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DOES INDIA NEED TO RELOOK THE DAM SAFETY ACT?

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The Dam Safety Act was tabled in the Rajya Sabha in December 2021, as a response to deficient surveillance and maintenance causing dam failure-related disasters. File | Photo Credit: PTI

The story so far: India has almost 6,000 large dams and about 80% of them are more than 25 years old and carry safety risks. A new Dam Safety Act (DSA) was passed in late 2021. On October 4 this year, a glacial lake outburst flood (GLOF) in North Sikkim's South Lhonak Lake washed away one of the biggest hydropower projects in India, the Teesta III dam at Chungthang. Reports have since revealed there were no early warning systems, no risk assessment or preventive measures in place as required under the Act.

The Dam Safety Act was tabled in the Rajya Sabha in December 2021, as a response to deficient surveillance and maintenance causing dam failure-related disasters. The Act listed key responsibilities and mandated that national and State-level bodies be established for implementation. It said a National Committee on Dam Safety would oversee dam safety policies and regulations; a National Dam Safety Authority would be charged with implementation and resolving State-level disputes; the Chairman of the Central Water Commission (CWC) would head dam safety protocols at the national level; a State Committee on Dam Safety (SCDS) and State Dam Safety Organisation (SDSO) would be set up. Sikkim formed an SCDS on August 17 with nine members and experts in hydrology and dam design.

Provisions require States to classify dams based on hazard risk, conduct regular inspections, create emergency action plans, institute emergency flood warning systems, and undertake safety reviews and period risk assessment studies.

Editorial | Safety first: On Dam Safety Authority

Importantly, States were asked to report and record incidents of dam failures. Until now, no statutory provision required systemic reporting of failures and no single agency was tasked with tracking this data. The CWC keeps a record but the list is not updated regularly, Devendra Damle argued in a 2021 working paper for the National Institute of Public Finance and Policy.

Failure to comply with any provision of the Act is punishable with imprisonment and/or fines, and "if such obstruction or refusal to comply with directions results in loss of lives or imminent danger

thereof, [entity] shall be punishable with imprisonment for a term which may extend to two years.” For example, in February this year, the Sikkim High Court ordered the Gati Hydropower Project company to pay 70 lakh to two widowed mothers, for non-compliance with the Dam Safety Act.

Experts say the Sikkim incident exemplifies blind spots in both legislation and implementation. The DSA does not promote risk-based decision-making and fails to incentivise transparency. Himanshu Thakkar, an environmental activist and coordinator of South Asia Network on Dams, Rivers and People, says that the frequency and scale of such disasters reveal a pattern of neglect: “It keeps happening regularly, people face disastrous consequences and we call these ‘natural disasters’. But there’s nothing natural about them.”

A robust DSA should allow different stakeholders to access information easily, but India’s framework falls short. “Dam safety is a public purpose function. Everything about dam safety, functions of all the institutions and committees and authorities, their reports, decisions minutes and agendas, everything should be promptly available to the public,” says Mr. Thakkar. “But nothing is in the public domain.” He adds that transparency is further obstructed when national and State bodies comprise government employees and engineers who worked on these projects, compromising objective decision making and lacking “people with a proven track record of taking independent decisions.”

Dam safety is a function of many parts: designing and constructing dams that adhere to safety margins, maintaining and operating them per guidelines, recording data in real-time in an accessible format, forecasting hazardous events and instituting emergency plans, to name a few. The Sikkim GLOF reveals poor compliance at all levels, from the dam’s design to the spillway capacity (which controls the release of water from a reservoir).

Hazard profiling and regular assessment are also mandated by the Act. Hazard risk fluctuates at the slightest touch, responding to climate change, urbanisation, and the way people/companies use water or where they are located. Periodic reviews are expected to bring forth fresh inundation maps and new rule curves (which determine the capacity of dam reservoirs), all of which contribute towards the safety of the downstream areas. Spillway capacity and other metrics should be reviewed every five years or so, but Mr. Thakkar says periodic reviews are often not conducted or if they are, their findings are not not easily available in the public domain. The Act requires dam builders to conduct comprehensive dam safety evaluations, but “there is no standardisation of how the failure is analysed and reported,” Mr. Damle stated. The Himachal Pradesh government recently served notices to 21 hydroelectric projects, finding them guilty of non-compliance with the DSA during the July-August floods.

logging into their accounts on Vuukle.

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