



# Dam Rehabilitation and Improvement Project: Phase II

## Why in News

Recently, the **Government of India signed a \$250 million loan agreement with the World Bank (WB) for the Second Phase of Dam Rehabilitation and Improvement Project (DRIP Phase II).**

## Key Points

### ▪ Phase-I:

- The Government of India, with financial assistance from the World Bank **initiated the Dam Rehabilitation and Improvement Project (DRIP) in April 2012.**
- The objective was **to improve the safety and operational performance of selected existing dams** along with dam safety institutional strengthening with a system wide management approach.
- It was a **State Sector Scheme with a Central component.** It had **rehabilitation provision for 223 dams located in seven States** (Jharkhand, Karnataka, Kerala, Madhya Pradesh, Odisha, Tamil Nadu and Uttarakhand) with 10 Implementing Agencies on board.
- The **CWC (Central Water Commission)** had been entrusted with overall coordination and supervision.
- A web-based tool called **Dam Health and Rehabilitation Monitoring Application (DHARMA)** has been developed to capture important data for all dams and use it for appropriate monitoring and development of rehabilitation protocols.
  - This is a step to move towards application of **Artificial Intelligence (AI)** in dam safety to smartly manage existing water assets.
- The Scheme successfully **closed in March 2021.**

### ▪ DRIP Phase-II and Phase III:

- Based on the success of DRIP, the **Ministry of Jal Shakti** initiated another externally funded Scheme DRIP Phase II and Phase III.
  - The scheme was approved in October 2020.
- It has the **participation of 19 States and 3 Central Agencies.** The Scheme is **10 years duration** and **will be implemented in two Phases**, each of six years' duration, with two years' overlap.
- The budget outlay is Rs 10,211 Cr (Phase II: Rs 5107 Cr; Phase III: Rs 5104 Cr) with **rehabilitation provision of 736 dams.**

### ▪ DRIP Phase-II:

#### ◦ Financing Pattern:

- The Phase II of the Scheme is being co-financed by two multilateral funding Agencies - **World Bank** and **Asian Infrastructure Investment Bank (AIIB)**, with funding of US\$ 250 million each.
- The funding pattern of Scheme is 80:20 (Special Category States), 70:30 (General

Category States) and 50:50 (Central Agencies).

◦ **Objectives:**

- To improve the **safety and performance of selected existing dams** and associated appurtenances in a sustainable manner.
- To **strengthen the dam safety institutional setup** in participating states as well as at the central level.
- To explore the alternative incidental means at few selected dams to **generate the incidental revenue** for sustainable operation and maintenance of dams.

◦ **Other Features:**

- It will strengthen dam safety by **building dam safety guidelines, bring in global experience**, and introduce **innovative technologies**.
- It will **introduce a risk-based approach** to dam asset management that will help to effectively allocate financial resources towards priority dam safety needs.
- Other important measures that DRIP-2 will support include:
  - **Flood forecasting systems** and integrated reservoir operations that will contribute to **building climate resilience**;
  - Implementation of **Emergency Action Plans** to enable vulnerable downstream communities to prepare for and **enhance resilience against the possible risks of climate change**; and
  - Piloting of **supplemental revenue generation schemes** such as **floating solar panels**.

◦ **Implementation:**

- It will be **implemented in approximately 120 dams across the states** of Chhattisgarh, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Rajasthan, and Tamil Nadu, and at the national level through the Central Water Commission (CWC).

▪ **Significance:**

◦ **Number of Dams in the Country:**

- India **ranks third globally after China and the United States of America, with 5334 large dams** in operation. In addition, about 411 dams are under construction at present. There are also several thousand smaller dams.
- These dams are **vital for ensuring the water security of the Country**. Indian dams and reservoirs play an important role in the economic and agricultural growth of the country by storing approximately 300 billion cubic meter of water annually.

◦ **Will Help in Tackling Climate Change:**

- By sustaining the livelihoods and food security of millions of Indians who depend on irrigated agriculture and enabling farmers to shift out of pumping groundwater, thereby, reducing energy consumption and greenhouse gas emissions.

◦ **Flood Mitigation:**

- With average annual cost of floods in India estimated at US\$7.4 billion, many dams are critical in mitigating floods. Their failure could pose serious risks to downstream communities.

◦ **Ageing of Dams:**

- According to a [United Nations \(UN\) report](#) "Ageing water infrastructure: An emerging global risk", over 1,000 large dams in India will be roughly 50 years old in 2025 and such ageing embankments across the world pose a growing threat.
- This Scheme is especially focused on mitigating the risks of dam failure and ensuring safety of people, riverine ecology and property located downstream of the selected dams.

◦ **Enhancing Culture of Dam Safety in the Country:**

- It will equip the Indian dam owners to gear up their human resources to comprehensively handle many important activities **envisaged in proposed Dam Safety Legislation.**
- **Employment Generation:**
  - It is likely to generate employment opportunities equivalent to approximately 10,00,000 person days for unskilled workers, and 2,50,000 person days for working professionals.

## **Dam Safety Legislation**

- Dam safety Bill 2019 seeks to set up an institutional mechanism for surveillance, inspection, operation and maintenance of specified dams across the country.
- **Features:**
  - The National Committee on Dam Safety will be constituted and will be chaired by the Chairperson, Central Water Commission.
  - 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 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.
  - 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.

**Source: PIB**

PDF Reference URL: <https://www.drishtiias.com/printpdf/dam-rehabilitation-and-improvement-project-phase-ii>