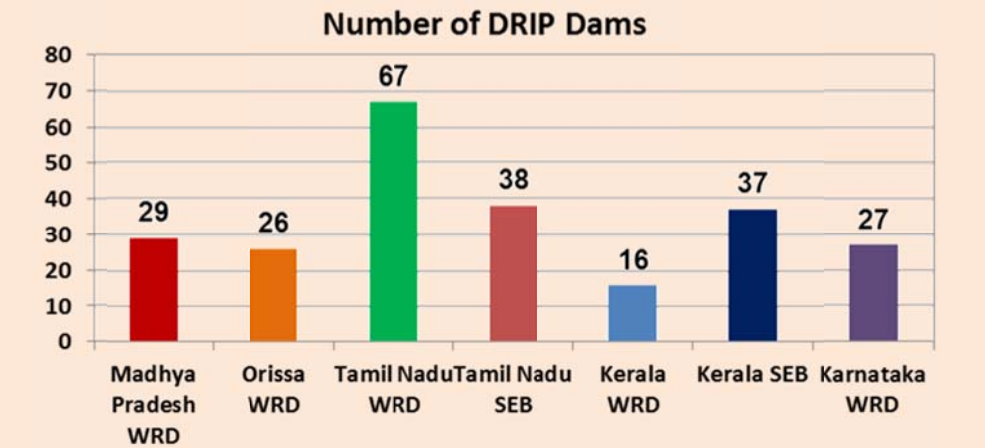


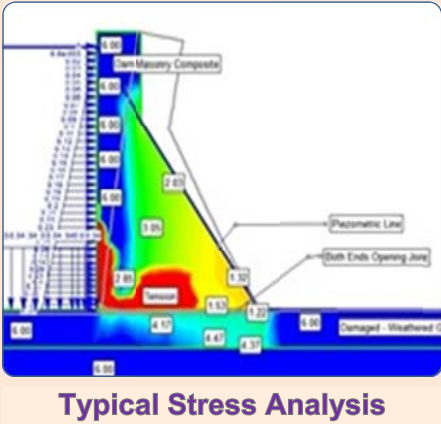
Dam Rehabilitation and Improvement Project



There are about 4900 large dams in India and about 350 are under construction. In addition, there are several thousand smaller dams. These dams are vital for ensuring the water security of the country; and they also constitute a major responsibility in terms of asset management and safety. In April 2012, the Central Water Commission with loan assistance from the World Bank, embarked on the six year Dam Rehabilitation and Improvement Project at an estimated cost of ₹2100 crore.

The project envisages:

- Rehabilitation and improvement of 250 dams managed by seven implementing agencies in five states; namely, Madhya Pradesh, Orissa, Kerala, Tamil Nadu and Karnataka with provision for inclusion of select dams of Uttarakhand and Damodar Valley Corporation;
- Institutional strengthening and project management in Central Water Commission and other Implementing Agencies;
- Promotion of new technologies and



improvement of Institutional capacities for dam safety evaluation and implementation in nine premier academic and research institutes.

Overall responsibility for overseeing and coordinating the implementation of projects under DRIP rests with the Central Project Management Unit, created in Dam Safety Rehabilitation Directorate, of Central Water Corporation. Egis EAU (France), in Joint Venture with Egis India Consulting Engineers Pvt. Ltd. is providing the Engineering and Management Consultancy to coordinate and supervise the Project implementation.

Portfolio of DRIP Dams



Vaigai Dam (Tamil Nadu)

Most DRIP dams are more than 25 years old and are composite dams (Concrete Gravity & Earthen Embankment). Many of these dams are facing various structural deficiencies as well as shortcomings in the operation and monitoring facilities. These affect the safety of the structures and pose risks to life and properties downstream of the dam. There are also inadequacies in complying with the current design

standards and philosophy.

Project Objectives

The objectives of the Dam Rehabilitation and Improvement project are to:

- Improve the safety and operational performance of selected existing dams and associated appurtenances in a sustainable manner; and,
- Strengthen the dam safety institutional setup in participating States as well as at the Central level.

The objectives are to be achieved through investments on rehabilitation and improvement of dams including maintenance, improved management of dam operations and accompanying institutional strengthening and reforms. The Dam Rehabilitation and Improvement Project will result in an effective utilization of stored water and improved performance of dams on long term basis with

reduced risk of failure / safety incidents. The project will also contribute to institutional strengthening and project management activities in the Central Water Commission and other participating organizations. In-house capacity building is being taken up in selected nine Academic & Research institutes; these institutes in turn would provide training and expertise (consultancy) to Dam Owner's in due course.

Implementation Arrangements

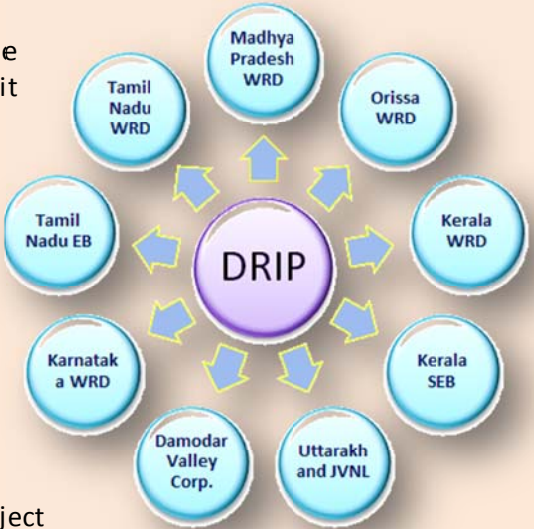


Almatti Dam

The Implementing Agencies for Dam Rehabilitation and Improvement Project are the respective dam owning agencies in the participating States.

The day-to-day management of the Dam Rehabilitation and Improvement Project at State level is being provided by the State Project Management Units established in the State Dam Safety Organization of the States/

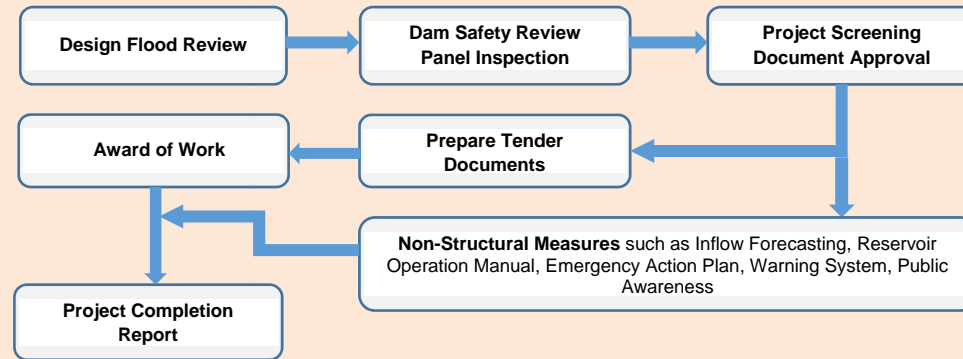
Implementing Agency's, with the Central Project Management Unit assisted by the consultant assuming an overall management role. The day-to-day construction supervision and quality assurance activities are coordinated by the concerned Implementing Agencies while third-party construction supervision and quality control on audit basis is carried out by Central Project Management Unit



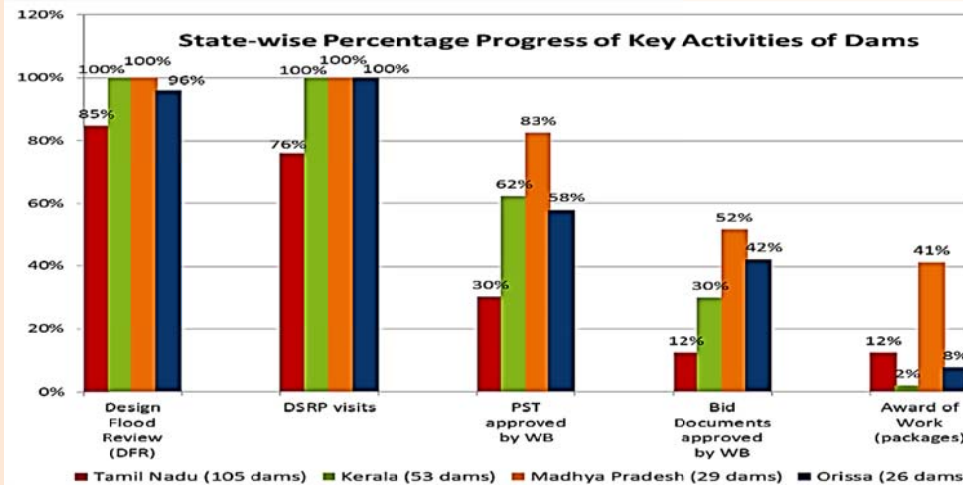
Dam Rehabilitation and Improvement Project

Project Implementation

The implementation of the project has commenced by all Implementing Agencies. Dam Safety Review Panels have been constituted in seven states; for assessing the safety status of the project dams by all existing seven Implementing Agencies to prepare project proposals for rehabilitation. The broad stages of project implementation are indicated below:



Project to Date



Institutional Strengthening Measures

Activities targeted for improving dam safety capacities of dam owning agencies include:

- Training in different aspects of dam safety and DRIP implementation

- Preparation of Guidelines related to dam safety
- Preparation of Design Review Manuals
- Establishment of Quality Management Systems in Central Dam Safety Organisation leading to ISO 9001 certification
- Development and maintenance of the DRIP website for wider dissemination of national level dam safety knowledge
- Development of software for dam asset management-Dam Health and Rehabilitation Monitoring Application

About 1000 officials from the Implementing Agencies have been trained on different aspects of DRIP implementation in the training programs organized by the Central Project Management Unit during the first three years of project till March 2014. Ten knowledge-sharing visits have also been organized with the participating states gaining first-hand experiences of dam distress conditions and remedial technologies available at hand.



MID Term Review Meeting

Project Reviews

Central Project Management Unit reviews the adequacy and compliance with best engineering practices. It also monitors the project progress all along. The World Bank periodically reviews the progress in the implementation of DRIP through their Review Missions and five Bank Review Missions have been completed so far. The Technical Committee, under chairmanship of the Member, Design & Research, Central Water Commission meets periodically for guiding and expediting the pace of project implementation. To date, ten meetings of the Technical Committee have been held.

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Dam Rehabilitation and Improvement Project

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Central Water Commission

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