

DAM REHABILITATION AND IMPROVEMENT PROJECT (DRIP)

(IBRD Loan NO.-7943-IN& IDA Credit NO.-4787-IN)

PROJECT OBJECTIVE :

A safe dam is one which performs its intended functions without imposing unacceptable risks to the public and society by its presence for which safety auditing of large dams are being done by the State Dam Safety Organization regularly. Odisha has 199 numbers of large dams (as per ICOLD classification). Out of these fifty five (55) dams are Major, Medium Project Dams and One Hundred Forty Four(144) numbers of Minor Irrigation Project dams.

In order to have sustainable economic growth through improved reliability of water resources for its intended use, the Dam Safety Assurance and Rehabilitation Project (DSARP) was operational under the World Bank assistance from September 1992 to September, 1999. An amount of Rs 1282.899 Million has been spent under the project against the SAR (Staff Appraisal Report) cost of Rs 1273.30 Million. Under DSARP, 18 dams have been provided with Basic Safety facilities like instrumentation, generators, approach roads and 10 dams have been rehabilitated. Two century old dams viz. Bhanjanagar, Soroda and the Asia's longest dam, Hirakud have been rehabilitated. During DSARP the Phase-II investigation of ten (10) nos. of dams have been completed by engaging external consultants. After DSARP, due to lack of funding these dams could not be rehabilitated.

Most of the 199 nos. of dams are more than 25 years old. The reservoirs formed by these dams are used for water supply, power generation, flood control, irrigation etc. All these dams warrant systematic safety assurance to avoid becoming high-hazard structures. In the event of dam failure, there is great economic hardship by way of devastating floods, causing loss of life and property and unavailability of water for various uses for which the dam was serving.

The Dam Safety Rehabilitation measures ought to take precedence for sustainable functioning of these dams. However because of budgetary constraints it is found that enough fund is generally not available for upkeep of these dams. To tide over this problem, Govt. of Odisha has negotiated with World Bank for the Dam Rehabilitation and Improvement Project (DRIP) amounting to Rs 1477.66 Million. Odisha is participating in the World Bank assisted DRIP along with CWC, states of Kerala, Madhya Pradesh, Tamil Nadu and Karnataka. State run Electricity Boards of Tamilnadu and Kerala, DVC and UJVNL who own dams are also participating in the Project.

Initially there was a proposal of rehabilitating 38 large dams based on information received from field authorities, distress conditions identified in the annual health status, 2007 prepared considering Pre & Post-monsoon inspection report, Phase-I investigation report and Expert Panel reports. During the project execution, it is observed that remedial actions have been taken up for 16 large dams either out of state resources or other external funding like World Bank aided schemes like OCTMP and ADB funded scheme like OIIAWMP, hence excluded from the list of DRIP dams. Four other large dams with significant dam safety issues were included under DRIP. Hence at present 26 Dam are under rehabilitation under DRIP. Out of

the 26 large dams under rehabilitation, 6 are major project dams, 14 are medium project dams and 6 are minor project dams.

Major Project Dams: Balimela ,Hirakud,Rengali, ,Salandi and Upper Kolab and Satiguda(UKP)

Medium Project Dams: Bhaskel, Daha,Dhanei, Derjang, Kalo,Nesa, Pitamahal, Pilasalki, Salia, Sarafgarh, ,Satiguda(malkangiri), Sundar, Sapua and Talsara,,

Minor Project Dams: Ashoknala, Banksal,Balskumpa Damsal, Jhumuka and Sanmachhakandana .

PROJECT COMPONENTS

A. Rehabilitation & Improvement of Dams and Associated Appurtenance :

This will focus on structural and non-structural measures for the dams which include hydrological assessments, sediment management and other measures required to improve the safety and operation of the dams and associated appurtenances. Support would also be provided as needed for the preparation of asset management plans, emergency preparedness plans, emergency warning systems, flood plain mapping and downstream impact mitigation measures.

B. Dam Safety Institutional Strengthening:

This will focus on legal, regulatory and technical frameworks for dam safety assurance. Among other tasks, the interventions would cover - policy formulation, training and support to Dam Safety Organisation (DSO) to assist with the development of appropriate skills and modern design tools, operating cost of expert panels comprising experts in relevant disciplines, dam status inventory and updating on a GIS platform, reservoir conservation techniques, technical training in hazard / vulnerability assessment, dam break analysis, development of emergency action plans, public awareness, attendance at dam safety courses, study tours and linking with other country agencies which have advanced dam safety programs.

C. Project Management

The overall responsibility for project oversight and co ordination rests with the Dam Safety Rehabilitation Directorate in CDSO of CWC. This Directorate acts as the

Central Project Management Unit(CPMU). The Directorate is assisted by a management and consulting firm “egis”. The state has a State Project Management Unit(SPMU) under State Dam Safety Organisation(SDSO) which is responsible for co-ordination and management of the project at state level. The SPMU is headed by the Chief Engineer ,Dam Safety and Technical officers of SDSO are managing the SPMU.

A **National Level Steering Committee(NLSC)** headed by Secretary MoWR and senior level representatives of CWC and participating states is already in place. It gives the policy direction in formulation and implementation of the project and review the physical and financial progress of the project.

A **Technical Committee(TC)** for the project at the Centre has been constituted which is chaired by Member (D & R),CWC and includes Engineer-in-chief/Chief Engineer of Irrigation/Water Resources/Power Department of participating states. The Director DSR-CWC is its member secretary.

The NLSC and TC provide the strategic supervision and direction for the successful implementation of DRIP. These committees provide the platform for resolution of project implementation related issues and also review the progress of the project.

PROJECT COST:

The total project cost of DRIP in Odisha is Rs.147.76 crores with following provisions for three of the project components. As per the agreement the World Bank will finance 80 percent of the total project cost. The State will finance the remaining 20 percent.

1. Institutional Strengthening (Rs.119.13 Crores)
2. Rehabilitation of Dams (Rs.16.34 Crores)
3. Project Management (Rs.7.24 Crores)
[Recurring Cost (Rs.5.06 Crores)]

The project period is six years which commenced on 18th April,2012 and likely to be completed by June,2018. The project screening template of 26 dams have been approved by the Central Project Management Unit (CPMU) and the World Bank. Depending on the type of work, each dam has various packages of works. The tender of various work packages in each dam have been decided.