



## The Big Picture - Dam Safety Bill, 2019

A Bill seeking to set up an institutional mechanism for surveillance, inspection, operation and maintenance of specified dams across the country has been passed by the Lok Sabha. The provisions of the Bill are proposed to be applied to all dams in the country which have a height of more than 15 metres, or between 10 metres to 15 metres. Among other things, the Bill also seeks to resolve the inter-state issues concerning maintenance and safety of dams as around **92% of dams in the country are on inter-state river basins.**

### Salient Features of the Bill

- **National Committee on Dam Safety:** The National Committee on Dam Safety will be constituted and will be chaired by the Chairperson, Central Water Commission.
  - Functions of the Committee will include formulating policies and regulations regarding dam safety standards and prevention of dam failures, and analysing the causes of major dam failures and suggesting changes in dam safety practices.
- **National Dam Safety Authority:** The Bill also envisages setting up of a National Dam Safety Authority to be headed by an officer not below the rank of an Additional Secretary, to be appointed by the central government.
  - The main task of the National Dam Safety Authority includes implementing the policies formulated by the National Committee on Dam Safety, resolving issues between State Dam Safety Organisations (SDSOs), or between an SDSO and any dam owner in that state, specifying regulations for inspection and investigation of dams.
  - The NDSA will also provide accreditation to agencies working on construction, design and alteration of dams.
- **State Dam Safety Organisation:** The proposed legislation also envisages constituting a State Dam Safety Organisation whose functions will be to keep perpetual surveillance, inspection, monitoring the operation and maintenance of dams, keeping a database of all dams, and recommending safety measures to owners of dams.
- **Obligations of Dam Owners:** The owners of the specified dams are required to provide a dam safety unit in each dam. This unit will inspect the dams before and after the monsoon session, and during and after every earthquake, flood, or any other calamity or sign of distress.
  - Dam owners will be required to prepare an emergency action plan, and carry out risk assessment studies for each dam at specified regular intervals.
  - Dam owners will also be required to conduct a comprehensive dam safety evaluation of each dam, at regular intervals, through a panel of experts.
- **Punishment:** The Bill provides for two types of offences - obstructing a person in the discharge of his functions, and refusing to comply with directions issued under the proposed law.
  - Offenders will be punishable with imprisonment of up to one year, or a fine, or both. If the offence leads to loss of lives, the term of imprisonment may be extended up to two years.
  - Offences will be cognisable only when the complaint is made by the government, or any authority constituted under the Bill.

## Challenges to the Dam Safety

- **India is the third largest dam owning country.** There are 5,745 reservoirs in the country of which 293 are more than 100 years old. The age of 25% of dams is between 50 to 100 years and 80% are over 25 years old. 40 dams have collapsed in India since Independence and the worst such disaster occurred in Gujarat in 1979 leading to the loss of thousands of lives.
- There are a **number of challenges to the dam safety** and some are mainly due to the age of the dams.
  - As the dams become old, their design, hydrology and everything else do not remain at par with the latest understanding and practices.
- **Huge siltation** is taking place as a result of which the water holding capacity of dams is getting reduced.
- The **regulation of dams is entirely dependent upon individual dam managers.** There is no systemisation and no actual understanding in terms of the downstream water requirement or the kind of flows that are already there.
- **Dam safety is dependent upon many factors such as landscape, land use change, patterns of rainfall, structural features etc.** All the factors have not been taken into account by the government in ensuring the safety of a dam.

## Government's Intentions Behind the Bill

- The government wants that there should be a **uniformity of procedures** which is followed by all dam owners for a particular type of large dams.
- **Water is a state subject** and the Bill in no way takes away the authority of the state. The Bill provides guidelines and a mechanism to ensure that the guidelines are followed.
- So far the professional efficiency of various contractors, designers and planners has never been evaluated, but they were engaged and that is the reason why **India's dams today have a design problem.** The Bill provides a mechanism where **accreditation of the people** who are really going to take part in the construction and maintenance, has to be taken care off.
- Dams are prone to damages and therefore their safety is very important. The Bill provides for the **formulation of dam safety standards.**

## Concerns

- The **governance structure on the dam safety is not logical.**
  - There is a Central Water Commission, under the Ministry of Jal Shakti.
  - The Chairman of the Central Water Commission is ex-officio chairman of the National Committee on Dam Safety.
  - The Central Water Commission gives techno-economic appraisal to almost all the dam projects.
  - The authority that has given techno-economic clearance has to sit over the audit of the same project (if the project fails). It is like being a judge of one's own cause.
- The National Dam Safety Authority will have to look after 5,000 dams across all over India, implying a **huge workload.**
- There is **already a national committee on dam safety** from last 30-32 years, which has **representation of as many as 18 states.** The **Bill says that seven states by rotation** will be represented.

## Way Forward

- Since the dam safety is dependent on many external factors, the environmentalists and the **environmental angle** in this, needs to be taken.
- There is a need to **strengthen the state irrigation department and the Central Water Commission.**
- It should be ensured that the inspection of dams is done by the respective state governments.
- **A preventive mechanism** to avoid dam failures is necessary because if a dam fails, no amount of

punishment can compensate for the loss of lives.

- With the changing climate, it has become absolutely essential to really think about the issue of water carefully and proactively.
- While considering uniformity across dams, **local factors** such as climate and catchment areas, need to be taken into consideration.

*Dams are critical infrastructure. They are important for the country's development in various ways: water, power, irrigation, drinking etc. Their operational safety is extremely important as they impact lives as well as ecology.*

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