

# GOOD GOVERNANCE



## Achievements of Water Resources Department

The Department of Water Resources has the mandate to plan, develop, utilize and manage the State's water resources. The Department formulates Water Policy & State Water Plan so also undertakes execution, operation and maintenance of irrigation projects, exploration and regulation of ground water, flood control and drainage development works, command area development activities and allocation of water for various uses. The functions of the Department are carried out through the organizations/ Public Sector Undertakings like -

- Major and Medium irrigation.
- Minor irrigation (flow)
- Command Area Development (CAD)
- Ground Water Survey and Investigation (GWS & I)
- Odisha Lift Irrigation Corporation (OLIC)
- Water and Land Management Institute (WALMI)
- Odisha Construction Corporation Limited (OCCL)

### Activities proposed for 12th Five Year Plan (2012-17):

- 9.36 lakh hectares of cultivated land to be brought under irrigation coverage.
- 75000 deep bore wells, 9704 Lift Irrigation Projects, 15000 Check Dams, 174 Mega Lift Projects to be constructed.
- 15 ongoing major and medium irrigation projects to be completed.
- 38 distressed dams to be rehabilitated through World Bank assistance.
- Field channel covering 214.75 thousand hectare and field drain covering 115.57 thousand hectare in command areas of selected major and medium irrigation projects to be constructed.
- Flood Control and Drainage development activities to be expedited.
- 342.00 thousand hectare of irrigation potential to be revived / stabilized to enhance potential utilization.
- Investment to the extent of Rs. 22000 crore required to undertake these activities.

### Programme for 2012-13:

- Additional irrigation potential of 102.28 thousand hectares to be created.
- 3000 Check Dams to be constructed. An outlay of Rs. 216.14 crore has been proposed under this scheme.

- 1190 Lift Irrigation Projects under BKVY & Hirakud Command Area Development programme to be taken up. An outlay of Rs. 162.00 crore has been proposed.
- Field channel covering 36638 hectares and Field drain covering 15835 hectares to be taken up in command areas of selected major and medium irrigation projects. An outlay of Rs. 86.00 crores has been proposed under CAD&WM programme.
- 68 Mega lift projects in 5 clusters to be taken up. An outlay of Rs. 150.00 crores has been proposed under this scheme.
- 7000 Deep Bore Wells to be taken up through Odisha Lift Irrigation Corporation. Fund allocation has been proposed in the budget of Agriculture Department.
- Periphery development works of selected reservoirs to be taken up to promote tourism. An outlay of Rs. 10.00 crore has been proposed.
- For execution of flood control and drainage projects, an outlay of Rs. 284.00 crore (RIDF : Rs. 131.00 crore, State Plan - 120.00 crore & FMP - 33.00 crore) has been proposed.
- For execution of major, medium & minor flow projects under AIBP, an outlay of Rs. 1078.00 crore has been proposed in the budget.

#### **Achievement of programmes/schemes:**

- Check Dam scheme launched during 2010-11. By end of January 2012, 1207 Check dams completed and 2199 in progress.
- Deep Bore Well scheme launched during 2010-11. By end of 25th February 2012, drilling of 5090 bore well successfully completed. Out of the above, 810 borewells handed over to beneficiaries after energisation.
- Repair, Renovation & Restoration (RR&R) of 1761 MIPs / Water Bodies sanctioned by GOI during 2009-10. Out of which, renovation and de-silting work taken up in 1321 MIPs. By end of January 2012, renovation works of 414 Water Bodies have been completed.
- During 2011-12, 707 Lift Irrigation Projects (BKVY- 641 nos, Others-66 nos) completed up to end of December 2011.
- During 2011-12, field channel covering 18324 hectares and field drain covering 4384 hectares have been completed up to end of December 2011.
- During 2011-12, additional irrigation potential of 20.88 thousand hectares has been created (minor lift – 15.82 thousand hectares, minor flow – 2.69 thousand hectares, major & medium – 2.37 thousand hectares) up to end of December 2011.

#### **ACTIVITIES**

##### **A. Irrigation:**

The state has 61.65 lakh hectares of cultivated land. By end of March 2011, net irrigation potential of 24.19 lakh hectares has been created through major, medium and minor irrigation projects executed by

Department of Water Resources. Besides, 5.96 lakh hectares of net irrigation potential has been created through other sources like dugwell, water harvesting structures, small check dams etc (Odisha Agricultural Statistics 2010).

During 2011-12, there is a target to create additional irrigation potential of 112.86 thousand hectares. Out of which, 20.88 thousand hectares has been created up to end of December 2011.

### **Major & Medium Irrigation :**

Irrigation projects with command area more than 2000 hectares are executed under major and medium irrigation sector. By end of March 2011, additional irrigation potential of 1349.50 thousand hectares has been created under this sector. At present 8 major, 12 medium, 7 creek and 7 ERM projects are in progress.

#### **i. Accelerated Irrigation Benefit Programme (AIBP):**

The AIBP scheme is being implemented with the assistance of Government of India since 1996. The primary objectives of AIBP are:

- To realize bulk benefit by completing the incomplete irrigation projects.
- To accelerate implementation of ongoing irrigation projects.

During 2012-13, an outlay of Rs. 1050.00 crore has been proposed in budget with a target to create additional irrigation potential of 37.03 thousand hectares.

#### **ii. Rural Infrastructure Development Fund (RIDF):**

The RIDF scheme has been launched by NABARD since 1995 with the objective to provide financial assistance for development of rural infrastructure. 86 major & medium irrigation projects have been taken up under RIDF-I to RIDF-XVII to create additional irrigation potential of 109.63 thousand hectares. By end of March 2011, 39 projects have been completed and additional irrigation potential of 69.18 thousand hectares has been created. During 2011-12 out of the budget provision of Rs.95.00 crore to create additional irrigation potential of 9.46 thousand hectares, an amount of Rs.48.75 crore has been spent and additional irrigation potential of 2.318 thousand hectares has been created upto end of December 2011.

During 2012-13, an outlay of Rs.90.00 crore has been proposed with a target to create additional irrigation potential of 7.70 thousand hectares.

#### **iii. Externally Aided Projects**

##### **1. Rengali Left Bank Canal:**

The Rengali Left Bank Canal is 141 Km long and designed to provide irrigation to 114300 hectares in Angul, Dhenkanal & Jajpur districts.

##### **2. Odisha Integrated Irrigated Agriculture & Water Management Project (OIIAWMP)**

The project envisages extension, renovation & modernization work of 15 major & medium projects viz. Taladanda, MCII, Machhagaon Canal, Pattamundai Canal, HLC Range-I, Jajpur Canal, Gohira,

Remal, Sunei, Kansabahal, Ramial, Kanjhari, Bankbahal, Khadkhai, Nesa and 1400 lift irrigation projects with a target to stabilize 2.18 lakh hectares of irrigation potential and to create additional irrigation potential of 0.06 lakh hectares.

### **3. Hydrology Project:**

Hydrological Information System is required for long term planning, design and sustainable management of water resources. Considering its importance, Hydrology Project was started at the National level under World Bank assistance. Odisha is one of the implementing states in this project. The main objective of hydrology project is development of design support system for early flood warning, drought monitoring as well as conjunctive use of surface and ground water.

### **4. Dam Rehabilitation and Improvement Project (DRIP) :**

Dam Rehabilitation & Improvement Project (DRIP) for rehabilitation of distressed dams will be implemented at national level through World Bank assistance. Odisha is one of the participating states. 38 dams of Odisha with an estimated cost of Rs. 147.75 crores have been included under the project.

### **Minor Irrigation (Flow):**

Irrigation projects within command area 40 to 2000 hectares are executed under Minor irrigation organisation. It has been assessed that about 970.00 thousand hectares of cultivable land can be irrigated through MI (flow) projects. By end of March 2011, irrigation potential of 561.81 thousand hectares has been created.

#### **1. Check Dam Scheme:**

State Government launched this scheme during 2010-11. The objective is to conserve water at the end of monsoon for drinking purpose, ground water recharge and incidental irrigation. Preference has been given to blocks having less than 35% irrigation coverage, areas where farmers are using traditional irrigation by constructing temporary cross *bunds* on streams and where farmers are willing to take up operation & maintenance of the project.

#### **2. Accelerated Irrigation Benefit Programme(AIBP):**

Eighty one (81) minor irrigation projects with latest estimated cost of Rs.218.70 crore to create additional irrigation potential of 23.959 thousand hectares have been taken up under this scheme. By end of December 2011, an amount of Rs.174.22 crore has been spent and additional irrigation potential of 16.530 thousand hectares has been created. 43 projects have since been completed.

#### **3. Rural Infrastructure Development Fund (RIDF):**

527 projects have been sanctioned under this scheme to create additional irrigation potential of 128.78 thousand hectare. By end of December 2011, additional irrigation potential of 81.85 thousand hectares has been created and 181 projects have been completed.

During 2012-13, an outlay of Rs.42.00 crore has been proposed with a target to create additional irrigation potential of 12.00 thousand hectares.

#### **4. Odisha Community Tank Management Project(OCTMP):**

This scheme is being implemented with the loan assistance from World Bank. Rehabilitation work in 900 tank systems covering a command area of nearly 1.20 lakh hectares, supported with an institutional framework for participatory irrigation management and livelihood development activities are proposed under this scheme.

#### **5. Repair, Renovation & Restoration of Water Bodies (RR&R):**

1761 Water Bodies/MIPs have been approved by Government of India under RR&R scheme during 2009-10. Out of the above, 1321 Water Bodies/MIPs with an estimated cost of Rs.254.41 crores have been taken up to revive 62.04 thousand hectares of irrigation potential.

During 2012-13, an out lay of Rs.75.00 crores has been proposed under this scheme for clearance of dues and for taking up new projects.

#### **Mega Lift Scheme:**

The scheme has been launched during 2011-12 for providing irrigation to the farmers in the upland areas by lifting water from rivers. Projects having irrigation command area within 500 to 2000 hectares will be taken up under this scheme. 174 sites in 15 clusters to provide irrigation to 214270 hectares have been identified in the Vansadhara, Indravati, Tel, Mahanadi, Brahmani, Baitarani, Budhabalanga rivers etc. and in periphery of Hirakud & Rengali reservoirs. Consultant for coordinating power system feasibility engaged and 33 KV electricity system requirements finalized for each cluster in co-ordination with distribution companies. 68 sites in five clusters identified in 1st phase to be taken up during 2012-13 for which an outlay of Rs.150.00 crore has been proposed.

#### **Minor (Lift):**

Odisha Lift Irrigation Corporation was established in the year 1973 for execution of lift irrigation projects on a large scale by pooling funds from all sources. Restructuring of OLIC was done during 2002. After implementation of Pani Panchayat Act, 2002, OLIC is constructing LI Projects and handing over the same to Pani Panchayats for operation and maintenance and providing technical assistance to them. OLIC is no more collecting water rate from the cultivators. Budget provision of Rs.18.00 crore has been proposed under Non plan during 2012-13 towards water rate subsidy. The schemes implemented by OLIC are enumerated below.

#### **1. Biju Krushak Vikash Yojana (BKVY):**

This scheme was launched by State Government in the year 2001 with the objective to revive derelict projects and construction of new minor and lift irrigation projects through people's participation. The scheme envisages that the project selection should be done by the beneficiaries and brought to the notice of Government agencies for technical scrutiny and approval. For execution of the project, the users have to contribute 20% of the cost in terms of cash or labour and the balance 80% is borne by State Government. In case of tribal sub-plan areas and KBK districts, the assistance of Government is 90% of the project cost and balance 10% is to be borne by the beneficiaries. Odisha Lift Irrigation Corporation (OLIC) & Odisha Agro Industries Corporation (OAIC) have been involved in the implementation of BKVY.

By end of March 2011, 5855 LIPs and 84 MIPs have been completed and additional irrigation potential of 130.25 thousand hectares (LIPs-125.60 thousand hectares, MIPs- 4.65 thousand hectares) have been created. During 2011-12, 641 LIPs have been completed up to end of December 2011 against the target of 1175 LIPs.

During 2012-13, an outlay of Rs.160.00 crore (RIDF- Rs.150.00 crore, SCA –Rs.10.00 crore) has been proposed to take up 1175 LIPs with a target to create additional irrigation potential of 23.50 thousand hectares.

## **2. Hirakud Command Area Development Work:**

For development of lift irrigation in Hirakud command area, total 52 projects to create irrigation potential of 1354 hectare have been sanctioned up to March 2011. Out of which 42 projects have been completed and irrigation potential of 1122 hectares has been created.

During 2011-12, 12 more LIPs with irrigation potential of 280 hectare has been created up to end of December 2011. An outlay of Rs.2.00 crore has been proposed to take up 15 LIPs during 2012-13.

## **3. Deep Bore Well Scheme :**

The scheme has been launched during 2010-11. The main objective is to provide irrigation to small and marginal farmers by exploiting ground water through deep bore wells covering 2 hectares in blocks having less than 35% irrigation coverage. The scheme is being implemented through OLIC.

## **B. Flood Control & Drainage:**

### **a. Flood Control:**

Some parts of the state or other is affected by the flood almost every year. State Government is taking various measures to mitigate flood and over the period of time, 7137.75 km of flood protective embankment (Capital Embankment-1591.31 km, Other Agricultural embankment-2443.97 km, Test Relief Embankment-1534.91 km, Saline Embankment - 1567.56 km) 1952 spurs and 233 kms of stone packing have been completed.

Flood control works are being done through FMP, RIDF and State fund. During 2012-13, an outlay of Rs.195.00 crore (RIDF-Rs.74.00 crore, FMP-Rs.29.00 crore, State fund- Rs.92.00 crore) has been proposed. Scheme wise details are given below.

### **1. Flood Management Programme (FMP):**

This scheme is being implemented with 75% central assistance from Government of India. 29 Flood control projects with estimated cost of Rs.123.27 crore have been taken up under this scheme. By end of December 2011, an amount of Rs.83.61 crore has been spent and 28 projects were completed. 1 project is in progress. An outlay of Rs.29.00 crore has been proposed in the budget 2012-13 ongoing projects as well as for taking of new projects.

### **2. Rural Infrastructure Development Fund (RIDF):**

Total 80 flood control and 19 road projects with an estimated cost of Rs.377.42 crore has been taken up under this programme. By end of December 2011, 22 flood control projects and 6 road projects

have been completed. An amount of Rs.154.49 crore has been spent. An outlay of Rs.74.00 crore has been proposed in the budget for 2012-13 for execution of ongoing and new projects.

### **3. State Fund:**

During 2012-13, an outlay of Rs.92.00 crore has been proposed for raising and strengthening of embankments at critical and vulnerable stretches and for taking up critical anti-erosion works.

### **b. Drainage:**

The coastal areas in the state suffer from poor drainage and water logging problem. As per assessment, the total water logged area is 2.17 lakh ha. out of which 1.91 lakh ha. can be retrieved. A Master Plan for drainage development costing Rs.856.46 crore has been submitted to CWC for scrutiny and technical clearance. Drainage works are being taken up through FMP, RIDF and State fund.

#### **1. Flood Management Programme (FMP):**

This scheme is being implemented with 75% central assistance from Government of India. 41 drainage projects with estimated cost of Rs.103.08 crore have been taken up under this scheme. By end of December 2011, an amount of Rs.70.42 crore has been spent and 20 projects were completed. 21 projects are in progress. An outlay of Rs.4.00 crore has been proposed in the budget 2012-13 for these works.

#### **2. Rural Infrastructure Development Fund (RIDF):**

83 drainage works with an estimated cost of Rs.324.52 crore has been taken up under this programme. By end of December 2011, 39 drainage projects have been completed. An amount of Rs.152.89 crore has been spent. An outlay of Rs.57.00 crore has been proposed in the budget for 2012-13 for execution of ongoing and new projects.

### **3. State Fund:**

An outlay of Rs.28.00 crore has been proposed for clearance of critical drainage congestion works during 2012-13.

### **C. Ground Water Survey and Investigation (GWS&I):**

The Directorate of GWS&I conducts survey and investigation work relating to ground water resources both in terms of quantity and quality. For quantitative study of ground water potential, water table monitoring is being done four times in a year at 1035 locations. Similarly, water quality monitoring is being done annually in 1035 locations. In addition to the above rain water harvesting, ground water recharge, remote sensing studies, feasibility of borewell works are being done by this organization.

For the financial year 2012-13, budget provision of Rs.0.60 crore has been proposed for these activities.

### **D. Command Area Development & Water Management (CAD&WM):**

Command Area Development Programme is being implemented as a Centrally Sponsored Plan Scheme in the State since 1976-77 with an aim of optimum use of water to enhance agricultural production and productivity. The main activities under CAD&WM are construction of field channels & field drain.



Besides, topographical survey and investigation, reclamation of water logged areas, farmers' training, crop demonstration & formation of Pani Panchayats (WUAs) etc are also being taken up by Command Area Development Organisation.

21 Major & Medium irrigation Projects have been included under this programme, out of which 8 projects have been completed. At present the programme is being implemented in 13 projects (10 Major, 3 Medium). By end of March 2011, 526.427 thousand hectares of field channel and 157.35 thousand hectares of field drain have been completed.

During 2011-12, it has been programmed to construct field channel in 33000 hectares and field drain in 17671 hectares. Out of which, field channel covering an area of 18324 hectares and field drain covering an area of 4384 hectares have been constructed up to end of December 2011.

An out lay of Rs.86.00 crore has been proposed during 2012-13 with a target to construct field channel in 36638 hectares and field drain in 15835 hectares.

#### **E. Pani Panchayat :**

Participatory Irrigation Management (PIM) was introduced in the State during 1995 on a pilot basis in four projects. During 2000, the programme was named "Pani Panchayat" and was extended to all commands of Major, Medium, Minor & Lift Irrigation Projects. In the mean time, legal status has been provided to Pani Panchayats through Odisha Pani Panchayat Act 2002 & the Odisha Pani Panchayat Rule 2003.

It has been programmed to hand over 17.97 lakh hectares to Pani Panchayats for operation and maintenance. By end of December 2011, 14.28 lakh hectare has been handed over to Pani Panchayats for operation and maintenance.

#### **F. Water & Land Management Institute (WALMI):**

WALMI was established in our state during the year 1984 and was registered as an autonomous organization to impart advanced training in the area of Water and Land Management and undertake action and adaptive research pertaining to irrigation and agriculture. Besides, this organization is actively associated with capacity building of Pani Panchayats.

The institute has conducted 1937 training programmes upto March 2011 in which 17737 Govt. officers and 50852 farmers have participated. During 2011-12, 62 training programmes have been conducted upto end of December 2011 in which 306 Officers and 1451 farmers have successfully participated.

During financial year 2012-13, an outlay of Rs.2.00 crore has been proposed for activities under taken by WALMI.

#### **G. Odisha Construction Corporation Limited:**

The Odisha Construction Corporation Ltd. was established in the year 1962 as a wholly owned Government of Odisha Undertaking to take up quality construction work in the State. The Corporation is now engaged not only in construction activities but also in training /consultancy and IT services. During the last 49 years of its existence it has successfully executed a number of works awarded by the State Government, the Central Government and Central and State Public Sector Undertakings.

Major activities under DOWR include Spillway and Canal works of Lower Indra, Dam & spillway of Telengiri, Spillway & gate works of Manjore, Spillway & gate works of Baghalati, Sagada Aqueduct, Rengali Left Bank Canal, Rengali Right Bank Canal, Modernization of gate works of Bidyadharpur Barrage, Spillway of Ret, Spillway and gate works of Kanupur.



## **H. OTHER ACTIVITIES:**

### **1. Survey & Investigation:**

Survey & investigation form an integral part of water resources development.

The Project Planning & Formulation Wing has been entrusted with the tasks of undertaking survey and investigation of new Major and Medium Irrigation Projects, preparing feasibility report, Detailed Project Report, co-coordinating technical and other statutory clearances from different Ministries of Government of India.

### **2 . 35% Irrigation Master Plan:**

To rationalize irrigation development in the State, the Government has decided to provide irrigation facilities to at least 35% of the cultivable land in each block by 2013-14. Out of 314 blocks in the state, 198 blocks were identified as deficit blocks. One Master plan has been prepared to cover 198 deficit blocks for the purpose. Existing scheme viz. BKVY, AIBP, RIDF, JBIC and new schemes viz. Check Dam, Deep Borewell, Mega lift are under implementation to achieve the target.

By the end of March 2011, out of 198 deficit blocks, 41 blocks namely Jatni, Tangi, Kusumi, Saraskana, Baripada, Badasahi, Kaptipada, Kuliana, Morada, Sulipada, Betnoti, Odapada, Kamakhyanagar, Odagaon, Lephripada, Gumma, Kanas, Muniguda, Aul, Telkoi, Baliapal, Jaleswar, Basta, Borigumma, Laxmipur, Baramba, Kantamal, Chandbali, Rasulpur, Gopa Bandhu Nagar, Bisam Katak, Gudari, Kolnara, Chandrapur, Koraput, Gondia, Golamunda, Chakapada, Korukunda, Khariar & Chandahandi have achieved 35% irrigation coverage.