

Flexi-check Dam (Rubber Dam) for Water Conservation



Installed flexi-check dam/ rubber dam for water conservation

Developed by _____

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RELEVANCE

- In a climate change scenario, flexi-check dams (rubber dams) were developed to conserve water, mitigate floods, and flush sediment during high-intensity rainfall.
- More than 40 rubber dams have been installed in various States viz. Odisha, Maharashtra, Gujarat, Tamil Nadu, West Bengal, Kerala, Uttarakhand, Meghalaya, and Himachal Pradesh.

DESCRIPTION

- A flexible check dam, commonly known as a 'rubber dam,' is an inflatable structure built across a stream to conserve water, control floods and regulate the flow of water in the stream.
- When inflated, it serves as a check dam/weir, and when deflated, it functions as a flood mitigation and sediment flushing device. The variable head regulates the depth of flow in the irrigation diversion channel.
- It can also be used in coastal creeks, estuaries, streams, and channels to restrict the inflow of seawater into land mass and freshwater.

BENEFITS

- Additional storage of 4000 -10000 m³ of water by a rubber dam (5.0 m span in a stream of 8 to 10 m width).
- An additional 13-17 ha can be irrigated during *kharif* and 3-5 ha during *rabi* and the summer.
- The rubber dam commands increased the average productivity of rice, pulses and vegetables by 22 to 34%, and cropping intensity increased up to 31%.
- The benefit-cost ratio is 2.30, and the internal rate of return is 14.3% with a payback period of 3 years.