

**SUMMARY OF THE PROPOSAL ON
DAM REHABILITATION & IMPROVEMENT PROJECT (DRIP)
FOR THE STATE OF ORISSA.**

GENERAL INTRODUCTION :

Dams have played a key role in fostering agricultural and rural growth and development. Irrigated agriculture and hydropower development supports Govt's strategy to enhance agricultural and rural development goals thereby ensuring food security. As the rain fall in the state of Orissa is mostly restricted to a four-month monsoon season, maximum storage of water in a safe manner is vital. Even though creating new reservoir capacity is also a priority, nonetheless the maintenance of already created reservoirs assumes great importance for optimum management of water resources.

NECESSITY OF DRIP :

Orissa has 163 nos. of large dams as per International Commission on Large Dams (ICOLD) specification. Out of these 10 nos. of dams are in Major, 45 nos. of dams are in Medium and 108 nos. of dams are in Minor Irrigation Sector. The State Dam Safety Organization (SDSO) is monitoring the safety status of these dams.

Most of these 163 nos. of dams are more than 25 years old. The reservoirs formed by dams are used for water supply, power generation, flood control, irrigation etc. All these dams warrant systematic safety assurance as they are usually designed for an effective life of more than 50 years. It is to be ensured that dams don't become high-hazard structures being unsafe and susceptible to failure. High safety standards for dams are therefore imperative to prevent failure that would cause economic hardships by way of devastating floods, loss of crops, loss of power generation, loss of life and property and other hardships such as non-availability of drinking water supply and industrial water use etc.

In the light of above dam safety rehabilitation measures for these dams ought to take precedence for sustainable functioning of these dams. Because of budgetary constraints enough fund is generally not available for the upkeep of these dams in sound condition. For that reason under the DSARP-I project, an external assistance

programme funded by The World Bank during the period 1992 to 1999, 10 nos. of dams were rehabilitated and basic safety features provided to 18 nos. of dams. However, a large number of dams still remain to be rehabilitated as of now. Under the prevailing circumstances, Department of Water Resources, Govt. of Orissa is interested to obtain external assistance from World Bank under the Dam Rehabilitation and Improvement Project (DRIP). This is being implemented in 5 nos. of states including that of Orissa. **Out of the 162 nos. of large dams, at present 38 nos. (list attached) of large dams were proposed for rehabilitation under DRIP on the basis of either being in severe, moderate or minor distressed condition (as enumerated in health Status of Dams) with an approximate cost of Rs.1310 million. Present project proposal leaves a scope for increase / decrease in number of dams and the project cost during the project period.**

DRIP is proposed as a six year project i.e. from 2009-10 to 2014-15. The Project Development Objective (PDO) is to improve the safety and operational performance of selected existing dams. DRIP will focus on investments targeted towards (i) physical and technical dam rehabilitation and improvement and (ii) managerial upgrading of dam O&M with accompanying institutional reforms and strengthening of regulatory measures pertaining to safe and financially sustainable dam operations. DRIP will aim at assuring the full reservoir capacity of the project dams.

The project has three components :

(1) *Rehabilitation & Improvement of Dams and Associated Appurtenance :*

This will focus on structural and non-structural measures for the dams, hydrological assessments 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. Increasing the height of dam to enhance reservoir capacity or enhance spillway discharge capacity is not allowed under DRIP.

(2) 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 such as Canada, united States and Switzerland etc.

(3) Project Management :

The overall responsibility for project oversight and coordination will rest with Dam Safety Rehabilitation Directorate in the Central Dam Safety Organisation (CDSO) of Central Water Commission, New Delhi which will provide engineering and management consultancy to State Project Management Unit (SPMU) which will have direct responsibility for the coordination and management of the project at state level.

FIRST YEAR PROJECTS

Out of 38 dams chosen for rehabilitation under DRIP, work can be taken up for 5 nos. of projects whose project preparation is already in an advanced stage during the 1st year. These are (i) Survey and investigation works of the major Irrigation Project i.e. Hirakud Dam (ii) Rehabilitation of 2 nos. of Medium Irrigation Project Dams i.e. Kalo and Nesa and (iii) Rehabilitation of 2 nos. of Minor Irrigation Dams i.e. Sanamachhakandana and Banksal.

LIST OF PROJECTS UNDER DRIP

Sl. No.	Name of Project	Category	District	Ayacut Area in Ha.
1	Balimela	Major	Malkangiri	60000.00
2	Hirakud	-do-	Sambalpur	159093.00
3	Rengali	-do-	Angul	270000.00
4	Salandi	-do-	Keonjhar	92987.00
5	Upper Kolab	-do-	Koraput	55679.00
6	Budhabudhiani	Medium	Nayagarh	2995.00
7	Dadaraghati	-do-	Dhenkanal	4120.00
8	Daha	-do-	Ganjam	4580.00
9	Derjang	-do-	Angul	6827.00
10	Dhanei	-do-	Ganjam	4036.00
11	Kalo	-do-	Mayurbhanj	5030.00
12	Nesa	-do-	Mayurbhanj	1028.24
13	Pilasalki	-do-	Kandhamal	2268.00
14	Pitamahal	-do-	Sundargarh	2654.00
15	Salia	-do-	Khurda	7945.00
16	Sarafgarh	-do-	Sundargarh	2747.00
17	Satiguda (UKP)	-do-	Koraput	47715.00
18	Satiguda (Malkangiri)	-do-	Malkangiri	9065.00
19	Talsara	-do-	Sundargarh	3030.00
20	Ardei	Minor	Keonjhar	724.00
21	Ashokanalla	-do-	Khurda	202.00
22	Bagjharan Dam	-do-	Bolangir	404.86
23	Balaskumpa	-do-	Kandhamal	497.00
24	Banksal	-do-	Sambalpur	1861.00
25	Deojharan	-do-	Sambalpur	283.22
26	Jagadala	-do-	Keonjhar	1012.00
27	Jhumuka	-do-	Khurda	648.00
28	Kalakala	-do-	Cuttack	950.00
29	Kanheinalla	-do-	Ganjam	647.00
30	Khasbahal	-do-	Nuapara	172.64
31	Laigam	-do-	Boudh	1030.00
32	Liard	-do-	Nuapara	202.40
33	Mathanpal	-do-	Bolangir	1274.00
34	Padampurnallah	-do-	Bargarh	1619.00
35	Pipalnallah	-do-	Kalahandi	809.70
36	Ramaguda	-do-	Ganjam	243.00
37	Runugaon	-do-	Sundargarh	247.00
38	Sanamachhakandana	-do-	Keonjhar	971.00