Water crisis in Bengaluru

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Why is in news? What has caused the water crisis in Bengaluru, neighbouring areas

An acute drinking water crisis in Bengalurhas been creating international headlines for the past few days. On April 18, Karnataka Chief Minister Siddaramaiah said Bengalurwas facing a shortage of 500 million litres of water every day, which is about a fifth of the city's daily total demand. The CM said arrangements were being made for additional supplies for Bengaluru.

However, the shortage of water is **not restricted to Bengaluru**, and neither is it only a drinking water problem.

The entire state of Karnataka, as also the **adjoining areas of Telangana and Maharashtra**, are facing water scarcity. Much of this has to do with the lower-than-normal rainfall in this area in the last one year and the nature of underground aquifers in this region.

Day Zero:

Day Zero is a term used to describe the day when a **city's municipal water supply is expected to be depleted entirely**, forcing authorities to shut down water connections for homes and businesses.

India's Status:

India has 4% of the world's water resources

India has 1123 billion cubic metres of surface and groundwater resources.

According to the Central Water Commission, India receives 4,000 billion cubic metres in rainfall, which is higher than its requirement.

However, in 2023, around 91 million Indians will not have access to safe water. This data indicates the massive water shortage in India.

Reasons behind the water shortage in Bengaluru:

Depleting Groundwater Levels: Over-exploitation of groundwater through borewells is a common practice in both urban and peri-urban areas of Bengaluru. This unregulated extraction has led to a dramatic decrease in groundwater levels, making it unsustainable in the long term.

Rapid Urbanization: Unplanned urban sprawl has led to the loss of lakes, wetlands, and green spaces, which traditionally recharged the groundwater. Many lakes that exist are heavily polluted and encroached upon, reducing their effectiveness as water sources.

Inefficient Water Management: Leakage and inefficiency in the water distribution network result in significant water loss. Estimates suggest that around 40-50% of water is lost due to leaks and unauthorized connections.

Over-dependence on Distant Sources: Bengalurprimarily relies on the Cauvery River for its water supply, which is located about 100 kilometers away. The dependence on a single, distant source puts the city at risk, especially during drought years.

Pollution of Water Bodies: Industrial and domestic wastewater has led to the pollution of the remaining water bodies, making the water unfit for consumption or even agricultural use.

Climate Change: Altered rainfall patterns, with extended dry periods followed by heavy monsoon rains, challenge the existing water management infrastructure, making it difficult to capture and store water effectively.

Some of the solutions and Efforts:

Efforts to address the Bengalurwater crisis involve a **multi-faceted approach**, focusing on both supply-side and demand-side solutions.

Rainwater Harvesting: Encouraging rainwater harvesting in residential and commercial buildings can help replenish groundwater and reduce dependence on distant water sources.

Wastewater Treatment and Reuse: Expanding and upgrading wastewater treatment facilities to enable the reuse of water for non-potable purposes can relieve pressure on freshwater resources.

Lake Restoration: Reviving and restoring the city's lakes can help recharge groundwater, improve biodiversity, and create additional water reservoirs.

Leakage Reduction: Investing in the modernization of the water distribution network to reduce leaks and unauthorized use can significantly improve water availability.

Public Awareness and Conservation Measures: Educating residents about water conservation techniques and implementing stricter regulations on water use can help reduce demand.

Management Frameworks: The Integrated Water Resource Management (IWRM) framework must be the main emphasis of groundwater planning and management. It encourages the coordinated management of resources related to water, land, and other relevant resources.

Measures taken by the State Govt:

The BengalurWater Supply and Sewerage Board (BWSSB) has **introduced fines**, beginning at ?5,000, for non-essential use of potable water such as gardening and car washing.

The Karnataka government has **capped water tanker prices** based on distance travelled to avoid customers being overcharged. The government has also made it mandatory for the private water tankers in the city to register with the civic body.

The government intends to take control of private borewells within the city and its vicinity.

Key Government Schemes To Tackle The Groundwater Crisis in India:

MGNREGA: Supports water conservation through rural employment.

Jal Kranti Abhiyan: Raises awareness on water conservation.

National Water Mission: Promotes sustainable water management.

Atal Bhujal Yojana (ABHY): Improves groundwater management.

Jal Jeevan Mission (JJM): Aims to provide tap water to rural households.

National Mission for Clean Ganga (NMCG): Addresses Ganga basin groundwater issues.

Conclusion:

The management and security of water supplies for the people of Bengalurare made more difficult by disputes over water sharing between Karnataka and adjacent states, especially about rivers like the Cauvery.

Addressing the Bengalurwater crisis requires concerted efforts from the government, private sector, civil society, and citizens to ensure sustainable water management practices that can support the city's growth without compromising its water security.