

# Challenges in Water Governance

## A Story of Missed Opportunities

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Seriously water-stressed and facing an unprecedented crisis, India is confronted with many challenges in the water sector, including the lack of reliable information on water, absence of any initiative to restructure the water institutions, a distressed groundwater lifeline, push for large dams, increasing footprint of the urban water sector, and the sorry state of its rivers. Yet, these fail to be taken up as electoral issues.

India is facing an unprecedented and worsening water crisis. The rivers are getting more polluted, their catchments, water-holding and water-harvesting mechanisms are deteriorating, and groundwater levels are depleting at an alarming rate. A large part of western and southern India is facing a drought at present. Some of these areas, for example, Kerala and the Cauvery basin in Karnataka and Tamil Nadu, are the areas that faced floods recently. When general elections are being conducted against this backdrop, one naturally expects, though unfortunately in futility, that water scarcity, its management, and challenges become one of the major election issues.

Amongst the challenges that the water sector is confronted with, the first is that of the lack of credible “water information,” that is, information about water storage, groundwater, water flows and, in some cases, even rainfall and snowfall levels. Access to accurate water information could help one understand the risks and urgency of the situation and steer towards informed decisions. As the Mihir Shah Committee report (2016) and the NITI Aayog report (2018) admitted, India is farthest from this goal. The NITI Aayog report, for example, says:

Data systems related to water in the country are limited in their coverage, robustness, and efficiency. First, data is often not available at the adequate level of detail. For example, water use data for domestic and industrial sectors is available at only the aggregate level, and thus provides very little information to relevant policymakers and suppliers. Second, where data is available, it is often unreliable due to the use of outdated collection techniques and methodologies.

The NITI Aayog report, however, fails to mention the main offender. That, in

fact, brings to attention the second big challenge of the water sector, the water institutions whose restructuring was the focus of the Shah Committee: Central Water Commission (cwc), Central Ground Water Board, Central Ground Water Authority, State Pollution Control Boards and Central Pollution Control Board, among others. These institutes may have a slightly different evolution trajectory, but they show a typical top-down, bureaucratic, unaccountable, non-transparent and non-participatory mindset. The cwc as the main body is an outdated mega institution with conflict of interest among its various functions and suffers from poor credibility. The opportunity to restructure these institutions that was presented by the Shah Committee recommendations (2016), got lost for a number of reasons, including inaction due to the absence of political will and interest.

### Unsustainable Extraction

The committee rightly pointed to the next big challenge before India—groundwater—as it faces a crisis of sustainability. There have been several warning bells about this, including by the National Aeronautics and Space Administration (NASA 2009), based on a study of depletion in groundwater levels in north-western India from 2002 to 2008. More recent research has reinforced

that North India is most affected, and is guzzling down groundwater at a rate 70% faster than estimated earlier (*Economic Times* 2019), but western and southern India are not far behind. Groundwater is, has been, and is going to remain India's lifeline for a long time to come. But, neither national policy nor national or state water resource establishments acknowledge this reality. There is an urgent need that our plans, projects and programmes get tailored keeping this reality in mind and work to protect groundwater recharge, enhance recharge where possible, and most importantly, regulate the use of groundwater.

Given the gravity of the situation, if groundwater sustainability becomes the



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officially acknowledged objective, there may not be any case for big dam projects, which both directly and indirectly adversely affect groundwater recharge and sustainability. And, yet, it is the big irrigation, hydropower, multipurpose and river-linking projects that are getting a push. In addition to the irregularities in the big irrigation projects, according to the Ministry of Agriculture and Farmers' Welfare data, net area irrigation by major and medium irrigation projects (all irrigation large dams broadly come under these projects) at the all-India level having reached a peak of 17.7 million hectare (ha) in 1990–91, have never reached that level again, with the sloping trend in recent years coming down by over 1.5 million ha (Thakkar 2018).

The union minister of power has repeatedly acknowledged in Parliament that big hydropower projects are no longer viable. The Prime Minister, however, had also been inaugurating hydropower projects in different states, including Jammu and Kashmir, and Arunachal Pradesh. Moreover, on the eve of the general elections, the government declared a slew of incentives for these projects (PIB 2019), while the industry lobby promptly came out with more demands. In a rare instance, when a water sector concern became an election issue, it was in the general elections of 2014 when Narendra Modi repeatedly told the people of North East India that if they do not want big hydropower projects, his government will not build those. This issue became politically important due to the prolonged mass struggle in Assam against the 2,000-megawatt (MW) Lower Subansiri Hydropower project that led to its stalling from 2011 till date. However, during his election campaign in 2019, he retracted, saying that “the northeast has the power to become new India’s energy hub and the government is working hard to develop the region to realise this dream” (PTI 2019).

India, with the world’s largest water infrastructure, faces a “turbulent future,” according to a report on the country’s water crisis (Briscoe and Malik 2006). The water infrastructure continues to perform far below its optimum, as India is not allocating even a fraction of the

required annual maintenance budget of \$4 billion that it needs. It faces grave dam safety issues, as was also evident in the case of Kerala floods in August 2018. Even as the World Bank, as ever, is ready to fund more billions for dam safety, it will not help without making the governance of the water sector democratic. India has the third largest number of big dams in the world, and with their increasing age, the issues of structural and operational safety are becoming more and more urgent, but it still does not have a dam safety act.

One of the key justifications put forward for the push for more dams in India, has been the advocacy for storage. There is no doubt that the water available mostly during the four months of monsoon needs to be stored to make it accessible through the year. However, the unjustified advocacy of big hydropower projects is one of the causes for the water crisis and farmer distress in India, as it has also led to complete neglect of essentials of water storage, the local water systems, rivers, wetlands, forests, soil moisture, and groundwater aquifers and their sustained effectiveness.

Soil moisture represents another major challenge. For the farmers facing increasingly irregular rains with changing climate, the increased capacity of soil to hold moisture is hugely useful, as also are the local water storage and sustained or enhanced groundwater levels. The capacity of the soil to store water increases when there is more carbon in it, and this can be achieved with the use of greater organic inputs. More carbon in the soil is also great news for mitigating the emissions-inducing climate change. But, serious schemes are needed for achieving this.

### Reviving the Rivers

The state of the rivers in general, and of the Ganga in particular, represents one of the most spectacular failures of the Modi government. Modi had promised to rejuvenate Ganga in his pre- and post-election speeches. Union Minister of Water Resources, River Development and Ganga Rejuvenation Nitin Gadkari has been making rather slippery promises about the improvement in the state of

pollution of the Ganga. During the recently concluded Ardh Kumbh Mela at Prayagraj, as is the usual practice, there was improvement in the waters of the Ganga due to a number of temporary measures, including increased water release from the Tehri dam, stoppage of polluting industries, ensured functioning of sewage treatment plants and even bioremediation of some of the streams. However, as soon as the mela ended, the river was again as polluted as ever (SANDRP 2019).

The October 2016 Ganga notification of the National Democratic Alliance (NDA) government was indeed a positive move, which provided a possibility of a bottom-up governance of the river, but the notification has never been implemented with any seriousness. Most shockingly, the apex body, the National Ganga Council, headed by the Prime Minister, never met. This notification had, in fact, replaced the National Ganga River Basin Authority of 2009 that had independent members, and removed the provision of inclusion of such independent-minded persons. Even as more than ₹20,000 crore were allocated in the name of rejuvenating the Ganga, numerous massive projects, including waterways, dredging, riverfront development, *char dham* highway, hydropower projects, and interlinking of rivers like the Ken Betwa link work contrary to the rejuvenation objective. Most of these interventions were taken up without any impact assessments, public consultations, or even appraisals or statutory clearances.

There are many sub-issues that would need to be addressed to revive the rivers. These include monitoring of water quality and environmental flows, protecting the floodplains and sustainable biodiversity in the rivers, achieving sustainable sand mining, and credible reservoir and flood management, among others. It is not clear if the proposed National River Ganga Bill will address these issues, which, in fact, are faced by almost every other river in the country. The environmental decision-making process that affects the water sector is another major mess that needs urgent attention. There is a need for credible environmental and cumulative impact assessments, genuine public consultation process at

multiple stages of planning and project implementation, confidence-inspiring appraisal, which includes the appointment of independent experts, and most crucially, achieving some real monitoring and compliance. The NDA government has been consistent in its attempt to dilute the whole process rather than strengthen it.

### Water Footprint

The NDA government, while claiming much about smart cities, mentioned nothing about a water-smart city. As the urban water footprint is going up by leaps and bounds in multiple ways, there is a need for a national urban water policy to guide the urban water sector. Be it Delhi, Chennai, Bengaluru, Mumbai, Hyderabad, Kolkata, Guwahati, Bhopal, Ahmedabad, almost every city is water-stressed and yet does not have a concrete plan to follow up on the basic steps. Cities need to stop the destruction of local waterbodies and local tree cover, treat its sewage properly, harvest rainwater, and stop straightening and concretising the rivers and encroaching on their floodplain. The Sabarmati Riverfront Development, which has been touted as a success story, is actually a destruction of the river as an ecosystem and presents a potential flood threat to Ahmedabad city, particularly in the context of changing climate.

There are a number of other challenges that India's water sector faces. As the NDA government's slogan of "Har Khet Ko Pani" (water to each field) implies, every farmer would benefit from better district-, block- and village-level water management. In this context, the key is to achieve appropriate cropping pattern, but there is no move to achieve that objective. There is no justification for sugar cane in Marathwada, western Maharashtra, northern Karnataka, or the Cauvery belt in Tamil Nadu, or even in the Gangetic plains in western Uttar Pradesh, or for the wheat-rice cycle in north-western India. The impacts of climate change are already being felt, most importantly by the farmers, fisherfolk, coastal residents, tribals and mountain residents, but the government has neither recognised them as climate victims, nor has any made provision to ensure justice

to them for their suffering. It continues to remain ill-prepared to face the recurring calamities.

The primary need is to address the democratic deficit in water governance. The first step in tackling this would be the recognition of this reality as a problem. The water governance ought to be made transparent, accountable and participatory in every sub-sector, including management of rivers, groundwater, floods, and biodiversity, among others. There is no doubt that the current government has failed to perform in almost every aspect of the water sector. It has been largely a story of missed opportunities. However, continuing to miss these opportunities will be disastrous for India.

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