

Command Area Development & Water Management (CAD&WM) Programme

Objective

Command Area Development and Water Management (CADWM) programme, a Centrally Sponsored Plan Scheme being implemented in the State since 1976-77 with the main objective of reducing the gap between irrigation potential created and that utilized. The programme aims at enhancing agricultural production and productivity in irrigated commands by judicious and equitable distribution of the available irrigation water with active involvement of farmers through participatory irrigation management (PIM).

Programme Coverage

The CADWM programme is being executed in major and medium irrigation projects. So far, 21 major and medium irrigation projects with CCA of 995861 hectare have been taken up under this programme. This includes 4 new projects namely Gohira, Remala, Sunei & Upper Indravati taken up during 2009-10. By end of March 2010, seven projects namely Salandi Left, Pitamahal, Talsara, Salia, Kuanria, Kansbahal and Daha were closed. At present, the programme is being implemented in 9 major and 5 medium irrigation projects namely Mahanadi Delta Stage -I, Mahanadi Delta stage-II, Salandi Right, Baitarani, Hirakud, Rushikulya, Potteru-Satiguda, Upper Kolab Salki, Upper Indravati, Jayamangal, Gohira, Remal & Sunei covering an area of 773039 hectares in 23 districts. There are 4 Command Area Development Authorities (CADAs) in the State located at Cuttack, Sambalpur, Berhampur and Jeypore to carry out the programme in the following irrigation commands:

Table – 6.1

Sl. No.	Name of the CADA	Name of the Project	
1.	CADA, Cuttack	1.	Mahanadi Delta Stage-I
		2.	Mahanadi Delta Stage-II
		3.	Salandi Right
		4.	Baitarani
		5.	Sunei
		6.	Remal
2.	CADA, Sambalpur	7.	Hirakud
		8.	Salki
		9.	Gohira
3.	CADA, Berhampur	10.	Rushikulya
		11.	Jayamangal
4.	CADA, Jeypore	12.	Potteru-Satiguda
		13.	Upper Kolab
		14.	Upper Indravati

Programme Components

Topographical survey

Topographical survey is carried out departmentally by the technical staff in the total Command Area of the Project for fixing alignment for construction of Field Channel, Field Drains. The beneficiaries on the basis of alignment voluntarily contribute the required land through the Pani Panchayats.

Construction of Field channel

Field channel is the core component under CADWM Programme. The field channels facilitate in carrying out water from out lets of minors, distributaries etc. up to tail end at very short time preventing loss of seepage in agricultural land. This helps in rotational water supply in judicious manner to each field to achieve higher production.

Construction of Field drain

Field drains help in draining out surplus water from the agricultural land to main and trunk drain. This prevents water logging in the crop field by which higher productivity is achieved and it helps in taking up cash crops after draining out the excess water from the field.

Reclamation of Waterlogged and Saline Lands

In order to reclaim the waterlogged and saline areas in the irrigated commands, surface drainage as well as sub surface drainage systems are developed along with the option of bio-drainage at suitable locations.

Farmers' Training

Training camps are organized in villages to educate the farmers on water management and crop management. This is important activity for educating the farmers to adopt modern technologies for achieving higher production with regulated water supply.

Crop Demonstration

Demonstrations are carried out on the farmers' field to show them practically, how to adopt suitable cropping pattern and use of balanced dose of inputs with proper management of available water.

Correction of System Deficiencies

This component meant to rectify the deficiencies in the supply system above outlet up to distributaries of 150 cusec capacity.

For active participation of farmers in irrigation management, Water Users Associations (Pani Panchayats) are being formed in different commands. The Pani Panchayats are to play key role in management of water supply in the field and adopt proper cropping pattern.

Financial Norms and Funding Pattern

The activities under CADWM programme being implemented in Orissa at present and the financing norms and funding pattern is given in the following table.



Secretary MOWR, GOI visiting Field Channel work at village (Budhabudhiani)



Commissioner, CAD & WM, MOWR, GOI visiting Field Channel work at village Pipili Sasan (Mahanadi-Delta Stage-II)

Table -6.2

Sl. No.	Items	Cost Norms Per hectare	Central Share	State Share	Farmers Share
1	Construction of Field Channels	Rs15,000/-for areas in Non-KBK districts and Rs22,000/-for areas in KBK districts	50%	40%	
2	Construction of Field Drains	Rs4,000/-for areas in Non-KBK districts and Rs5,000/-for areas in KBK districts	50%	50%	
3	Reclamation of Waterlogged	Rs15,000/-	50%	40%	10%
4	Adaptive Trials, Action Research and Demonstration	As per location specific need	75%	25%	
5	Farmers Training	As per location specific need	75%	25%	
6	Correction of system deficiencies above out let up to Distributaries of 150cusec capacity	Rs6,000/-	50%	50%	
7	One time functional grant to water Users' Association	Rs1,000/-	45%	45%	10%
8	Topographical survey & Investigation	Rs1,000/-	50%	50%	
9	Establishment @ 20% of Item No. 2,3,4&7		50%	50%	

Programme Status

By end of March 2010, field channel covering 496.677 thousand hectares & field drain covering 148.445 thousand hectares were completed that includes construction of 18.473 thousand hectare of field channel & 0.630 thousand hectares field drain during 2009-10. Emphasis is being given to complete the ongoing projects. Project wise status is given in the table below.

Table-6.3

Total status Field Channel and Field Drain in CAD projects as on 31.03.2010

Sl. No.	Name of the Project	Year of inclusion	CCA in th. ha	Total area covered by March 2010 (in th. ha)		Remarks
				Field Channel	Field Drain	
1	Salandi Left	1976-77	44.635	43.317	11.920	Programme closed
2	Salia	1994-95	8.310	0.526	0.000	-do-
3	Pitamahal	1994-95	2.640	1.106	0.050	-do-
4	Talsara	1994-95	3.030	0.524	0.000	-do-
5	Daha	1998-99	4.760	4.657	0.390	-do-
6	Kansbahal	2004-05	5.050	4.578	0.295	-do-
7	Kuanria	2004-05	3.780	3.780	0.452	-do-
	Total		72.205	58.488	13.099	

1	Mahanadi Delta St-I	1976-77	179.410	120.319	40.033	Under progress
2	Mahanadi Delta St-II	1976-77	156.840	84.780	29.005	Under progress
3	Hirakud	1976-77	157.018	142.915	47.989	Under progress
4	Rushikulya	1994-95	61.790	17.662	1.577	Under progress
5	Salandi Right	1994-95	40.178	12.341	4.327	Under progress
6	Potteru-Satiguda	1988-89	70.100	14.025	0.400	Under progress
7	Baitarani	1998-99	32.768	10.095	7.404	Under progress
8	Upper Kolab	2004-05	47.715	21.605	4.150	Under progress
9	Salki	1994-95	19.870	12.436	0.251	Under progress
10	Jayamangal	1998-99	7.350	1.961	0.210	Under progress
11	Upper Indravati	2009-10	128.000	0.000	0.000	Under progress
12	Gohira	2009-10	8.304	0.050	0.000	Under progress
13	Sunei	2009-10	10.000	0.000	0.000	Under progress
14	Remal	2009-10	4.313	0.000	0.000	Under progress
	Total		923.656	438.189	135.346	
	Grand Total		995.861	496.677	148.445	

Achievement during 2009-10

Name of the Scheme	Target (ha)	Achievement in ha	Revised outlay 2009-10(Rs Lakhs)	Expenditure 2009-10(Rs Lakhs)
Construction of Field Channel	18473	18473	4582.67	2798.98
Construction of Field Drain	750	630	22.00	20.00
Reclamation of Waterlogged Area	17	17	2.28	2.28
Crop Demonstration	500	500	35.00	29.63
Farmers' Training (in number)	101	97	10.92	10.44
Correction of system deficiencies	50	0	2.00	0.00
Sub Total Works			4654.79	2861.33
Project Administration			157.92	145.74
Topo Survey, Planning and Design	33550	30550	1208.54	1101.62
Sub Total Establishment			1366.46	1247.36
TOTAL CADWM			6021.37	4108.69
WORKS UNDER NON-PLAN			358.24	385.24
GRAND TOTAL			6406.61	4493.93

Programme 2010-11

A budget provision of Rs6643.56 lakhs has been provided in the annual budget of 2010-11 for construction of field channels of 28.92 thousand ha. field drains of 9.33 thousand ha. & other required components of the scheme as given below.

Table-6.4

Sl. No.	Name of the schemes	Physical target for 2010-11 (ha)	Budget provision for 2010-11 (Rs in lakhs)		
			State share	Central share	Total
1	Construction of Field Channel	28922	2026.22	2532.77	4558.99
2	Construction of Field Drain	9330	196.60	196.60	393.20
3	Reclamation of Waterlogged Area	130	11.40	14.25	25.65
4	Crop Demonstration	1622	20.28	60.84	81.12
5	Farmers Training (Nos)	141	3.80	11.40	15.20
6	Correction of system deficiencies	35	1.00	1.00	2.00
7	Topo Survey	47000	693.70	693.70	1387.40
8	Project Admn.		90.00	90.00	180.00
GRAND TOTAL			3043.00	3600.56	6643.56



Field channel construction work under progress in Tikarapali (Budhabudhiani)



Field channel work at Balisahi of Kendrapara Canal System (Mahanadi-Delta Stage-I)



Field drain at village Indas (Salandi Right Canal)



Field channelwork at village of Patamundai Canal System
(Mahanadi-Delta Stage- I)



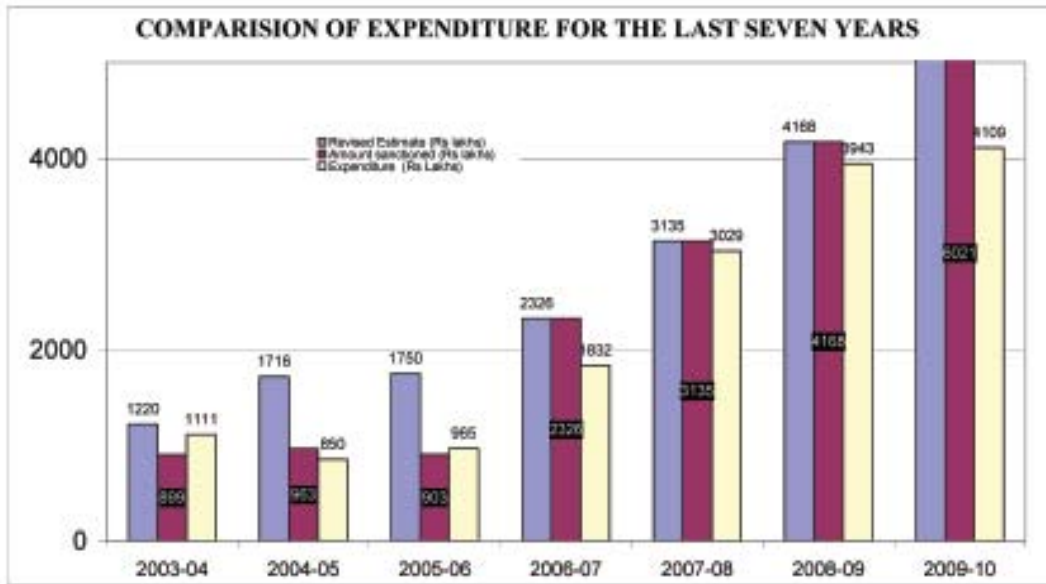
Field channel at village Sahadevpur
(Mahanadi-Delta Stage- I)



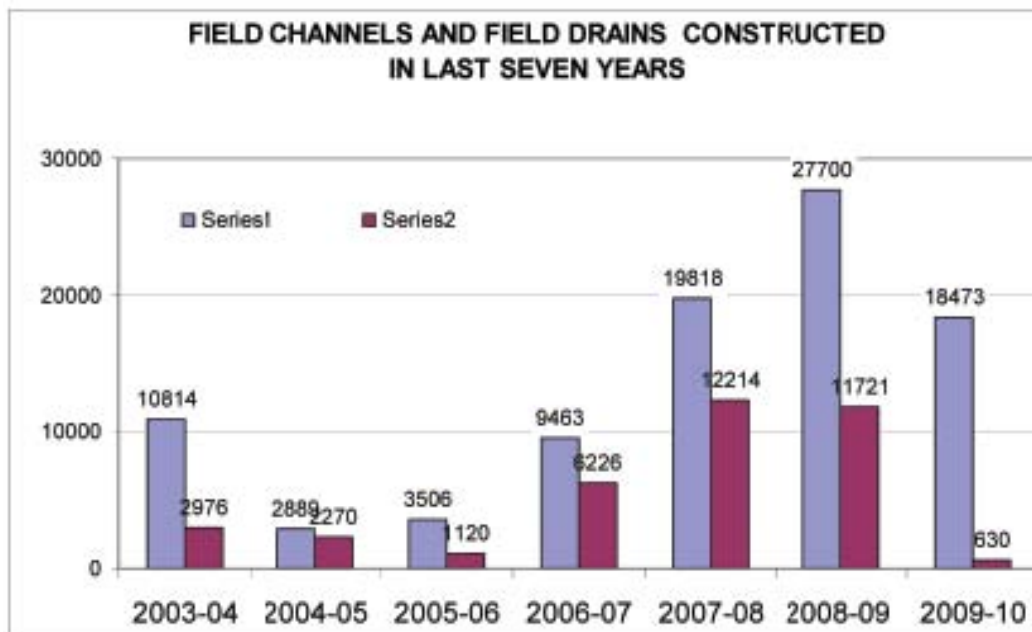
Field drain at Nilka to Bina Pinjara (Salandi Right Canal)

CADWM programme in last seven years

The CADWM programme has been scaled up in the last few years with higher allotment of funds year after year. Against the budget provision of Rs1220 lakhs, an amount of Rs1111 lakhs was utilized during 2003-04. The provision went on increasing and an amount of 4108.09 lakhs were spent during 2009-10 against the revised estimate of Rs6021.37 lakhs. Budget provision of Rs.6643.56 lakh has been made during 2010-11.



The physical achievements towards construction of main items like Field channels and Field drains have also been increased in the last few years as given in figure below:



CADWM activities under RKVY

CADWM activities are also being extended in other irrigation projects by availing funds from Rastriya Krishi Vikas Yojana (RKVY). Four medium projects namely Budhabudhiani in Nayagarh District, Salia in Khurda District, Pilasalki in Khandamal District and Godahada in Ganjam District covering an area of 23611 ha. have been included under RKVY. Pani Panchayats are being directly involved in the process of planning and execution of these projects.

CADWM activities under OIIAWMIP

On-Farm Water Management and CAD activities under participatory mode are to be taken up in command areas of 15 major and medium irrigation projects under "Orissa Integrated Irrigated Agriculture and Water Management Investment Programme (OIIAWMIP)" with financing from ADB in four trenches.

Works in four irrigation projects, namely, Goriha, Sunei and Remal and the Taladanda Canal system of Mahanadi Delta Stage-I command have been taken up in the Tranch-I of the programme. The scheme components like field channels and field drains etc are to be covered under centrally sponsored scheme and the additional support interventions like improvement to field channels and field drains, construction of lateral channels, scheduling (warabandi) and conjunctive use of surface and ground water are covered under OIIAWMIP. In Taladanda Canal System field channel covering 1862 ha. have been repaired during 2009-10. It has been programmed for repair field channel covering 5630 ha. during 2010-11. These works are being executed through Pani Panchayat and it will be handed over to them for use and future maintenance.

Maintenance of On Farm Development Works

The On Farm Development works in the initial years were left for the farmers to maintain. Many a projects, which are quite old, are in a dilapidated condition. Funds from Non Plan are being provided since 2007-08 for repair and renovation of these dilapidated field channels and field drains constructed decades ago. An amount of Rs.318.38 lakh in 2007-08, Rs.390.22 lakh in 2008-09 and Rs.385.24 lakh in 2009-10 were spent under Non-plan schemes for maintenance of the field channels and field drains. Budget provision of Rs.500.00 lakh made during 2010-11 for repair of field channel of 9050ha. and field drain of 850 ha. All these works were executed by the concerned Pani Panchayat.

Maintenance under NREGS

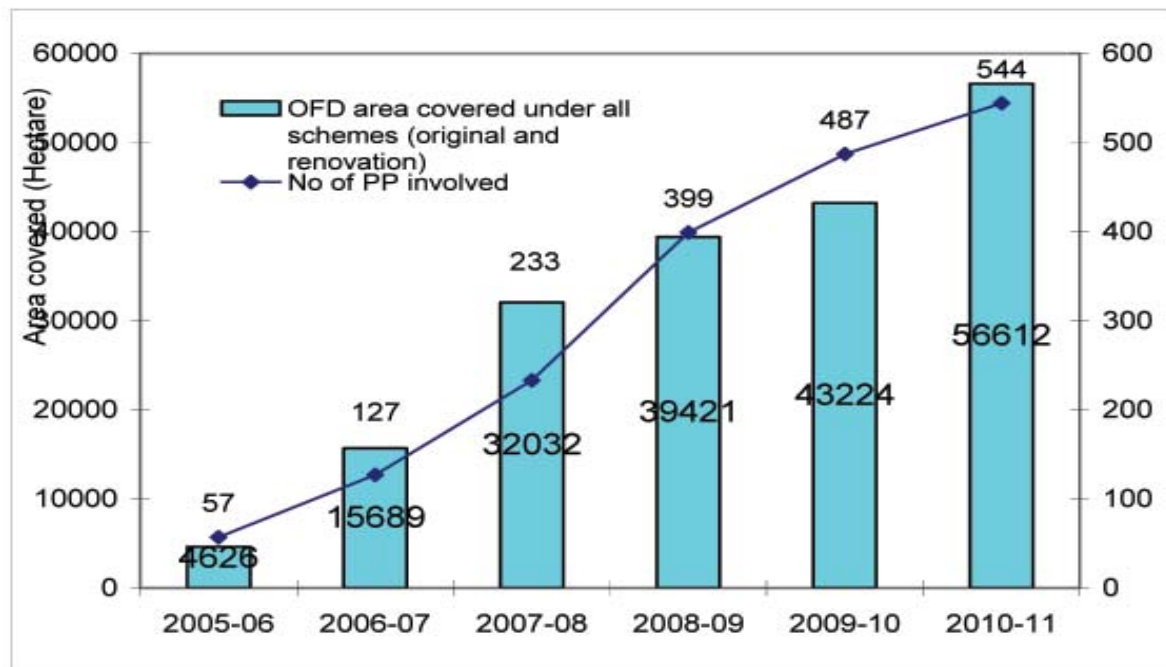
Repair and restoration of old and defunct field channels and field drains are also being taken up under NREGS. 96 works covering 10 districts namely Cuttack, Kendrapara, Jagatsinghpur, Bhadrak, Jajpur, Subarnapur, Baragarh, Sambalpur, Puri and Khurdha amounting to Rs.149.959 lakh have been programmed. So far Rs.75.459 lakh have been released in seven districts. Works were taken up for repair and rehabilitation of CAD field drain structures for ensuring optimal utilization and equitable distribution of water and also for mitigating water logging situation in low lying areas.

Special package of the Hon'ble Chief Minister for Hirakud Command Area Development

An amount of Rs.100.00 lakh was sanctioned during 2009-10 under special package of the Hon'ble Chief Minister for taking up of repair and rehabilitation works of field channels of 2907ha. in Hirakud command. After execution of these works water is now reaching the tail end areas.

Role of Pani Panchayats

Participation of farmers and execution of CAD works through the Pani Panchayats is a pre-requisite for CADWM programme as per Govt. of India norms. Under the Command Area Development programme, the execution of Field channel and Field Drains are taken up solely by the concerned Pani Panchayats with the supervision of the technical personnel of CAD organization. The Pani Panchayat plays a key role in motivating the farmers and is involved in land donation (for construction) and beneficiary contribution in shape of labour (10% in construction of field channel and reclamation of waterlogged areas). The Pani Panchayats take keen interest in maintaining the quality of work. As the farmers are directly associated with the work during execution, they feel that the work belongs to them and is their property. After execution the same have been handed over to concerned Pani Panchayat for operation and maintenance. The Pani Panchayat involve in the last five years is shown in the following figure.



Mustard cultivation at village Kusuli (Hirakud command)



Patato cultivation at village Nimapara (Mahanadi-Delta Stage-II)

