

Harvest rainwater, hit the roof!

An Ancient Technique Gets A Thumbs Up In The Concrete Jungles Of Urban Dwellings, Finds Out **Sudeshna Chatterjee**

Heard of rooftop rainwater harvesting? The next time you visit Kachrali Lake, take a cautious walk around the temple to understand one of the easiest and oldest ways of harvesting rainwater. The rain water being pure can directly be stored for drinking purposes as is being done at Karnataka. About 23,683 schools in Karnataka through the Rural Development and Panchayati Raj system, have undertaken rooftop rainwater harvesting technique with storage tanks to address the issue of scarcity of drinking water. But at Kachrali Lake, the issue is more to ensure steady flow of water. "For continuous flow of water round the year, it is important to maintain the water table of the surrounding area and hence rooftop rainwater harvesting technique with percolation well is introduced here as it is the easiest to construct and most economic in terms of both construction and maintenance costs. That 90 per cent of lakes in Thane inevitably have a temple to it therefore only helps in the process," observes architect and town planner Pallavi Latkar. Along with her team, Latkar gave shape to this ongoing Thane Municipal Corporation (TMC) project. "This is a pilot project and there are plans afoot to introduce

rooftop rainwater harvesting system at the TMC building itself," informs public relation officer, TMC, Sandeep Malvi.

So, one might wonder how does a rooftop rainwater harvesting system operates? (See sketch). "The PVC pipes are firmly fixed horizontally to the sides of the temple. The rain water from the roof gets collected here. Then through another set of pipes placed vertically, the collected water goes to the percolation well located close by," explains a team member of Latkar, Sachin Waghmare. While water management has been practiced by the Indians over the ages, even during the time of Harappan civilization and much later as seen in the rainwater harvesting structures in low rainfall areas in Rajasthan and percolation tanks and ponds in southern India, today the need to implement techniques of rainwater harvesting with percolation wells has become all the more necessary.

"With excessive extraction of water through bore wells, the level of the water is declining at an alarming rate across the country in the urban areas. Percolation well is a long-standing and economic solution to ensure stable water table," informs Latkar. It is a soak-pit, dug at shallow levels,

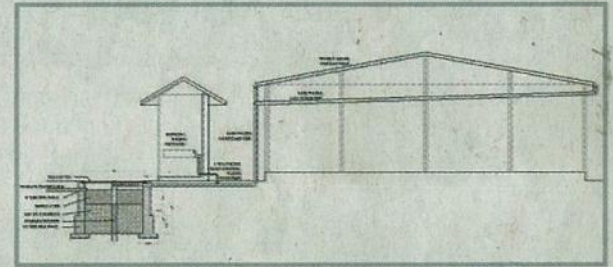


with a brick wall and comprises of sand, different sizes of pebbles and perforated pipes. The well is closed from the top and opens at the bottom. Unlike storage tanks,

the rain water so harvested from roof tops of buildings and run through percolation wells assures stable level of water table of the surrounding area throughout the

year. Which means, the water bodies in the adjoining areas will always be replenished to some extent throughout the year, goes the explanation.

File Photo



This is a sketch of the model implemented at the Kachrali Lake (L) for the purpose of rooftop rainwater harvesting

And to say that the project does not need much of maintenance only help in the long term. Just before the monsoon, the roofs need to be cleaned once to ensure that no bird droppings, leaves, dirt etc can flow in the collected water. To ensure doubly, the first wash is not allowed to percolate. Since, only about 10 percent of water gets lost by way of roof absorption and in the collection process, most of the volume gets collected. To ensure, that there is zero wastage of water like zero garbage, the water so wasted from a nearby drinking water fountain is also used up. "Some amount of water gets wasted when people are drinking water or when any of the taps are left half closed or not functioning etc. Every drop

counts. So, there is a pipe connected with the fountain to make this wasted water flow into the percolation well," points out Waghmare.

The entire technique, costing about Rs 35,000, is in place and running at the Kachrali Lake. An attractive informative signage is expected to be put up soon. "The signage in marathi will explain the visitors about this technique," says Latkar. Let's hope, more Thane residents get inspired to have the model of rooftop rainwater harvesting technique set up in their houses, offices, shops etc so that Thane becomes a green city in more ways than one.

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