

## **Catch the rain and save our soil: Let's solve the rural water crisis**

**- By Amitabh Kant**

Precipitated by climate change and practices, India's water crisis is rapidly reaching a flash point. Water is essential for life, and history teaches us that civilizations have had to adapt or face dire consequences when water becomes scarce. For instance, lack of water has led to mass migrations of people and even wars over resources.

Over the past 25 years, India's drought-prone regions have increased by more than 50%, with increasing frequency on account of climate change. In the last ten years, one out of every three of India's districts have experienced more than four droughts. This situation poses a significant threat to a nation where nearly half the population relies on agriculture, with most farming being rain-fed. This reliance on rain means that farmers are vulnerable to changes in weather patterns, which can threaten food security, economic stability, and the livelihoods of millions.

Finding solutions to the water crisis is crucial for rural development and food security. One important point of intervention is to improve water storage and focus on replenishing groundwater. The idea to "Catch the Rain – Where it Falls, When it Falls" has resulted in projects like the Amrit Sarovar initiative – a which aims to build or revive 75 ponds per district, totalling 50,000 water bodies across the country. In tandem, it encourages communities to get involved in managing their water resources.

Historically, civilizations have always settled near water sources. In rural India, farmers traditionally depended on local water bodies for both agricultural and personal use. These bodies would fill during the monsoon months and provide water throughout the year. Many of these water bodies were percolation tanks, which helped recharge the groundwater table, acting like a bank does for our savings to be used when we need to draw them in times of need. However, many of these sources have been affected by silt buildup and over-extraction of water, leading to a decline in groundwater levels.

Silt buildup occurs when fertile topsoil washes away into nearby water bodies during heavy rains, reducing both soil quality and the amount of water these

bodies can hold. This has made water scarcity a bigger problem in many parts of India.

Rejuvenating these silted water bodies can be a cost-effective solution. The first-ever Water Body Census by the Ministry of Jal Shakti found over 2.3 million rural water bodies in India. By focusing on larger water bodies owned by the government or communities in drought-stricken areas, we could revive over 200,000 water bodies. This could potentially provide water security to over 300 million citizens at a very low cost, funded through existing government schemes. Restoring these water bodies can have a wide-reaching impact, benefiting entire communities by providing them with a reliable water source.

### **The Community-Centric Model**

A successful example of community involvement is an initiative by NITI Aayog under its Aspirational District Program, in six states. The government funded the excavation of silt in the water bodies, while farmers covered the cost of transporting it to their fields. A foundation dedicated to water security supported the process, including building an open technology platform to monitor the progress, funding local NGOs to create community demand for the silt.

Farmers found such an arrangement beneficial as the silt is highly nutritious, enhancing soil fertility and reducing the need for chemical fertilizers. Plus, using natural silt instead of artificial fertilizers can lead to healthier soil and better crop yields in the long-term.

In regions where silt is not fertile (for example in places like Sirohi district of Rajasthan), it was used for other community projects like levelling roads or building playgrounds. This model exemplifies the power of collaboration between Government, community, and civil society to solve critical issues.

Chhatarpur, located in the drought-prone Bundelkhand region of Madhya Pradesh, offers a compelling case study of this approach. This district has long struggled with erratic rainfall and low water retention capacity of the soil, severely affecting agricultural output. The terrain and extensive deforestation further exacerbate drought conditions, leading to high soil runoff and reduced groundwater recharge. In 2022, NITI Aayog began reviving water bodies in

Chhatarpur, creating additional storage for 1.5 million litres of water across 164 water bodies – which helped 182 villages and around 270,000 people.

Farmers in Chhatarpur have noticed major improvements in their water levels and crop yields thanks to these efforts. For instance, Pramod Chaurasia, who used 90 loads of silt from a cleaned pond on his one-acre farm, saw his income double with better harvests of tomatoes and chilies.

The government spends about Rs. 5 lakhs to clean a water body, which greatly increases water storage and helps replenish groundwater. Farmers benefit from using the silt, as it boosts their crop yields and reduces the need for fertilizers. Many similar success stories show how community-driven water body rejuvenation can change lives.

According to a study by Deloitte, the NITI Aayog initiative, which started in 2022, rejuvenated 351 water bodies, impacting over 2.2 million people in 379 villages across three states, at a cost of Rs. 9.3 crores. This created 3.13 billion liters of new water storage, highlighting the effectiveness of such projects.

Other initiatives, like Gal Mukt Dharan in Maharashtra and Sujalam Sufalam Jal Abhiyan in Gujarat, also demonstrate success. These projects show that even small steps can lead to significant improvements in water availability. Expanding these community-focused projects could significantly improve water availability for rural areas. It is estimated that spending around Rs. 1,500 crores each year for five years could help cover 260,000 villages in water-stressed regions, easing the water crisis for 300 million people and boosting the income of 5 million farmers.

Rejuvenating silted water bodies is an affordable and effective way to tackle this urgent problem. India's political will is moving in the right direction, as demonstrated by the commitment to sustainable water management practices. It is Prime Minister Narendra Modi's phrase 'Catch the Rain – Where it Falls, When it Falls,' that underpins this vision and emphasises the importance of collective action in addressing the water crisis. It's vital for everyone, across sectors and demographics, to work together to create a sustainable and thriving rural India.

*\*The author is India's G20 Sherpa and former CEO, NITI Aayog. Views expressed are personal.*