

From AWWAIndia

It's Time to Address India's Water Challenges



Indians are a water-stressed people. According to NITI Aayog, the country's per capita water availability has declined about 70 percent during the past 60 years. As a result, nearly 600 million Indians face high to extreme water stress.

The paradox is that India's annual water requirement is 3,000 billion cubic meters, and the country receives 4,000 billion cubic meters of rain every year on average. Is it germane to ask how a country of 1.3 billion people fails to use one-fourth of the water it receives annually from the rain gods?

The amount of usable water equates to about 1,123 billion cubic meters a year, comprising 690 billion cubic meters of surface water and 433 billion cubic meters of "replenishable" groundwater. Groundwater is the most used source in drinking water projects.

Time for another paradox: India extracts more water than China and the United States combined. Only 8 percent of extracted groundwater in India is used for drinking purposes, which results in more than 16 crore Indians (including 84 percent of rural homes) having no access to clean water—the highest in the world.



Water queues are becoming a common site in India's densely populated areas.

To exacerbate this, more than 70 percent of the country's water is contaminated, resulting in two lakh deaths every year.

To add another dimension to this conundrum, the National Green Tribunal (NGT) estimated that almost 60 percent of sewage generated by urban India remains untreated. In addition, this untreated sewage enters water bodies such as lakes and rivers, creating a negative environmental impact and making the water unfit for use. An estimated 62 million liters per day (MLD) of sewage is generated in urban areas, but the treatment capacity across the country is only 23 MLD (i.e., 37 percent). Out of 816 municipal sewage treatment plants (STPs) across India, only 522 are functional. This means that only 19 MLD of sewage gets treated, implying that 70 percent of the sewage generated in urban India goes untreated.

The Jal Jeevan Mission to ensure Har Ghar Jal (piped water) to all rural households by 2024 prioritizes the government's intent to provide "access" to safe and adequate drinking water. In providing piped water access, the per capita investment spending could range around INR 8,000-9,000. This would amount to spending at least INR 5.6tn-6.3tn over FY2020-2025 and would be almost double water and sanitation spending from FY2014-2019.

Unquestionably, this presents a huge opportunity for those involved in the water treatment and supply value chain. However, the challenge can't be fixed techno-managerially. Its implementation needs to be seen through the twin prism of nudge economics and the hydro-social cycle, especially when a NITI Aayog report grimly forecasts water demand will be twice the present supply and India could lose up to 6 percent of its gross domestic product. Without water reuse and rejuvenation of water bodies, the mission may end up becoming only a "pipe dream."

The effort and cost for providing piped drinking water to every household are mammoth, but achieving these goals doesn't solve India's water crisis. Effectively maintaining and managing the upstream and downstream issues of this campaign, as well as effectively managing India's water assets, pose even bigger challenges. AWWA reports such as "Buried No Longer" and "State of the Water Industry" shed light on the financial, social, and ecological cost of building, operating, financing, and maintaining an enormous infrastructure without compromising on public health.

During the last three years, AWWAIndia has been taking steps to improve India's water stewardship with its thought leadership efforts to help the country's battle-hardened water professionals navigate and succeed in solving India's water problems while building an inclusive ecosystem in line with the U.N.'s 2030 Agenda for Sustainable Development, "Leaving No One Behind." AWWAIndia's campaign focuses on technological adoption for water utilities, capacity building, best practices and standards to help realize its stated goal: "Better India through Better Water."

— Aninda Sen,
Executive Manager, AWWAIndia office