PUNE DOESN'T NEED A NEW DAM, IT NEEDS PROPER MANAGEMENT

Deputy Chief Minister and erstwhile Water Resources Minister of Maharashtra Ajit Pawar has made a statement suggesting that PMC should build a new dam for water supply to the city, on the lines of Mumbai (e.g. Lokmat Pune Edition, Frontpage Headline, 090312). By saying so he is echoing the thoughts of exclusively supply management approach which is prevalent in our Water Resources Department as well as Municipal Corporation.

Before coming to any such conclusion, the Water Resources Department needs to make a public statement about allocation of water from Khadakwasala, Warasgaon, Panshet and Temghar dams and Khadakwasala canals to various sectors, including Private Townships like Lavasa and Nanded City, Pune City, Industrial Area and Water Users Associations. This data should be analysed for equity and water use efficiency.

Pune Municipal Corporation should come out with a White Paper (not two-page note in the Environment Status Report) about:

- Precise monthly need of the city and usage, with details of sectors, population and water use for each ward
- Current per capita water supply in different areas and sectors
- Projection of future need
- The amount of polluted waste water that it treats, with figures for each STP along with the input and output quality and quantity, design parameters and month wise figures of returns to the specific canal network and the river
- Functioning bulk water meters and their month-wise readings
- Water audit that shows the sources, use, losses, sewage outputs and quality and quantity of treated and untreated sewage and where it is released

The White paper should also include the status of implementation of options like the following:

- **Present Water sources within the city:**
  Pune sits amidst some excellent traditional water sources. The two Katraj tanks built across Ambil Rivulet, which supplied water to old Pune still harvest huge quantities of water. Volume of the Katraj lake alone is more than 3 MCM (300 crore litres of water). So does the Pashan tank on Ramnadi, which supplied water to the Pashan area and University. The catchment area of this tank is more than 40 sq. kms.

  Utilising these and other such water sources within and around the city can help Pune's water security, and can be an inspiration for other cities across the country which are facing similar challenges, especially Mumbai, Delhi and Bangalore. Pune has been spending considerable amounts every financial year for centralised water treatment and supply. With political willingness and societal support, these sources can be utilised.

  Watershed development work to be carried out on the hills surrounding Pune along with afforestation and reforestation. This will stop run off and increase ground water recharge.
  Pune city has a large number of wells which are now closed. These can be put back in use for conjunctive water use.

  Rainwater Harvesting:
  - How much water is being currently harvested (and/or recharged) in the city?
  - Mapping aquifers is a critical step to planning rain water harvesting, which can be more effective if implemented through a comprehensive area based approach.

- Though the PMC has made RWH mandatory for new buildings, there is no monitoring to check if the system is in place and functioning. These systems need to be monitored, just like elevators are monitored.
- For a phased program, initially rainwater harvesting should be made mandatory for big buildings and complexes like government offices, shopping malls, movie theatres, industries, colleges and schools as well as open parks and water bodies under the PMC. The owners/ managers of these building should be given a deadline of one to two years to achieve functioning RWH systems, with publicly declared information how they do that and consequences to follow for those who do not achieve this in stipulated time and manner. The system should be monitored after two years for its efficiency and steps should be taken against defaulters.

Pune receives more than 700 mm rainfall annually. This means that a building with a roof area of 2000 sq feet has a runoff of 130000 litres annually. Considering 100000 litres of water is actually harvested, this can suffice water use of two people for an entire year (at around 135 lpcd). This is to indicate the potential of RWH, which is currently unexplored in Pune. According to GSDA report, groundwater levels in the city have dropped by more than 8.75 meters. Recharging groundwater by recharging the existing 5000 borewells and 400 open wells through rainwater harvesting can help conjunctive water use in the city.

- **Waste Water Treatment and reuse:** Pune produces more than 744 Million litres of Sewage every day of which less than 30% is treated. All of the 7 Sewage treatment plants run at less than 50% of their designed capacity in addition to huge quantity of sewage which flows in the river directly.

  Pollution caused by Pune is wreaking havoc with the riverine ecosystem and downstream areas of Indapur, Daund towns and settlements around Ujani Dam, as far as Solapur. People from Ujani cannot drink surface water, cannot even use it for irrigation in many instances. Fish kills are common in the river and the reservoir. MPCB River Water Quality Status Report from 2007-09 lists 30 stations with 'very bad' Water Quality Indices out of which **a staggering 16** are from Pune and Pimpri Chinchwad Municipal Corporations!

  Pune has been spending huge amounts on setting up Sewage Treatment Plants. The General Body meeting on 29th February 2012 again said that 51 crores have been kept aside from the current Annual Budget for 10 more STPs.

  But why do we not see any results? Why is the huge investment failing everytime? Why is there no credible external audit of the efficiency and functioning of these sewage treatment plants? Why is there no transparent, accountable, participatory governance mechanisms for each of the STP?

- **Losses** It has been estimated that wastages and leakages in Pune's water supply system amount to more than 40%. Answering a question in GB Meeting of the PMC in Sept 2011, the PMC Water Supply Department had agreed that it does not have the figures of water wastage and leakage and no projects have been undertaken regarding this for past 4 and a half years. Pune did not have functioning bulk water meters then and it was nearly impossible to comprehend where losses came from. Pune urgently needs to adopt metering system and follow examples of towns like Amravati where the city with Maharashtra Jeevan Pradhikaran overhauled its ageing water system and set up District Metering Areas (DMA), each with 500-2500 connections per **DMA and a bulk water meter at the entrance of each DMA, making it easier to monitor water supply and leakages** and ensure supply efficiency and auditing water use. This can be done without any privatisation or huge loans from international financial institutions like the World Bank, as is being proposed for Pune.

- **Demand Side Management** Pune also needs to assess the water consumption by various sectors and sections and see where it is possible to reduce the unwarranted, wasteful use.

Also those who use higher than minimum quantity needs like Water Parks, swimming pools, etc., to be made to pay for the water they consume. Hotels, Malls, multi storey offices, and such other users can also be asked to put in their own STPs to recycle maximum possible quantity of water in a time bound manner. Instead of looking at Mumbai example only in the context of Dams, we can take lessons from Mumbai, which provides only 90 lpcd water and has asked the citizens to reuse their wastewater in case more in needed. This has also helped in setting up small STPs by apartment complexes and offices in Mumbai.

- **River Encroachment and Concretisation** Under the guise of River improvement and river restoration project, streams and river sections are being channelised and put in pipes, severely affecting groundwater recharge and flood absorption, besides killing the stream and river section biologically and socially. Instead of exclusively focussing on such investment-intensive river destruction options, Pune needs to work on river and stream restoration through citizen's participation urgently.

- **Democratic Water Governance:** Accountable water governance where the citizens are participant and aware of the investments and projects, can monitor progress and question the functioning of departments is a necessity for efficient water use in Pune.

The respected Deputy Chief Minister quoted the example of Mumbai and how it is building dams in surrounding areas. **What he forgot to mention was that these dams will be coming up at a huge societal and ecological costs, profiting only the contractors and babus.** More than 30000 tribals will be displaced for these dams which will submerge more than 14000 hectares of rich Western Ghat Forests and villages. Work on many of these dams is going on ILLEGALLY, without any environmental or other statutory clearances in place and the Water Resources Department has been conveniently ignoring the fact. In fact work on one of the Dams, Kalu has been stayed by the Bombay High Court recently because it does not have the requisite permissions and also because the ecological and social impacts are very high, but have not even been assessed.

Keeping all these factors in mind, it is entirely unjustified, immoral and unacceptable for a city like Pune, which has not worked seriously on any of the options for reducing and reusing its water, to simply ask for a new dam. This new dam will be built at a great cost to a vulnerable society and ecosystem. Pune does not deserve this at least till all options listed above are assessed and exhausted.

Pune faces a number of challenges, but there are a number of opportunities in the situation as well. With political will, transparent administration and citizen's participation, the current crisis can be transformed into an opportunity for the city to take sustainable, wise decisions about managing its water resources not only for the present, but for the coming generations.

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