

CATCH EVERY DROP - Rainwater harvesting is nobody's child

New Delhi

TIMES NEWS NETWORK

Policy Muddle Equally To Blame For Programme's Failure

For years the city has drawn more water from the ground than what rain puts back inside. At most places, water is found at more than 50-metre depth. Aware of the approaching crisis, Delhi high court had forced the city government to enforce rainwater harvesting on a large scale. The court regularly monitored progress of the programme and the chief secretary was required to submit a status report every six months. But the last time such a report came was two years ago.

Vinod Jain, director of Tapas, the NGO on whose PIL the court issued the order on rainwater harvesting, says the programme has failed in Delhi because there is no institutional framework to guide it. "Central Ground Water Authority (CGWA) was made the nodal authority but no single agency is responsible for ensuring that it is done. Delhi Jal Board gives permissions for borewells and billing incentives, municipal corporations are supposed to ensure implementation but take no interest, and CGWA does not have staff for monitoring. I will now take the case to National Green Tribunal," he said. No agency has any information on RWH structures in the city. DJB only has data on permissions granted for borewells. Due to lack of maintenance, many RWH structures are useless. "RWH is pointless if any part of the structure is blocked, or pollutants are going into it," said Jyoti Sharma, director of Force, another NGO. "Lack of maintenance has rendered many RWH structures useless. Also, unless RWH is done across the city its benefits are limited," she added.

But Sushmita Sengupta from Centre for Science and Environment says maintaining a harvesting structure is extremely easy. "We have about 17 structures at CSE and spend just about Rs 1,000 to maintain them every year."

There's no clear policy on RWH. In 2001, the urban development ministry made rainwater harvesting mandatory for any structure occupying 100 sqm land or more.

But the current master plan allows 90% ground coverage for such plots, leaving hardly any space for RWH structures. Last year, the environment department found that many people dig up pits claiming that they will harvest rainwater but actually withdraw ground water.

Many experts say it is best to build these structures at the colony level, or in parks, flyovers and wetlands. Manu Bhatnagar, who heads the natural heritage division of conservation body Intach, said RWH structures should be sturdy. "The design is often not right. Large volumes of water pass through narrow pipes which get clogged in no time." He gave the example of check dams in Sanjay Van that have helped recharge an old well. "The water table is at 60-70m in that area but we found

water at 4m in the well. The Hauz Khas Lake has probably managed to put around 1,000 million litres of water into the ground. Wetlands are equally important recharge zones.”



LET IT FLOW

Rainwater harvesting potential in Delhi
60 million cubic metres*
 (1m³=1,000 litres)

That's **3,500 litres or 13 days'** average water availability per person

But hardly any rainwater is saved. Delhi Metro has water harvesting systems at **63 stations**

Source: Groundwater recharge strategy for Delhi submitted to DJB

WHAT RESIDENTS CAN DO

Collect rainwater in plastic tank through terrace/balcony chute

Annual rainfall in Delhi: **611mm** (usually spread over 27 days)

This water can be used for household cleaning, washing & watering of plants

At ₹4 per litre (approx), it's the cheapest rainwater harvesting system

Storage in a permanent concrete tank costs ₹8-10 per litre

Underground recharge wells or pits can be developed in areas where groundwater is scarce. Rainwater from roof will flow directly into it. Drilling a 2-3m³ well will cost ₹50,000-75,000. A smaller pit of about 2-3ft³ will cost ₹8,000-10,000

HOW TO MAINTAIN IT

- Keep all catchments neat and clean
- Don't allow contaminated water to flow into system
- Put iron, nylon mesh or fine cloth on inlet/outlet pipes and chambers to prevent debris from getting into system
- Clean open drains regularly by removing deposits of sand & gravel
- Drain and clean storage tanks thoroughly before every monsoon
- Change filter media every year
- Remove algae from roof tiles and asbestos sheets before monsoon
- Do not let water stagnate in the collection chamber as this will slow down recharge

LET'S DEPEND ON NATURE

The best way to harvest rainwater is to rejuvenate dead wetlands, storm water drains and irrigation canals. Conservation body Intach claims Hauz Khas Lake has recharged **800 million litres** of groundwater in nine years