

# WAKE-UP CALL

## for cities to manage water, treat sewage

Radheshyam Jadhav | TNN

**Pune:** Big cities like Pune and Mumbai have lessons to learn from the precarious situation they placed themselves in when the monsoon was deficient in June and drinking water had to be rationed.

With little being done to boost depleting ground water levels and untreated sewage released into the rivers, water resources are becoming a cause for concern. "Water pollution due to municipal sewage and industrial activities, unsatisfactory sanitation, mismanagement of available water resources and the depletion of ground water in Maharashtra is a worry. Local bodies must take some action now," said activist Sampatrao Pawar.

The state government data over the years on per capita water supply reflects striking disparities in urban centres and within different areas of a city. Mumbai has a maximum average water supply of 200 litres per capita daily (LPCD), but the supply in different areas of the city is skewed. While slums barely get 90 LPCD, the upmarket areas get 300 to 350 LPCD.

The quantity of inland water resources in Maharashtra is about 3.39 lakh hectare, which accounts for 4.93% of the total inland water resource in the country. However, the state houses 9 per cent of the country's population according to the 2001 census. This indicates that the per capita water available in the state is lower than the national average. Rivers and canals in Maharashtra together run for 16,000 km.

Water supply in the urban and rural areas is far from uniform. More than 245 urban centres have piped water supply schemes for drinking while in rural areas people have to trudge for miles to get a pot of water.

Experts have offered solutions to augment and conserve fresh water supplies. Recycling of effluent for industrial applications, desalination of sea water, recycling of sludge and sewage for secondary purposes like flushing toi-

lets, gardening, vehicle washing and rain water harvesting for drinking and secondary purposes.

In Mumbai, before the water cut came into effect a few months ago, the Brihanmumbai Municipal Corporation used to supply approximately 3,450 million litres of water a day. But when the catchment areas of the lakes supplying water did not record substantial rain, the civic body introduced a 10 per cent water cut and then raised it to 15 per cent. Water supply was between 2,850 million litres and 2,900 million litres daily to the city. The rainfall activity later improved in July.

In Pune too, the civic body imposed a 40 per cent water cut in view of the

tamination and power consumption.

Urban water supply is a state subject and as such a responsibility of the state governments/urban local bodies. They have to plan, design, execute, operate and maintain water supply projects with funds from the state.

To supplement these efforts, the urban development ministry extends additional central assistance under the Jawaharlal Nehru National Urban Renewal Mission. As many as 151 water supply projects at an estimated cost of ₹ 19,570.04 crore and 418 projects at an estimated cost of ₹ 7,867.21 crore have been approved under the Urban Infrastructure and Governance and Urban Infrastructure Development for Small

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depleting water levels in the four dams that supply water to the city. Even though the rainfall activity has improved and at least two reservoirs store more than 80 per cent water, the city continues to receive water once a day.

In Nanded, water supply system is largely confined to the northern parts. Here too its coverage in terms of house connections is less than 50 per cent of the property tax assessments and less than 40 per cent of the total residential units in the city.

There is no proper zoning system as the two original zones are no longer relevant. There are numerous water connections and cross-connections. This has resulted in an inefficient distribution system fraught with leakage, con-

and Medium Towns, respectively.

"The central government is funding the overhaul of the water supply systems in the cities. But the local bodies should be proactive and initiate steps to complete works like fixing leakages and curbing water thefts," said Vivek Velankar of Sajag Nagrik Manch, a local organisation.

The PMC's Environment Status Report for 2009 had observed that, "The old water supply lines are rusted and require repairs. The PMC lacks a system to control water supply. Faulty meters and absence of water supply data make it difficult to calculate water usage." The ESR also said that with no maps of the old water pipeline network, it was difficult to carry out repair works.

Several cities are grappling with water crises and raw sewage. The last part of the series on JNNURM's projects and the problems looks at how urban centres should act fast

### STATE'S RIVERS NEED ATTENTION

**THE CENTRAL POLLUTION CONTROL BOARD (CPCB) REPORT SHOWS THAT MAHARASHTRA HAS THE LARGEST NUMBER OF POLLUTED RIVER STRETCHES IN THE COUNTRY**

- It has identified 26 rivers in Maharashtra with 28 polluted stretches. Mula and Mutha in Pune, Kalu and Bhatsa in Thane and Mithi river in Mumbai are the prominent ones
- Domestic and industrial sewage is a source of pollution
- The Kundalika river, which flows through the Sahyadris in Raigad district and is popular with river rafters, now has a polluted stretch.
- Nira, a small tributary of the Bhima in Solapur, and Kanhan, a river flowing through Nagpur have been polluted because of industrial as well as domestic effluence.
- The CPCB has marked 150 polluted river stretches in India, which includes almost all the major rivers.
- After Maharashtra, Gujarat has the most polluted rivers. Industrial activity remains a major source of pollution.

### METRO SCENE

**THE 35 METROPOLITAN CITIES (WITH MORE THAN 10 LAKH POPULATION) GENERATE 15,644 MLD. THE TREATMENT CAPACITY EXISTS FOR 8,040 MLD WHICH MEANS ONLY 51 PER CENT IS TREATED.**

- Among the metropolitan cities, Delhi has the maximum treatment capacity of 2,330 MLD (30% of the total treatment capacity of metropolitan cities)
- In Hyderabad, Vadodara, Chennai and Ludhiana and Ahmedabad, treatment capacity meets the volume of generation.
- Delhi and Dhanbad have more than 50 per cent capacity while the remaining have less than 50 per cent capacity

### IN CLASS I CITIES

There are **498** Class I Cities (those with **1 lakh** population)

- Nearly **52%** cities (**256** of the **498**) are in Andhra Pradesh, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal. The sewage generated is an estimated 35,558.12 MLD
- Almost 93 per cent of the wastewater is generated in Class-I cities.
- Treatment capacity is 11,553.68 MLD, about 32 per cent of the sewage
- Of the 11,553.69 MLD sewage treatment capacity, 8,040 MLD (69%) is treated in 35 metropolitan cities. This indicates that other than metropolitan cities, the capacity of 462 Class-I cities to treat waste water is only 31%.

### WHAT CAN BE DONE

**SEWAGE GENERATION FROM CLASS I CITIES AND CLASS II TOWNS (AS PER 2008 ESTIMATES) IS 38,254 MLD. BUT THEY CAN TREAT ONLY 11,787 MLD, ONLY 30% OF THE GENERATION**

Municipal authorities shall pay attention to setting up sewage treatment plants to prevent this pollution. This activity should be recognised as one of the most important indicators of overall development of the country.

Considering the widening gap between sewage generation and treatment capacity, an action plan is necessary to fill up this gap in a minimum time frame.

Considering the urgency of preventing pollution of our water bodies and preserving water resources, sewage treatment and reutilisation of treated sewage need higher priority.

Operation and maintenance of existing plants and sewage pumping stations is neglected, as nearly most of the treatment plants are not conforming to the general standards prescribed under the Environmental (Protection) Rules for discharge into streams.

Rivers, which are a source of drinking water, are most polluted. Hence, an action plan to arrest the pollution needs to be prepared and implemented.

Ground water recharging may be tried with treated wastewater to replenish the ground water levels.

Reuse of treated municipal wastewater should be encouraged in industries.

Use of treated municipal wastewater for irrigation and fodder cultivation should be encouraged. The revenue will be used to supplement the sewage treatment costs.



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## Sewage treatment has long way to go

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NURM.

**Pune:** The state government in 2008 made it mandatory for large constructions—like malls, hotels and even residential complexes—to have on-site treatment of sewage water. The new rules for waste treatment made it necessary for every new construction with more than 60 units or 240 residents to have a plant. Any project with an area of over



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2,000 sq m was also brought under the ambit of the rules.

However, the situation has not changed and cities like Mumbai and Pune have not ensured 100 per cent sewage treatment facilities.

The Brihanmumbai Municipal Corporation (BMC) has decided to set up seven sewage treatment plants over the next two years. These plants will treat about 2,600 MLD and use it for non-potable purposes. The BMC has sought ₹ 1,400 crore for the project under the JN-

STOWAD) project so far out of total approved central assistance of ₹ 1,200.53 crore.

The Pune Municipal Corporation (PMC) has drawn up a plan which includes setting up of eight new sewage treatment plants (STPs) at a cost of ₹ 271.60 crore to achieve 100 per cent sewage treatment for a pollution-free Mutha. The civic body will seek central government funds to restore the river.

The move came after Union environment minister Jairam Ramesh's observation

that there was 'visible deterioration' of the Mutha when he visited Pune on June 19 for a public consultation on the proposed national green mission initiated by the environment ministry.

Ramesh wrote to chief minister Ashok Chavan saying that if the state government came up with a proposal to improve the condition of the river, the ministry would support it. The state government then directed the civic body to come up with a plan.

The PMC's plan moots 100 per cent sewage water treatment and its release into the Mutha. "The PMC has plans to tackle river pollution to ensure that the Mutha will flow clean within two years," said municipal commissioner Mahesh Zagade.

The plan, to be implemented by the Maharashtra Jeevan Pradhikaran (MJP), has been forwarded to the state government which can provide financial aid to implement the project for sewage treatment. At present, of the 744 million litres of sewage generated daily, the city's mechanism can treat only 497 MLD. The remaining 247 MLD (33 per cent) is released untreated into the river. There are other pollutants like solid garbage, industrial effluent and truckloads of construction rubble dumped into the river.

Nanded is working on a comprehensive sewerage master plan (including slum sanitation) which will focus on the

densely populated areas and potential development areas.

Nashik Municipal Corporation has adopted activated sludge process to treat sewage. "Treatment plants in the city are facing problems as sewage collected exceeds the designed capacity of the treatment plants resulting in undesired quality of treated sewage. The increase in the quantity of sewage is due to urban population growth," the city development plan said.