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What is the debate on the Dam Safety Bill?

Why are stakeholders concerned about ageing dams? Can Parliament frame a law for a State subject?

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The story so far: The Dam Safety Bill, 2019, which provides for the surveillance, inspection, operation and maintenance of all specified dams across the country, and has been debated for decades, finally got the nod of the Rajya Sabha on Thursday (December 2), after a four-hour discussion. In August 2019, the Bill was approved by the Lok Sabha.

Why is a law on dam safety required?

■ India ranks third globally with 5,745 large dams in operation. According to the National Register of Large Dams prepared in June 2019 by the Central Dam Safety Organisation (CDSO) in the Central Water Commission (CWC), 67 dams were built prior to the 20th century and 1,039 dams during the first 70 years of the 20th century. For stakeholders of the water sector, ageing of dams in the country has been a matter of concern. Jal Shakti Minister Gajendra Singh Shekhawat told the Rajya Sabha that since 1979, there were 42 instances of dam failure, the latest being Annamayya reservoir in Kadapa district of Andhra Pradesh that led to the death of at least 20 people in November 2021.

Even though the CWC, along with the CDSO, has been functioning as the apex body to advise States on issues of dam safety, there is no specific Central law that governs the subject, given the situation that the ownership of dams and their maintenance predominantly falls in the purview of the States. In July 1986, a panel of experts recommended to the Centre that a legislation be framed. In 2007, Andhra Pradesh and West Bengal Assemblies passed resolutions empowering Parliament to come up with a law on dam safety, under Article 252. Since 2010, different versions of the Bill were introduced.

What does the legislation seek to do?

■ The Bill covers those dams having the height of over 15 metres and between 10 and 15 metres with certain stipulations. It seeks to create two national institutions -- National Committee on Dam Safety to evolve dam safety policies and recommend necessary regulations, and the National Dam Safety Authority to implement policies and address unresolved issues between two States. The



Shared waters: Water flows out from the Moolathara dam in Palakkad, an important component of the inter-State Parambikulam Aliyar Project, which irrigates western districts of Tamil Nadu • THE HINDU

legislation also envisages the formation of State Dam Safety Organisations and State Committees on Dam Safety. Dam owners will be held responsible for construction, operation, maintenance and supervision of dams.

Why has the Bill become contentious?

■ In the last 10 years, several States, including Karnataka, Kerala, Tamil Nadu and Odisha, opposed the legislation on the ground that it encroached upon the sovereignty of States to manage their dams. Critics also raised the constitutional validity of the legislation in the light of water being a State subject. The silence on the payment of compensation to people affected by dam projects was cited as another shortcoming.

Tamil Nadu has all along been a critic of the legislation as it fears that it will lose its hold over four of its dams, which are located in Kerala. The dams include Mullaperiyar, whose structural stability and safety are being debated for over 40 years, and Parambikulam, an important reservoir that caters to irrigation requirements of the western districts of Tamil Nadu including Coimbatore.

Taking a cue from the 2011 report by the Parliamentary Standing Committee on Water Resources to invoke Entry 56 of the Union List, the Centre framed the legislation, declaring that "it is expedient in public interest that the

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Union should take under its control the regulation of uniform dam safety procedure for specified dams." In his speech in the Rajya Sabha on Thursday, Mr. Shekhawat contended that Entry 17 of the State List (dealing with "water") was no bar for the Union to frame a law on the subject.

However, the PRS Legislative Research, a New Delhi-based think tank,

opined that even then, "it is unclear how Parliament would have the jurisdiction to frame a law for dams on rivers where the river and its valley are entirely within a State." Another point adduced in support of the legislation is that inter-State basins cover 92% of the country's area and most of the dams, making the Centre competent to enact such a law.

What is the way forward?

■ Given the sentiments expressed by a number of parties, including the AIADMK, an ally of the BJP, on the Bill, the Centre can hold talks with the States to allay their fears and frame rules suitably for legislation.

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Floating solar panels to be deployed in 10 reservoirs

KSEB eyeing at least 100 MW by tapping renewable energy

TIKI RAJWI
THIRUVANANTHAPURAM

Grid-connected floating solar panel units will be deployed in 10 reservoirs as part of a larger programme aimed at tapping the renewable energy potential of the State.

The Kerala State Electricity Board (KSEB) has invited requests for qualification (RFQ) from solar power developers for installing floating solar panels in eight reservoirs managed by it and two under the Kerala Water Authority (KWA).

25-year period

The initiative is to be implemented on a design, build, own and operate model with a period of 25 years.

The eight reservoirs under the hydroelectric projects of the KSEB selected for the floating solar programme are Ponmudi, Kallarkutty, Sengulam, Kallar, Kundala, Mattuupetty, Anayirankal and Banasurasagar. The Aruvikkara and Peppara reservoirs in Thiruvanan-

RESERVOIRS

under KSEB

- Ponmudi
- Kundala
- Kallarkutty
- Mattuupetty
- Sengulam
- Anayirankal
- Kallar
- Banasurasagar

under KWA

- Aruvikkara
- Peppara



thapuram district are the two reservoirs under the Kerala Water Authority.

From this project, the KSEB is eyeing a minimum of 100 MW, R. Suku, Director (Renewable Energy and Energy Savings), KSEB, says. The power utility has unveiled its first reservoir-based floating solar facility in the Banasurasagar reservoir in Wayanad in 2017.

Being a State that produces just 30% of its daily power requirement, Kerala is eyeing solar power in a big way

for augmenting its domestic generation. Given the State's geographical peculiarities, scarcity of land is a hindrance in establishing large solar farms. On the other hand, the presence of a large number of waterbodies and reservoirs opens up possibilities for floating solar plants or 'floatovoltaics', according to the KSEB.

According to the utility, its hydel reservoirs are spread over thousands of hectares. The surfaces of these waterbodies can be partially used to commercially tap solar photovoltaic power, the KSEB notes.

"After a preliminary assessment of the technical and environmental feasibility, a detailed bathymetric survey has to be done to map the underwater topography such as depth of bed from the surface and presence of stumps of submerged trees that is usual in dams," the KSEB notes in a November 20 order giving the go-ahead for the initiative.

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As farmers exult, let's not forget the perils of ignoring water crisis

BY INVITATION



MRIDULA RAMESH

The battleground appears to have shifted in the farmers' protest from the repeal of the three farm laws to a legally binding MSP. Leaving aside issues of implementation-practicality, the several-billion-dollar questions are for which crops should MSP be legally binding, where, and for how long? For context, consider that we have gone from being a nation of 220 million eating primarily millets in 1881 to a 1.3 billion rice-and-wheat-eating behemoth today. The price for this transformation has been paid largely from the groundwater reserves of the northwest. It's unclear how long that water will last — one high-level state government committee opined that the groundwater could run out in 20-25 years in Punjab. Between 1966 and 2010, Punjab's annual rainfall has averaged 662 mm, while the rainfall between 2011 and 2020 is 653 mm — not a big fall, but still a fall. How long can farming continue if this fall continues, as some climate models predict? Already, bores are being deepened at a high cost. An attempt to conserve groundwater squeezed crop cycles and caused farmers to burn stubble, contributing to the winter spike in pollution. Given this context, should MSP, a policy tool forged during the droughts of the mid 1960s, be used to encourage the growing of a water-hungry crop in India's dry northwest?

Consider, India's monsoon does not deposit 1,100 mm of rain equally: places like Jaisalmer get about 165 mm, while some parts of the North-East see five metres in a matter of months. Before the British, Indian farmers grew their crops largely in keeping with locally available water and opted for crop varieties that could cope with the vicissitudes of India's temperamental rainfall. But the British changed that with the canals bringing water in and railroads carting produce out. All at once, Indians began to believe that we could grow what we like, where we like. The Green Revolution with its borewells and the ascendancy of central procurement of rice and wheat only strengthened that belief. Only now, as the climate warms, and wet regions become wetter, and dry regions grow drier, that belief is being questioned.

Apart from being geographically varied, India's rainfall is highly seasonal, temporally skewed and varies across years as global phenomena like the El Nino exert their influence. When we ignore these facets, we create faultlines that erupt into crisis. Just last week, South India — Andhra Pradesh, Tamil Nadu and Puducherry — were confronting rivers in spate intent on sweeping away everything in their paths. Earlier, we had the ameliorating influence of tanks that could help moderate intense rainfall and parley between dry and wet seasons. When we began seeing tanks as uncool (and dry tanks as



NO RESPITE: Many Indian cities have slipped into a bipolar reality of floods and drought

prime real estate), and borewells as sophisticated and convenient, many Indian cities slipped into a bipolar reality of flood and drought.

Speaking of ameliorating influences, we must not forget forests and the glowing embers of an incipient water crisis in the North-East. The Jal Shakti of the Brahmaputra comes from both the plentiful rainfall and the emerald forests of Arunachal. Forests trap the rain and send it into cerulean streams which coalesce to form large rivers that feed into the Brahmaputra. In a water-scarce world, both China and India eye those waters hungrily. Moreover, the steep descent of many of the streams sing the siren song of hydropower — a renewable energy source that has become increasingly valuable in a planet short of carbon space. China plans a huge dam (three times the size of the Three Gorges) on the Brahmaputra, just a few kilometres away from the Line of Control. Will forests be cleared to build this dam, or others like it in this region? Will such a dam be able to cope with intense rainfall, which the loss of trees will only make worse (think Kerala floods)? What about the very real risk of earthquakes? Will the dam become a capricious hydro-disciplinary tool?

These are knotty questions with few easy answers, but almost every water crisis in India stems from our disrespect for the tempestuous nature of India's cloud messenger. And so, any action begins with respecting this variability. This means building water storage — something India has too little of. This means keeping forests intact to smoothen the intense rainfall and maintain dry season river flows. This also means sustainable crop practices and urban planning that requires giving water its space. Many of these actions go against both powerful and popular forces. As the farmers outside Delhi exult, what about the next generation of farmers who will confront a dry land in which to grow a water-hungry crop? What will they do? What will we do? ■

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राहत : गंगाजल में 29 जगहों पर थोड़ा सुधार

नई दिल्ली | प्रभात कुमार

पिछले कुछ सालों की तुलना में गंगाजल में थोड़ा सुधार देखने को मिला है। देश के विभिन्न हिस्सों में कई बार गंगा जल के नमूने की जांच के बाद यह परिणाम सामने आया है। हालांकि, बिहार की राजधानी पटना, उत्तर प्रदेश के वाराणसी और बिजनौर में गंगाजल में किसी तरह का सुधार देखने नहीं मिला है।

राष्ट्रीय स्वच्छ गंगा मिशन (एनएमसीजी) ने नेशनल ग्रीन ट्रिब्यूनल में पेश रिपोर्ट में कहा है कि 41 जगहों पर की गई जांच में से 29 जगहों पर गंगा के जैविक जल गुणवत्ता में सुधार मिला है। हालांकि गंगाजल प्रदूषण मुक्त नहीं हुआ है। एनजीटी प्रमुख जस्टिस एके गोयल की अगुवाई वाली पीठ के समक्ष पेश रिपोर्ट में कहा है कि 41 में से 29 जगहों पर लिए गए जल के नमूने की जांच के बाद जल की गुणवत्ता मॉडरेट से अच्छा की श्रेणी में देखने को मिला।

रिपोर्ट में कहा गया है कि पटना, उत्तर प्रदेश के वाराणसी और बिजनौर में गंगाजल की जैविक गुणवत्ता 2014 से 2020 तक मॉडरेट ही बनी

49% तक जैव विविधता मूल्यों को पाने में सफलता

एनएमसीजी ने एनजीटी में पेश रिपोर्ट में कहा है कि गंगा में 49 फीसदी तक जैव विविधता मूल्यों को पाने में सफलता मिली है। पीठ को बताया गया है कि गंगा में छह बड़े जैव विविधता क्षेत्र और 12 संरक्षित क्षेत्र बनाए गए हैं। रिपोर्ट में कहा गया है कि गंगा के जैव विविधता को बनाए रखने और बढ़ाने के लिए भारतीय वन्यजीव संस्थान, देहरादून और केंद्रीय अंतर्देशीय मत्स्य पालन शोध संस्थान के साथ मिलकर काम किया जा रहा है।

नई जगहों पर दिखे डॉल्फिन और घड़ियाल

रिपोर्ट में कहा है कि कानपुर गंगेटिक डॉल्फिन और भागलपुर में चिकने लेकित ऊदबिलाव, ऋषिकेश में घड़ियाल और प्रयागराज में इंडियन स्कीमर (पक्षी) देखे गए हैं।

रही है। वहीं, उत्तर प्रदेश के कानपुर में गंगाजल की जैविक गुणवत्ता में गिरावट आई है।