

Irrigation

Introduction:

Irrigation is the most important input for agriculture and vital for food security. Therefore, large investments were made in successive Plans for expansion of irrigation facilities. Many major, medium and minor irrigation projects have been constructed in the country during last five decades, thereby increasing the Irrigation potential from 22.6 million ha in 1951 to 100million ha in 2005. This has resulted in increase in the food grains production from 50 million tons in 1951 to 208 million tons in 2005. The National Commission for Integrated Water Resources Development in its report has outlined the importance of irrigation and estimated that increase in irrigation facilities alone has contributed to about 52% increase in food grains production whereas improved agricultural practices coupled with high yielding varieties have contributed to 48% increase in food grains production.

Although the country is now self sufficient in food grain production, the task of feeding a growing population poses a challenge. The nets own area of the country remains unchanged. Given the constraints of land availability, it is necessary to bring more area under irrigation to meet the challenge. The report of sub-committee on more crop and income per drop of water states that by 2050 AD the population of the country may stabilize around 1.6 to 1.7 billions and that would require about 450 million tons of food grain annually at the required level of consumption. Area wise, it is necessary to provide irrigation to at least 130 million ha for food crops alone and in an area of 160 million ha for all crops to be able to meet the demands of the country in 2050 AD and ensure food security.

Irrigation in Orissa:

Orissa is primarily an agrarian state. Irrigation sector holds the key to Orissa's economic development and poverty alleviation. The state has a cultivable land of 61.65 lakh ha. It has been assessed that 49.90 lakh ha can be brought under irrigation through major, medium and minor (flow & lift) irrigation projects.

Irrigation development has not made much headway in the state in the pre- independence era. Hardly 183.07 thousand hectare of net irrigation potential was created. After introduction of Five Year Plan by Govt. of India in 1951, attempts were made for rapid harnessing of water resources and much emphasis was laid to accelerate the irrigation potential creation. By the end March 2010, net irrigation potential of 2366.04 thousand hectares has been created through major, medium and minor irrigation projects executed by Department of Water Resources. In addition to the above, 565.71 thousand hectare of net irrigation potential created through other sources like dug-well, water harvesting structures, small check dams etc. Sector wise created irrigation command up to end of March 2010 is given in the following table.

Table-4.1
Created Net Irrigation Potential (Unit-'000' ha.)
Total Status as on 31.03.2010

Sector	Pre-Plan Period	Plan Period (end of March 2010)	Total	Executing Agency
Major & Medium	183.07	1138.92	1321.99	W.R Deptt.
Minor (flow)	-	551.44	551.11	W.R Deptt.
Minor (lift)	-	492.94	492.94	W.R Deptt.
Other Sources*	-	565.71	565.71	P.R Deptt, Agril Deptt. Private
Total	183.07	2748.68	2931.75	

Irrigation Potential Utilization:

The irrigation potential creation and utilization corresponding to the year 2000-01 to 2008-09 is given in the following table. The potential utilization has shown an increasing trend. The gap between potential creation and utilization is attributed to many factors, but the main reasons are defunct LIPs, MIPs and deterioration of distribution systems in the irrigated commands. The State Government is attaching utmost importance to minimize the gaps. System improvement works of some of the major and medium irrigation projects have already been completed under OWRCP and AIBP. Biju Krushak Vikash Yojana (BKVY), RIDF and NREG schemes are being utilized for restoration of in-operable LIPs, Partly derelict MIPs. Orissa Community Tank Management Project (OCTMP) funded by World Bank and RR&R scheme founded by Government of India have been taken up for rehabilitation /modernization of derelict / partly derelict MIPs. System improvement to 15 major, medium and 1400 lift Irrigation projects are taken up under ADB-funded Orissa Integrated Irrigated Agriculture and Water Management Investment Projects (OIIAWMIP).

Table-4.2
Status of Irrigation Potential creation & Utilization

Year	Total Irrigation Potential created (th. Ha)			Total Irrigation Potential created (th. Ha)			% of utilization
	Khariff	Rabi	Total	Khariff	Rabi	Total	
2000-01	2533.83	1071.99	3605.82	1589.88	535.84	2125.72	58.59%
2001-02	2554.26	1117.63	3671.89	1752.27	793.64	2545.91	69.33%
2002-03	2608.59	1123.75	3732.34	1246.81	465.21	1712.02	45.86%
2003-04	2674.12	1161.21	3835.33	1737.49	780.87	2518.36	65.66%
2004-05	2707.27	1266.22	3973.49	1845.79	844.87	2690.66	67.71%
2005-06	2731.50	1294.92	4026.42	1922.70	1042.79	2965.49	73.65%
2006-07	2720.46	1318.52	4038.98	2001.98	1147.47	3149.45	77.97%
2007-08	2765.73	1342.06	4107.79	2027.00	1281.46	3308.46	80.54%
2008-09	2867.01	1407.18	4274.19	2081.13	1096.03	3177.16	74.33%

Five year Perspective Plan

Department of Water Resources has formulated a five year Perspective Plan for the period 2009-10 to 2013-14 for sustainable development of Water Resources with following targets.

- Additional irrigation potential of 5.6 lakh hectare to be created.
- 31 major & medium, 494 minor flow and 7739 Lift irrigation projects to be completed.
 - 169 deficit blocks to be provided with at least 35% irrigation coverage.
 - Sixteen new major and medium projects viz. Ong Dam, Brutang, Samakoi, Upper Lanth, Katra, Upper Udanti, Tel Barrage (Kukudmal & Manikpur), Indravati Barrage, Koksara Lift, Sono Barrage, Bankatira, Sandul, Turi Guntat, Aheerajore, Korapani & Lamdora with designed irrigation potential of 165.393 thousand hectare to be taken up.
 - Investment clearance and other statutory clearances of 42 new major and medium irrigation projects and Hydroelectric projects from various ministries of Government of India to be obtained for implementation.
 - Command Area Development & Water Management (CAD&WM) activities to be extended to 16 more major and medium irrigation projects
 - 1.89 lakh persons covering farmers, Pani Panchayat office bearers, Government official and staff to be imparted training through WALMI for skill up-gradation inefficient water management practices.
 - All irrigated commands to be handed over to Pani Panchayats for Operation and Maintenance.

- . 1761 water bodies to be renovated through RR&R scheme under domestic assistance.
- . 900 partly derelict/ completely derelict minor irrigation tanks covering 1.20 lakh hectares to be rehabilitated under OCTMP through World Bank assistance.
- . Modernization work of Upper Indravati, Upper Kolab, Potteru and selected medium irrigation projects to be taken up in a phased manner.
- . Rehabilitation of 38 dams comprising of 5 major, 14 medium and 19 minor to be taken up through Dam Rehabilitation and Improvement Project (DRIP) under World Bank assistance.
- . Critical drainage congestion clearance activities to be taken up through NABARD, Flood Management Programme and State funds.
- . 68.98 thousand hectares of irrigation potential to be stabilized through Orissa Integrated Irrigated Agriculture & Water Management Investment Programme (OIIAWMIP).
- . Coastal erosion and protection works to be taken up under ICZMP & NCERMP.
- . Basin wise flood control master plans to be prepared for managing the flood and minimizing the impact of flood.
- . Tourism infrastructure to be provided in major, medium & minor irrigation projects depending on tourism potential and feasibility.
- . About Rs.10, 000 crore to be spent in the Perspective five year Plan period.
- . Capacity of the department to be suitably augmented in order to achieve the enhanced targets.