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Water governance reforms overdue

FIRE FIGHTING. A regulator for the entire water sector at the State level is needed. Only 5 States have water regulators



SK SARKAR

At 1.4 billion, India accounts 17.5 per cent of the world's population but has only 4 per cent of the fresh water resources. The per capita annual fresh water availability has gone down from 5177 cu m (1951) to 1486 cu m (2019) (see Table). Thus India is a water stressed country; out of 766 districts, 256 are water stressed. By 2050, India is likely to experience water scarcity.

Among the G20 countries, India's per capita GDP is the lowest. India aspires to become the second largest economy by 2047. This will have an enormous impact on the use of water resources by various stakeholders. India receives water during monsoon and from the melting of ice.

Rainfall is erratic and the data (1990-2021) show that about 30 per cent of the districts received less than normal South-West monsoon rainfall in 20 out of 32 years. This tendency is likely to increase in the coming years due to global warming and climate change.

The water sector hasn't seen the kind of far-reaching reforms the electricity and telecom sectors have witnessed. Water management is beset by bureaucratic hurdles, there's lack of equity in water access, and British common law, especially in giving unlimited power of groundwater withdrawal to the owner of land (Article 7(g) of Easement Act 1882), is still followed.

Cooperative federalism in water governance, adoption of multidisciplinary expertise, bridging silos in water sector, and building multi-stakeholder partnership are the need of the hour.

G20 EXPERIENCE

Recent meetings of G20 countries discussed innovations in water management in the areas of water use efficiency (Turkey, the UK, Saudi Arabia, India); river rejuvenation (Australia, China, France, India, South Africa); climate resilient infrastructure (the UK and the US); safe drinking water (Germany, India, Mexico); water supply augmentation (Saudi Arabia); efficient water governance (Japan, Saudi Arabia); waste water management (India, Saudi Arabia); watershed management

Economy and water resources of G20 countries

Countries (G20)	Population in 2021 (in thousand)	GDP per capita in PPP 2021 (\$)	Rainfall (2019) annual in mm	Per capita annual water availability (2019) in cu m
Argentina	45,908	21,537	591	6,498
Australia	25,688	49,774	534	19,416
Brazil	214,326	14,552	1,761	26,730
Canada	38,246	47,893	537	75,795
China	1,412,360	17,603	645	1,998
France	67,750	44,953	867	2,968
Indonesia	273,753	11,858	2,702	7,488
Italy	59,109	41,929	832	3,055
Japan	125,681	40,784	1,668	3,396
Mexico	126,705	19,086	758	3,270
Turkey	84,775	31,467	593	2,719
UK	67,326	44,979	1,220	2,169
US	331,893	63,670	715	8,583
Germany	83,196	53,180	700	1,288*
India	1,407,563	6,592	1,105	1,486*
Republic of Korea	51,744	44,232	1,274	1,253*
Saudi Arabia	35,950	44,339	59	67*
South Africa	59,392	13,312	495	771*

Source: Ministry of Jal Shakti (2023) @Water stressed country *Water scarce country

(Australia, Saudi Arabia); and groundwater management (China and Slovakia). These approaches are worth emulating. Although per capita annual renewable water is 67 cu m (2019) in Saudi Arabia, it has one of the highest per capita income in the world. In 2018, the country developed National Water Strategy (NWS) 2030 based on integrated water resources management approach.

The objective was to attain water availability, comply with quality, achieve environmental and economic sustainability and affordability, and reform the water and wastewater sectors to ensure the development of water resources. The strategy was taken up by restructuring of the water sector to increase efficiency, setting regulations, building capacity, and increasing reliability.

Under the NWS, a few sector agencies

The water agencies established in Saudi Arabia are worth emulating given that rainfall is erratic due to global warming.

were positioned for improved water management: (a) the Ministry of Environment, Water and Agriculture is given the overall in-charge of developing sector strategy, managing surface and ground water resources, and ensuring that all the water agencies work together; (b) the bulk water supply agency is the Saline Water Conversion Corporation which is responsible for desalinated water production and transmission to major urban areas; (c) the Water Technology and Transmission Company will own and operate long distance water transmission network; (d) the National Water Company deals with national water including wastewater as a utility; (e) the Saudi Water Partnership Company deals with build, operate and transfer contracts, wastewater treatment plants, water transmission lines and water storage facilities; (f) the Saudi Irrigation Organisation is in charge of building up of the country's irrigation infrastructure, and developing the wastewater reuse sector, and (g) there is an overarching water regulator for regulating water management within the sector including setting water tariffs.

The adoption of NWS has resulted in reduction of agricultural use of non-renewable groundwater resources

from 20.6 bcm (2017) to 9.7 bcm (2022), and there is an increase in reuse of water from 17 per cent of total treated wastewater to 24 per cent (2022).

AGENDA FOR ACTION

In India, water is a State subject except inter-State regulation of rivers which, as per the Constitution of India, is under Central purview. Therefore, any water sector restructuring should be mainly at the State level with proper overview by the Central Government. An institutional mechanism covering the Centre and States should be created to work for cooperative federalism in water governance. The existing National Water Resource Council should be revamped.

Second, the water agencies established in Saudi Arabia are worth emulating given that rainfall is erratic due to global warming. For example, establishing institutions akin to those set up by Saudi Arabia may enable India achieve higher irrigation water use efficiency, better treatment of wastewater and their use, greater private sector participation in water sector, etc.

Third, there is a need to introduce an overarching institution for regulating the entire water sector at the State level. At present, out of 28 States, only a few have water regulators. Their jurisdiction on the overall performance of the water sector is not comprehensive, and their core functions such as tariff regulation, checking quality of service and monitoring compliance, monitoring the utility's financial viability, adjudication of disputes, consumer protection, and enforcement of licencing conditions are not explicit. A model water regulatory framework should be developed for adoption by various States, and they should be incentivised for early introduction of water regulators.

Finally, the existing institutions operating at the Central State levels need to be examined. At Central level, the CWC (Central Water Commission) and CGWB (Central Ground Water Board) need to be restructured to ensure multidisciplinary expertise with various divisions reflecting various water priorities. States should also examine their varied water institutions/departments for sustainable water resource management in the states. This approach will enable India to achieve various Sustainable Development Goals by 2030.

The writer is Distinguished Fellow, The Energy and Resources Institute (TERI), and former Secretary, Ministry of Water Resources

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Drains polluted, NGT summons Irrigation Dept Engineer-in-Chief

Tribunal dissatisfied with his reply on complaint | Channels flow into Yamuna

MUKESH TANDON
TRIBUNE NEWS SERVICE

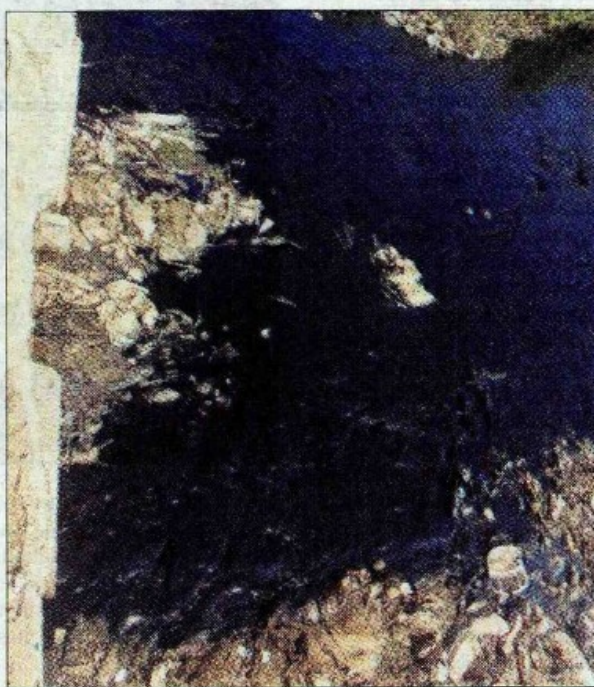
PANIPAT, JANUARY 1

Dissatisfied over the reply filed by the Engineer-in-Chief (EIC), Irrigation and Water Resources Department, over severe pollution in the Drain Number 6 and Drain Number 8, flowing in the Sonapat-Kundli region leading to Yamuna, the National Green Tribunal has directed the EIC to appear before the tribunal personally. He has been asked to show cause as to why he should not be prosecuted for violations in the past.

Dr Lokesh Kumar, a resident of Sonapat district, in his complaint filed with the NGT, said a drain concerned passed from Sonapat via Barota to Piau Maniyari/Kundli and finally reaches Delhi. The drain is maintained by the Irrigation and Flood Control Department but is filled with trash, garbage, silt, litter and sludge. It is not cleaned and dredged on a periodic basis. It overflows into Drain Number 8 and pollutes it.

Following the complaint, the NGT had constituted a joint committee and sought a factual and an action-taken report. The joint committee inspected the region and collected samples from various places of both drains and submitted a detailed report to the NGT in November.

As per the report submitted to the NGT, the committee found ammoniacal nitrogen concentration from 2.24 to



Garbage accumulated in Drain Number 6 in Sonapat district.

SAMPLES FOUND CONTAMINATED

■ A panel set up by the NGT found ammoniacal nitrogen concentration and a large number of faecal coliform bacteria in water samples collected from the drains concerned

■ It observed that one of the drains was carrying highly coloured waste water, an indicator of severe water pollution. These drains flow through the Sonapat-Kundli region into the Yamuna

16.24mg/litre and a large number of faecal coliform bacteria (over 400 MPN/100ml) in water samples. It observed that Drain Number 6 was carrying highly coloured waste water, an indicator of severe water pollution. The entire area along the drain emanated a foul smell.

Untreated discharge from the Sonapat MC was also

being done at several places. It is estimated that about 31.48 MLD of untreated sewage is discharged from 27 untapped points, the report says.

Birender Singh, Engineer-in-Chief (EIC), Irrigation and Water Resource Department, filed his reply to the NGT in which he said that sometimes there were mishaps in the new Drain Number 6, caus-

ing spillage, but the same was controlled immediately by the Irrigation Department, Haryana, at Delhi. However, this spillage did not affect the drinking water supply of Delhi, as Haryana is supplying water through the canal system. "Even if we consider this spillage, which is not more than a few cusecs in any case, its quantum of water can't pollute river. Therefore, there is no such pollution causing harm to water treatment plants at Delhi," he said.

The EIC said to avoid any remote possibility of any adverse impact of the new Drain Number 6, parallel to Drain Number 8, a scheme for the construction of closed conduit pipeline for the disposal of untreated effluents of Drain Number 6 in the bed of diversion Drain Number 8 was under consideration of the state government. "After approval, at least two years will be required to complete this work," he said.

Dissatisfied with the reply of the EIC, the NGT in its orders on December 22, said the reply was filed very casually without any sincerity. The NGT directed Birender Singh to appear before the tribunal on the next date of hearing.

The NGT also directed the EIC to take remedial measures in view of the observations and recommendations made by the joint committee and file an action-taken report within two months.

The next hearing in the matter is fixed for March 6.