in South Asia. The draft stresses on empowering local communities to participate in management, conservation and restoration of wetlands. It also calls for creation of a Central Wetland Management and Conservation Authority. States such as Karnataka, Madhya Pradesh, Odisha and Jammu and Kashmir have already set up an apex body for lake conservation.

There are examples of citizens coming together to revive lakes. Kaikondrahalli Lake and Jakkur Lake in Bengaluru have been restored by the local residents and authorities. Scientists with the Indian Institute of Science claim that using the integrated wetlands ecosystem model, which was adopted to revive Jakkur Lake, all the lakes in Bengaluru can be rejuvenated within a year or two.

Protection of urban lakes will be incomplete unless the city planning authorities ensure that the rainwater flows freely into the water bodies. Rather than putting a monetary value on the land occupied by the water bodies, it is time urban India recognised the ecosystem services provided by these shrinking water sources. Else the smart cities will only end up digging their watery graves.