

CHAPTER 5

WATER RESOURCES

5.01 Orissa is one of the few states in the country, which is endowed with abundant water resources. But this resource is very unevenly distributed over time and space. The state has around 11% of the total water resources of the country with eleven rivers basin. Rainfall is the main source of water and long term average annual rainfall in the state is of the order of 1452 m.m. which is equivalent to 230.76 billion cubic metres (BCM). About 78% of the above is received in the monsoon (June to September) due to rapid increase in population, the per capita availability of water is reducing. As per the assessment made in 2001, the average per capita availability of water (both surface and ground) in the state was around 3359 cum per annum, as compared to national average of 1820 cubic. Table 5.1 shows the water resources scenario of Orissa and India.

Table 5.1
Water Resources: Orissa & India.
(In BCM)

Description	Orissa	India
1	2	3
Annual precipitation	230.76	4000
Average Annual Water Resources	141.408	1869
Utilizable water resources	108.147	1122
Utilizable Resources (% of precipitation)	47%	28%

5.02 Water has always played an important role in providing livelihood, hygiene and environmental securities. As the demand pattern is changing rapidly with increase of population, urbanization and rapid industrialization, the requirement of water for different purposes have been assessed and presented in Table 5.2 is given below.

Table - 5.2

Water Requirement for different uses.

(In BCM)

Type of uses	Year 2001			Year 2005		
	Surface	Gound	Total	Surface	Gound	Total
1	2	3	4	5	6	7
Domestic	0.798	1.198	1.996	1.202	1.803	3.006
Agriculture	18.000	4.688	22.688	40.000	9.408	49.408
Industry	0.606	0.100	0.706	1.750	0.200	1.950
Environment	21.000	8.400	29.400	21.000	8.400	29.400
Others	0.100	0.100	0.200	0.200	0.200	0.400
Total	40.504	14.486	54.990	64.152	20.011	84.164

5.03 In Orissa, a water storage capacity of 17.01 BCM has so far been developed through completed major, medium and minor (flow) projects. Another 4 major and 9 medium irrigation projects are in progress. On completion of these ongoing projects, another 1.47 BCM storage capacity will be added.

Irrigation Development

5.04 Agriculture is an integral part of the development system and irrigation holds the key to increasing agricultural productivity. the first proposal to utilize the waters of the rivers of Orissa for irrigation was made in the year 1858. But after introduction of Five Year Plan by Govt. of India in 1951, attempts were made for rapid harnessing of water resources and emphasis was laid to accelerate the irrigation potential creation. By the end of 10th Plan (March'2007) net irrigation potential of 2191.50 thousand hectare (th.ha.) has been created through major, medium and minor irrigation projects by using surface and ground water resources. In addition about ----- the ha. of irrigation potential have been created through unconventional sources like dug wells, water harvesting structure, small check dam etc. Table 5.3 presents the source wise net irrigation potential created and actual area irrigated in Orissa by the end of 2006-07.

Table – 5.3

Net Irrigation Potential Created in Orissa.

Sources	Potential Created (th.ha.)			Actual area irrigated
	2000-01	2005-06	2006-07	
2	3	4	5	6
Major & Medium	1177.89	1239.84	1250.50	
Minor (flow)	450.37	514.02	519.03	407.16
Minor (lift)	336.05	408.68	421.97	110.68
Other sources	557.92	586.76		
Total	2522.23	2745.91		

5.05 The state government has given top priority for providing irrigation facilities to at least 35% of the cultivable area of the state. It has been assessed that out of 314 blocks of the state, 116 blocks have already been provided with 35% irrigation facilities. The rest 198 blocks (Annex-5.1) will be covered in the 11th Five Year Plan period and 59.54 th.ha. during 2007-08. Source wise breakup is given in table 5.4.

Table – 5.4

Source wise irrigation potential to be created during 11th Plan period.

Sources	Potential to be created (in th.ha.)	
	During 11th plan period	During 2007-08
1	2	3
Major & Medium	321.73	32.71
Minor (flow)	47.27	6.83
Minor (Lift)	100.00	20.00
Total	469.00	59.54

State Water Policy

5.06 The State formulated its first state water policy in 1994 following the principle enunciated in the National Water Policy, 1987. In the mean time the National Water Policy, 1987 has been reviewed, updated and a new policy titled national Water Policy, 2002 has been adopted by Government of India. Accordingly, the State Government have prepared a new water policy titled “Orissa State Water Policy – 2007” which has been approved by State Water Resource Broad.

Major & Medium Irrigation

5.07 Major and medium irrigation occupy a key position in the irrigation map of Orissa. It has been assessed that among all sources of irrigation, only major and medium irrigation will provide irrigation to 31.30 lakh hectare. By the end of March, 2007, 1250.50 thousand hectares of irrigation potential has been created. Besides, another 32 projects were in different stages of progress, on completion of these another 352.04 thousand hectares of irrigation potential will be created. Table 5.5 represents the status of Major & Medium irrigation projects in the State as on 31.03.2007.

Table – 5.2

Status of major & Medium Irrigation projects in Orissa as on 31.03.2007.

(in 000' hectares)

Category	Completed Projects		On going projects		Balance potential to be created
	Nos.	Potential created	Nos.	Potential created	
1	2	3	4	5	6
Major	10	817.11	8	103.47	282.55
Medium	49	280.03	11	10.80	48.35
Creek	13	22.85	6	-	13.53
ERM	12	14.15	7	0.10	7.61
Total	84	1134.14	32	114.37	352.04

5.08 It has been targeted to create additional irrigation potential of 321.73 thousand hectare during 11th Five Year Plan including 32.71 thousand hectare during 2007-08 through major and medium irrigation projects. Tow mega projects namely Mahanadi Basin Development Plan (MBDP) and Orissa Integrated Irrigated Agriculture and Water Management Project (011 AWMP) are likely to be implemented during 11th Plan period. The estimated project cost of these two projects is about Rs.4690.30 crore. An out lay of Rs.1582.89 crore have been proposed in the 11th Five Year Plan including Rs.40.80 crore for 2007-08. Besides, another project “Rengali Ph-II” is expected to be implemented during 11th Five Year Plan with an out lay of Rs.50.00 crore with assistance from JBIC.

Minor Irrigation (Flow)

5.09 Minor Irrigation (Flow) project has its own importance due to low gestation, less investment and quick benefit. The minor irrigation projects have contributed substantially to augment the irrigation potential in the State. It has been assessed that 970.00 th. Ha. of irrigation potential can be created through M.I. (flow) projects. By the end of 31st March 2007, about 519.027 thousand hectare irrigation potential have been created as against 514.022 thousand hectare potential created by the end of 2005-06. At present, Minor Irrigation Organization is looking after construction, operation & maintenance of Minor Irrigation (Flow) projects having ayacut above 40 hectares. Projects having ayacut below 40 hectares were transferred to Panchayati Raj Department. Further, some old MIPs which cannot be revived at all are also deleted from the account. The status of MIP (Flow) projects as on 31st March 2007 is given in table 5.6.

Table – 5.6

Category	No. of projects		Designed ayacut (000'ha.)	Certified ayacut (000'ha.)
	Total	KBK region		
1	2	3	4	5
a) Functional MIPs	2080	243	337.00	324.00
b) Partly derelict MIPs	844	239	103.00	68.00
c) Completely derelict MIPs	540	41	44.00	1.00
d) Ongoing MIPs	180	70	63.00	8.00
Total	3646	593	547.00	401.00

5.10 Out of total 3646 M.I. (flow) projects, 593 projects are belongs to KBK region. This comprises 243 completed, 239 partly and 41 complete derelict projects. By the end of 2006-07, about 106.754 thousand hectares of irrigation potential have been created by these projects including 0.880 th. ha. created during 2006-07.

Lift Irrigation

5.11 Orissa Lift Irrigation Corporation was set-up in the year 1973 to exploit the surface and ground water resources on a massive scale by pooling funds from all sources. Prior to that, lift irrigation projects were executed by the Directorate of Lift Irrigation. During 2002, the State Government decided to restructure OLIC claiming to execute new L.I. projects to create additional irrigation potential and handing over the same to Pani Panchayat for operation and maintenance in the State. After implementation of Pani Panchayat Act, 2002, OLIC is no more collecting water charges from the cultivators of the Pani Panchayats. By the end of 31st March 2007, 18,028 LIPs have been installed and energized in the State and irrigation potential of 421.97 thousand hectares has been created. The status of LIPs in the State as on 31.03.2007 is given in table 5.7.

Table – 5.7
Status of Lift Irrigation Projects in
Orissa as on 31.03.2007.

Description	KBK districts	Non-KBK districts	Total
1	2	3	4
No. of operable L.I. Projects	2238	6801	9039
No. of defunct L.I. Projects	1609	7380	8989
Total	3847	14181	18028

SOIL CONSERVATION

5.12 Watershed Development Programme (WDP) focus on harnessing and conserving land and Water through various soil and water conservation intervention for increasing and sustaining productivity of land and improving livelihood of the community. These programmes are being implemented in the State under various Centrally Sponsored Schemes like Drought Prone Area Programme (DPAP), Integrated Waste Land Development Programme (IWDP), River Valley Project (RVP) etc. Besides, WDP are also being implemented under Western Orissa Rural Livelihood project (WORLP) for Baragarh, Bolangir, Nuapada and Kalahandi districts. The Orissa Watershed Development Mission (OWDM) has been setup for co-ordination, monitoring and strengthening the implementation mechanism of all Water shed programmes in the State.

Schemes / Programmes

5.13 A number of schemes / programmes are being implemented in the State for

development of Irrigation. They are as follows:

- *Accelerated irrigation Benefit Programme (AIBP).*
- *Rural Infrastructure Development Fund (RIDF).*
- *Externally Aided Projects (JBIC, hydrology Ph-II).*
- *Repair, Renovation & Restoration of Water Bodies.*
- *Biju Krushak Vikash Yojana*

Accelerated Irrigation Benefit Programme (AIBP)

5.14 Government of India launched the Accelerated Irrigation Benefits Programme (AIBP) during 1996-97 for providing loan assistance to State Governments for accelerating the pace of irrigation development in the country. The primary objectives of AIBP are:

- ♦ *To accelerate implementation of ongoing irrigation projects.*
- ♦ *To realize bulk benefits from irrigation projects.*

5.15 Orissa is a reforming state and has been availing central assistance as per relaxed norms of AIBP. The projects in KBK districts are treated at par with Special Category States & the projects in Non-KBK districts are treated under relaxed norm. Altogether 18 Major and Medium Irrigation Projects & 22 Minor (flow) Projects have been approved under AIBP. Out of the above, one MI (flow) projects has been dropped. The

status of Projects under AIBP is given in table 5.8.

Table – 5.8
Status of AIBP as on 31.03.2007.

Description	Major & Medium			Minor (flow)
	Non-KBK	KBK	Total	KBK only
1	2	3	4	5
Projects taken up (Nos.)	9	9	18	21
Projects Completed (Nos.)	4	3	7	13
Projects under Progress (Nos.)	5	6	11	10
Appraisal Potential (in Th. ha)				
(a) Creation	184.558	151.59	336.14	9.52
(b) Stabilization	61.62	-	61.62	-
Potential created (in Th. ha)	13.39	45.384	58.774	7.701
Potential Stabilised (in Th. ha)	54.508	-	54.508	-

Rural Infrastructure Development Fund (RIDF):

5.16 Agriculture and Rural Infrastructure Sectors play an important role for growth of economy. There are many infrastructure projects, which have been started but are lying incomplete for want of resources. Even though there is an urgent need of creating adequate employment opportunities in rural areas through development of infrastructure, there had been virtually no institutional arrangements for financing rural infrastructure.

5.17 Against this background, the Government of India in the Budget of 1995-96 announced the scheme for setting up Rural Infrastructure Development fund (RIDF) to be operationalised by NABARD. This fund has

emerged as a popular and effective scheme for financing rural infrastructure projects. The primary objective is to assist State Governments for the completion of ongoing rural infrastructure projects and also taking up new projects.

5.18 The Water Resources Department has availed loan under RIDF scheme since inception of the programme. Earlier the loan was extended for taking up new as well as completion of ongoing Major, Medium & Minor Irrigation projects. Later on, during 2004-05, NABARD agreed to provide loan to Flood control & Drainage Projects. The status of projects taken up under different RIDF trenches is given in table 5.9.

Table – 5.9
Status of RIDF projects as on 31.03.2006.

Sector	Taken up	Completed	Under progress	Dropped	Design potential (Th. Ha)	Potential Created (Th. Ha.)
1	2	3	4	5	6	7
Major & Medium	52	32	20	2	95.155	55.581
Minor Flow	256	133	105	18	91.551	55.48
Flood Control	24	04	20	-	-	-
Drainage works	23	01	22	-	-	-

Externally Aided Projects:

Japan Bank of International Co-operation (JBIC):

5.19 Japan is providing ODA (Overseas Development Assistance) loan to developing countries at low rates of interest and with long repayment periods to develop and improve

the economic and social infrastructure for sustainable economic development. JBIC's Overseas Economic Cooperation Operations are in charge of the major part of ODA loans. So far 3 Major Projects namely Upper Indravati Irrigation Project (RD 15.00 to 52.00 Km.), Upper Kolab irrigation Project (RD14.00 to 41.78 Km) & Rengali Left Bank Canal (RD 29.177 to 71.313 km.) have been sanctioned under this scheme. Out of three sanctioned projects, two projects namely Upper Indravati and Upper Kolab have been completed. At present, Rengali Left Bank Canal (RD 29.177 to 71.313 Km.) is under progress since 1997. The project is scheduled to be completed by 2010-11. The physical and financial progress is given in table 5.10.

Table – 5.10
Total Status as on 31.03.2007.

Financial (Rs. in Cr.)				Physical (Th.ha.)			
Latest Cost	Exptr. by 03/2005	Exptr. during 2005-06	Total Exptr. by 03/2006	Appraisal potential	Potential created by 03/2005	Potential created during 2005-06	Total Potential created by 03/2006.
1	2	3	4	5	6	7	8
686.4	406.8	70.5	477.3	29.2	0.3	0.3	0.6

N.B. = Rounded up to 1 decimal point.

Repair, Renovation & Restoration of Water Bodies (RR&R):

5.16 The water bodies have been a part and parcel of minor irrigation in the country, under which even today two-thirds of irrigated agriculture is covered in our country. Such Minor irrigation schemes generally suffer from

the problem of loss of storage due to silting of the tanks, poor maintenance and management, encroachment, etc. Damage to various structures, inadequate surplus arrangements, silting are some of the reasons for deteriorating conditions in the irrigation system. It is necessary to restore the storage capacity of water bodies with the purpose of recovering their lost irrigation potential.

5.17 With this end in view, a new Scheme called “National Project for Repair, Renovation and Restoration of Water Bodies directly linked to Agriculture” has been launched on pilot basis by Govt. of India during 2004-05. The main objectives are

- (a) *To restore and augment storage capacities of water bodies.*
- (b) *To recover and extend their lost irrigation potential.*

5.18 Under this pilot scheme 127 of MIPs in the district of Ganjam & Gajapati at a cost of Rs.18.84 cr. has been taken up to restore lost ayacut of 9,619 thousand hectare. The physical and financial performance is given in Table 5.7.

Table – 5.7
Status of Repair, Renovation & Restoration of Water Bodies as on 31.03.2006.

District	Project (Nos.)			Potential to be revived (Th.ha.)	Potential revived (Th.ha.)
	Taken up	Completed	Ongoing		
1	2	3	4	5	6
Ganjam	68	1	67	6.081	1.846
Gajapati	59	-	58	3.538	0.634
Total	127	1	126	9.619	2.480

BIJU KRUSHAK VIKASH YOJANA (BKVY):

5.19 This novel scheme was launched by state Government in 2001 with an objective to revive derelict projects & construction of new projects particularly in minor irrigation sector through people's participation. The assistance will be limited to 80% of the estimated capital cost and contribution of Pani Panchayat shall be 20% of the cost. In case of tribal sub-plan areas and KBK Districts, the assistance may be raised to 90% of the capital cost. The Pani Panchayat may contribute its share either in cash or in terms of labour or in the form of land etc. The assistance to a Pani Panchayat towards the capital cost shall be given only after it is registered as Society under the Societies Registration Act, 1860 for which a

model bye-law will be furnished by the DOWR. At present the funding for execution of MIPs & LIPs in KBK districts are basically met from Special Component assistance (SCA) received under RLTA. Similarly, loan assistance from NABARD is being availed under RIDF scheme for execution of MIPs & LIPs in Non-KBK Districts. The status of BKVY is given in the table 5.8.

Table - 5.8
Achievement made under BKVY as on 31.03.2006.

Project Particular	Minor (flow)			Lift Irrigation (OLIC & OAIC)		
	Non-KBK (RIDF)	KBK (SCA under RLTA)	Total	Non-KBK (RIDF)	KBK (SCA under RLTA)	Total
1	2	3	4	5	6	7
1.Sanctioned (No)	40	52	92	1215	1402	2617
2.Dropped (No)	3	16	19	52	-	52
3.Taken up (No)	37	36	73	1163	1402	2565
4.Completed (No)	3	21	24	669	1107	1776
5.Ongoing (No)	34	15	49	494	295	789
6. Appraisal Potential in Th. Ha. (Taken up Projects)						
(a) Creation	2.44	5.19	7.64	21.82	26.83	48.65
(b) Revival		1.708	1.708	0.572	2.98	3.552
7. Potential created.(Th.ha.)	0.43	1.88	2.31	12.15	21.23	33.38
8. Potential revived (Th.ha.)	-	1.708	1.708	0.216	2.22	2.436

OTHER IMPORTANT ACTIVITIES:
Pani Panchayats, Participatory Irrigation Management (PIM)

5.20 PIM concept has been introduced in the State during 1995, on pilot basis in four

projects with the assistance of World Bank under the banner Framers' organization & Turn over. To motivate farmers in irrigation management, massive awareness campaign, training programmes & work shops have been

done at regular intervals. Due to overwhelming response, during 2000, the programme was named “Pani Panchayat” and was extended to all commands of Major, Medium, Minor & Lift Irrigation Projects. To make Pani Panchayats successful, legal status has been provided by enacting the Orissa Pani Panchayat Act 2002 & the Orissa Pani Panchayat Rule 2003.

Physical Projections and achievements:

5.21 At present, it has been programmed to hand over 16.88 lakh ha. to Pani Panchayats for operation and maintenance. The Physical achievements ending 31.03.2006 is given in the table 5.9.

Table – 5.9

Status of Pani Panchayats in Orissa as on 31.03.2006.

Sector	Total Programme		Registered / Formed		Handed Over		Delineation	
	Nos	Area (lakh ha.)	Nos	Area (lakh ha.)	Nos	Area (lakh ha.)	Nos	Area (lakh ha.)
Major & Medium	2567	11.17	1375	6.05	1034	4.61	2091	9.19
Minor (flow)	1883	3.28	1405	2.12	826	1.3	1710	1.92
Minor (lift)	11033	2.43	10504	2.34	9638	2.15	231	0.03
Total	15483	16.88	13284	10.51	11498	8.06	4032	11.14

i) Drought Prone Area Programme (DPAP)

5.22 The programme is in operation in 47 identified blocks of 8 districts viz. Bolangir, Boudh, Baragarh, Dhenkanal, Sonapur, Kalahandi, Kandhamal and Nuapada. Total 1,146 projects were sanctioned under the programme with project cost of Rs.329.64 crore for treatment of 5.813 lakh hectares. 66 projects have been completed by the end of 31st March 2006. An amount of Rs.111.19 crore including Rs.78.73 crore Govt. of India share have been released by the end of March 2006, out of which Rs.94.47 crore have been utilized in treating 1.79 lakh hectares.

ii) Integrated Wasteland Development Programme (IWDP)

5.23 The scheme is being implemented in 23 districts of the State except Boudh, Bhadrak, Kandhamal, Kendrapara, Jagatsinghpur, Puri and Nuapada districts. 741 Micro Water Shed Projects are under implementation under the projects with sanctioned project cost of Rs.219.75 crore for treating 3.98 lakh hectares. By the end of march, 2006 Rs.99.11 crore have been released including Rs.96.10 crore GOI share and an amount of Rs.79.06 crore have been utilized for treating 1.55 lakh hectares. During 2005-06 about 16,100 hectare in 650 water sheds were treated by utilizing Rs.8.53 crore.

iii) River Valley Projects (RVP)

5.24 This is a centrally sponsored project aims at treating degraded catchment area of multi purpose inter State reservoirs with appropriate soil and water conservation measures to check silt inflow in to the reservoirs and to enhance the productivity of degraded land. The scheme is in operation in four catchments in the State viz. Hirakud, Rengali – Mandira, Machhakund – Sileru and Upper Kolab. During 2005-06, 7 watersheds were being implemented in the State and an amount of Rs.1.39 lakh was utilized under the scheme and 1,142 hector were treated.

National Watershed Development Project for Rain fed Areas in the State (NWDpra)

5.25 The project is being implemented in the State since 1990-91 as a component of the CSP Macro management of Agriculture. 212 re-cast Water sheds of 9th Plan period were carried over to 10th Plan period for treating 1.38 lakh hectares at an estimate cost of Rs.62.11 crore. Out of these 212 watersheds, 59 belong to KBK districts with an area of 33,315 hectare for treatment. During 2005-06 an amounts of Rs.3.65 crore have been utilized and 8,122 hectare area have been treated. It has been programmed for treatment of 25,087 hectare with an estimated cost of Rs.1,128.90 lakh under these watersheds.

WATERSHED DEVELOPMENT UNER RLTAp FOR KBK DISTRICTS

5.26 314 Micro Water-shed projects have been taken up under RLTAp for KBK districts since 2002-03 with a project cost of Rs.100.57 crore for treating 1.67 lakh hectares. The cumulative expenditure under the programme came to Rs.44.14 crore for treatment of 0.68 lakh hectare area. It has been programmed for treating 33,200 hectare under this programme during 2006-07 with an investment of Rs.20.00 crore.

WESTERN ORISSA RURAL LIVELIHOOD PROJECT (WORLP)

5.27 The project was launched in 2000-01 with DFID assistance with the aims to promote sustainable rural livelihood for the poor in the project area through watershed plus activities and would support land and water management, livelihood initiatives for the poorest, capacity building, and encouraging an enabling environment to address Govt. policy. The project is in operation in 29 blocks of four districts viz. Bolangir, Nuapada, Kalahandi and Baragarh.

5.28 During 2005-06, 290 watersheds were implemented under the scheme with a treatable area of 1.51 lakh hectare with a project cost of Rs.137.75 crore.

Flood Control

5.29 Floods affect vast areas of the state. Major rivers namely Mahanadi, Brahmani, Baitarani, Subernarekha, Rushikulya, Budhabalanga, Vamsadhara and their

branches have the potential of causing severe floods in their delta. The flood prone area of the State has been assessed to be 33.40 lakh ha, which is 21.45% of its geographical area. Almost every alternate year, the State experiences large scale devastation either due to flood or flood coupled with cyclone. During the last five decades, some structural and non-structural measures have been taken to mitigate flood. As a part of structural measures, two flood control reservoirs namely

Hirakud on Mahanadi River & Rengali on Brahmani River have been constructed. Similarly the Chanduli Dam & Icha Dam (under construction) in Jharkhand State will control flood to some extent in Subernarekha Delta. Besides, 6,515 kms. of protective embankments have been constructed in different basins to control the flood & saline ingress in the deltaic / low lying area which is given in the table 5.10.

Table – 5.10
Status of flood control programme as on 31.03.2006.

Name of Basin	Capital Embankment (in Km.)	Other Agricultural Embankment (in Km.)	Test Relief Embankment (in Km.)	Saline Embankment (in Km.)	Total (in Km.)
1	2	3	4	5	6
Mahanadi	1281.14	1205.78	428.69	961.72	3877.33
Brahmani	144.21	218.67	258.35	323.20	944.43
Baitarani	127.87	122.13	184.54	161.80	596.34
Rushikulya	-	486.46	-	30.00	516.46
Subernarekha	30.00	28.70	225.60	28.00	312.30
Budhabalanga	-	20.50	144.85	12.95	178.30
Vamsadhara	4.98	1.70	82.91	-	88.59
Total	1588.20	2083.94	1324.94	1517.67	6514.75

N.B. : In addition, 1952 nos of spurs and 253 km of Stone packing have been constructed.

5.30 There are no specific irrigation schemes under which these works can be taken up. Govt. of India's intervention in this sector is limited to Northeast & Ganga Basin States. To overcome the funding problem, during 2003-04, a proposal integrating flood control and drainage with irrigation has been prepared on a pilot basis for Mahanadi Basin "Mahanadi Basin Development Plan" submitted to MOWR for necessary clearances. After obtaining necessary clearances, the same has been planned to be posed to World Bank for funding. At present, the emergent natures of works in selected

patches are taken up through CRF/SGRY/ NCCF/RIDF.

5.31 Apart from that, during 2004-05, Government of India under anti-sea-erosion works sanctioned one project namely Construction of Seawall of Jamboo Saline Gherry on Gobari Left from RD 8.67 km. to 10.855 km. at an estimated cost of Rs.314.00 lakh (Central share-Rs.235.00 Lakh). The Project is scheduled to be completed during 2006-07. Central assistance of Rs.150 lakh. has been released for this project & an amount of Rs85.00 lakh has been spent up to end of 31.03.2006.

Drainage:

5.32 The coastal belt of Orissa is one of the most densely populated areas of the country. In spite of fertile land, suitable agro climatic conditions and irrigation systems, the crop yield is low. This is mainly due to the fact that 30% of the CCA, i.e, 2.17 lakh ha suffers from poor drainage and water logging problems. To harness the potential for increased agricultural growth, a Master plan amounting to Rs.856.46 Cr. to retrieve 1.90 lakh ha. of waterlogged area has been prepared & submitted to CWC for necessary clearance.

5.33 To address the drainage congestion and water logging problems, there are no specific schemes available as Government of India's intervention is limited to Ganga & Brahmaputra Basin States. However, during 2004-05, NABARD agreed in principle to provide loan assistance under RIDF for this sector. During 2005-06, twenty project proposals have been submitted to NABARD for sanction, which are under scrutiny. Though, separate drainage organization was created during 2001 to look after the drainage work, due to funds constraints the activities are scaled down. At present, the emergent natures of works in selected patches are taken up through CRF/SGRY/NCCF/ACA/CSP. Apart from that, during 2004-05, Government of India sanctioned a project, namely Improvement of Drainage System & Improvement of Coast Canal

Range-III in Bhogarai & Jaleswar Block of Balasore District at an estimated cost of Rs.1,446.26 lakh (Central share-Rs.1,283.81 Lakh) under this scheme. The Project is scheduled to be completed during 2006-07. By the end of March 2006, Central assistance of Rs.4.75 Cr. has been released for this project. The physical and financial progress of the project under CSP is given in table 5.11.

Table – 5.11
Status of Drainage project in
Orissa as on 31.03.06.

Financial (Rs. in Cr.)				Physical (Th.ha.)			
Appraisal Cost	Expdr. by 03/2005	Expdr. by during 2005-06	Total Expdr. by 03/2006	Area to be retrieved	Area retrieved by 03/2005	Area retrieved during 2005-06	Total Area retrieved by 03/2006.
14.46	1.50	2.50	4.00	11600	3000	3185	6185

MINOR IRRIGATION CENSUS

5.34 The Minor Irrigation Census is being conducted by Government of India in every quin-quennial period. The 3rd Minor Irrigation Census was conducted in the State during 2001-02 with reference year 2000-01. The Census report provides district level information on number of different minor irrigation schemes, culturable command area (C.C.A.), irrigation potential created (I.P.C.) and irrigation potential utilized in respect of five types of M.I. schemes viz. dug well, shallow tube well, deep tube well surface flow and surface lift. A comparative picture of 3rd Minor Irrigation Census and 2nd Minor Irrigation Census have been presented in Table 5.12.

Table 5.12
Gross Irrigation Potential Created and Utilised in the State
as per 2nd and 3rd Minor Irrigation Census.

Scheme (In numbers)	Number of Scheme			Gross Irrigation Potential Created (in lakh hectare)			Gross Irrigation Potential Utilised (in lakh hectare)		
	1993-94(2 nd M.I.Census)	2000-01(3 rd M.I.Census)	Percent changes	1993-94(2 nd M.I.Census)	2000-01(3 rd M.I.Census)	changes	1993-94(2 nd M.I.Census)	2000-01(3 rd M.I.Census)	changes
Dug well (lakh)	3.23	3.78	17	2.06	1.91	(-) 7.40	0.92	0.77	(-) 16.1
Shallow tube well	18095	43881	142.5	1.31	1.53	16.4	0.54	0.66	22.3
Deep tube well	2911	4592	57.8	0.82	0.94	14.7	0.14	0.11	(-) 20.6
Surface flow	24103	28303	17.4	6.98	6.9	(-) 1.3	4.31	3.64	(-) 15.5
Surface lift	20604	32844	59.4	2.83	3.03	7.1	1.13	1.03	(-) 8.5

5.35 Out of the total 3.78 lakh dug wells, trend of 20.6% over the 2nd M.I. Census. 2.83 lakh are in use, 0.26 lakh are not in use permanently, and remaining 0.69 lakh are not in use temporarily. The gross irrigation potential created is under utilized in the case of 2.07 lakh dug wells out of 2.83 lakh in use due to less discharge of water, mechanical break down and inadequate power etc. The gross irrigation potential utilized during the 3rd M.I. Census through deep tube wells was 0.11 lakh hectares as against 0.14 lakh hectares during 2nd M.I. Census showing a declining

This may be due to large-scale defunct, poor and irregular maintenance and inadequate power supply. The declining trend of surface flow during 3rd M.I. Census is due to siltation of storage tanks, breakdown of channels and inadequate storage due to erratic rainfall. In case of surface lift, the reasons for such under utilization were mostly due to inadequate power supply, mechanical breakdown and less discharge of water etc.