

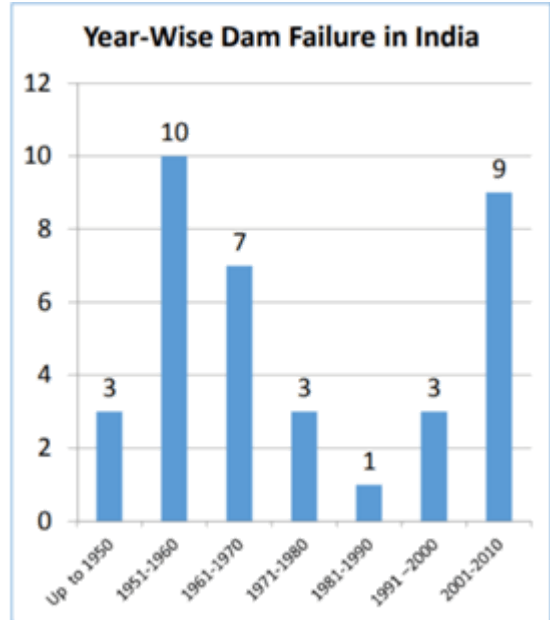
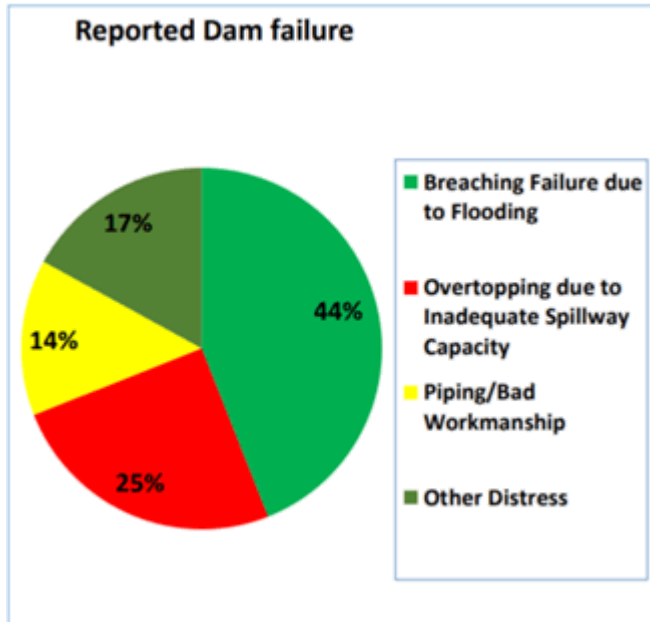
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Dam Safety Bill YouTube Lecture Handouts-2018 Highlights (Environment and Ecology)

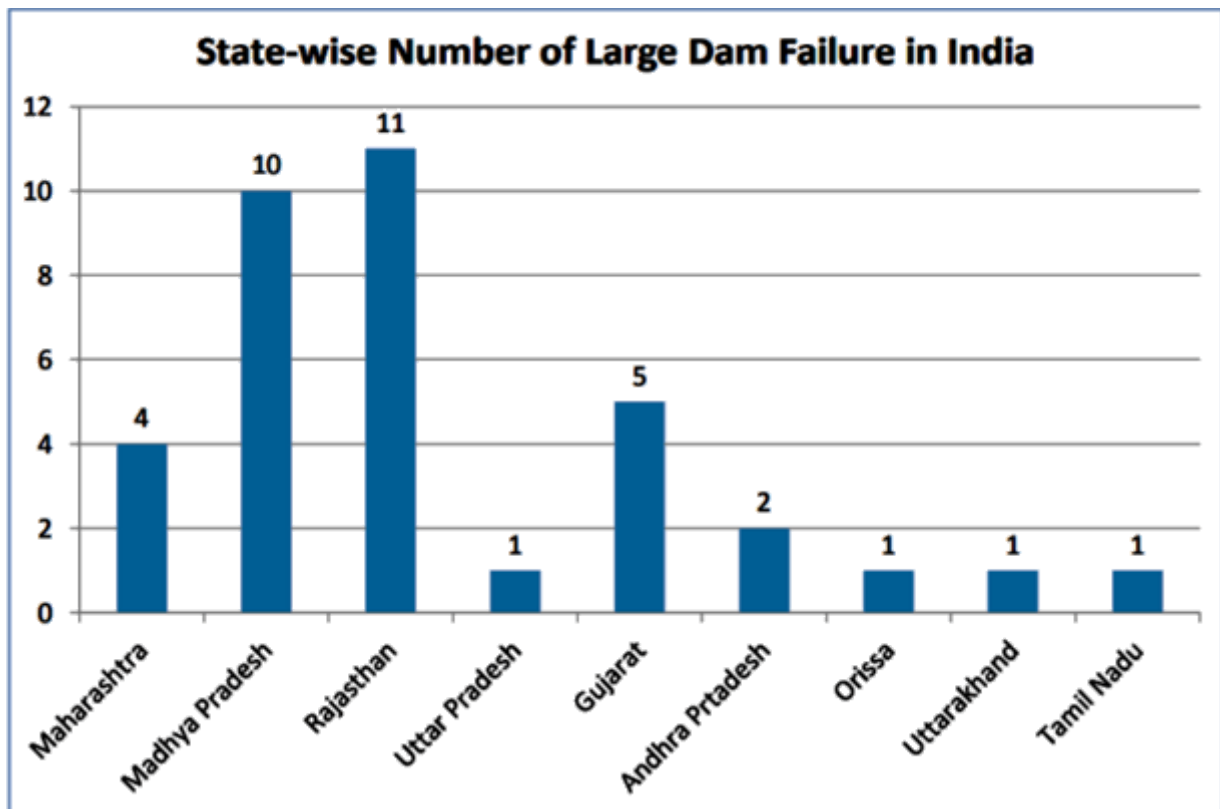
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- A large dam is classified as one with a maximum height of more than 15 metres from its deepest foundation to the crest.
- A dam between 10 and 15 metres in height from its deepest foundation is also included in the classification of a large dam provided it complies with one of the following conditions:
 - length of crest of the dam is not less than 500 metres or
 - capacity of the reservoir formed by the dam is not less than one million cubic metres or
 - the maximum flood discharge dealt with by the dam is not less than 2000 cubic metres per second or
 - the dam has specially difficult foundation problems, or
 - the dam is of unusual design
- A dam exceeding 15 m in height above deepest river bed level and a dam between 10 and 15 m height provided volume of earthwork exceeds 0.75 million m³ and storage exceeds 1 million m³ or the maximum flood discharge exceeds 2000 cumecs.
- China – 23842 dams
- USA – 9261 dams
- India – 5102 dams (as of 2016)
- 200 notable failures of large dams in the world up to 1965
- After 1950's failure rate is 0.5 %
- First such failure was recorded in Madhya Pradesh during 1917 when the Tigra Dam failed due to overtopping. The worst dam disaster was the failure of Machu dam (Gujarat) in 1979 in which about 2000 people have died.



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- Most failures are seen in earth dams, failure in composite and masonry dams are less.
- Major cause of dam failures
- Breaching – 44 % cases
- Overtopping – 25 % cases

- Failed immediately after construction, or 1st full load (inadequate design and poor quality construction)
- Dam Safety
- Huge investment
- Safeguard life and property
- Overcome structural deficiencies
- Provide budget for maintenance and repair
- Routine safety inspection
- Comprehensive evaluation every 10 years
- Proper surveillance, inspection, operation & maintenance
- Provide for constitution of National Committee on Dam Safety
- Constitution of State Committee on Dam Safety
- National Dam Safety Authority as regulatory body, which will discharge functions to implement policy, guidelines & standards for dam safety in country.

National Committee on Dam Safety (NCDS)

Constituted by Govt. of India in 1987.

Chaired by Chairman, CWC and is represented by all the States having significant number of large dams and other dam owning organizations.

Suggest ways to bring dam safety activities in line with the latest state-of-art consistent with the Indian conditions.

Acts as a forum for exchange of views on techniques adopted for remedial measures to relieve distress in old dams.

So far, 37 meetings of NCDS have been held.

Central Dam Safety Organization (CDSO)

Established in CWC, in 1979

Assist in identifying causes of potential distress;


Perform a coordinative and advisory role for the State Governments

Lay down guidelines, compile technical literature, organize trainings etc. ; and create awareness in the states about dam safety.

State Dam Safety Organizations (SDSO)

DSO/Cell established in 18 States and 5 dam owning organizations

To improve the safety and operational performance of selected existing dams in the territory of the participating states

<h2 style="margin: 0;">PANEL TO ADVISE ON REGULATIONS</h2>	
<p>Key features of the Dam Safety Bill, 2018</p> <ul style="list-style-type: none"> ➤ Constitution of a National Committee on Dam Safety that will recommend necessary safety regulations ➤ Establishment of National Dam Safety Authority as a regulator to implement policy, guidelines and standards for dam safety ➤ Setting up of a state committee on dam safety by respective states 	

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National Dam Safety Authority

- National authority will be required to maintain contact w/state dam safety organisations & owners of dams for standardisation of dam safety-related data & practices.
- It will provide technical & managerial assistance to states & state dam safety organizations.
- It will help maintain national level database of all dams in country & records of major dam failures.
- It will be required to examine cause of any major dam failure.
- Authority will publish & update standard guidelines & check-lists for routine inspection & detailed investigations of dams & appurtenances.
- It will accord recognition or accreditations to organisations that can be entrusted w/works of investigation, design or construction of new dams.

- It will look into unresolved points of issue b/w state dam safety organisation of 2 states, or b/w state dam safety organisation of state & owner of dam in that state, for proper solution.
- In cases where dams of one state fall under territory of another state, national authority will perform role of state dam safety organisation thereby eliminating potential causes for inter-state conflicts.

✍ Manishika

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