



**GOVERNMENT OF ODISHA
DEPARTMENT OF WATER RESOURCES
BHUBANESWAR**

**ANNUAL REPORT
OF
MACHHAGAON CANAL DIVISION,
KAIJANGA, JAGATSINGHPUR
FOR THE FISCAL 2016-17
UNDER OIIAWMIP - TRANCHE - II.**



1. INTRODUCTION

A. Sub-Project Location

The Government of Odisha through the Government of India has availed a Multi-tranche Financing Facility (MFF) Loan from the Asian Development Bank (ADB) approved in September' 2008 to partly finance the implementation of the Odisha Integrated Irrigated Agriculture and Water Management Investment programme (OIAWMIP). The executing agency for the project is the Department of Water Resources (DOWR), Government of Odisha. The Machhagaon Irrigation Scheme is located in the flat, low-laying delta of the Mahanadi River. The Scheme is supplied by the Machhagaon Main Canal, which offtakes from the Mahanadi Barrage at Cuttack. The command area is bounded by the Kathajori (Biluakhai, Devi) river to the South & West, by the Hansua Nullah to the North and by the Saluan Nullah to the East. The 52.425 Km long Machhagaon Canal runs parallel to the Kathajori River for much of its length and inspection is facilitated by Cuttack - Jagatsinghpur Road and the Jagatsinghpur-Balikuda road.

The Canal command area is 36,417ha which is included under the proposed rehabilitation project.

B. Description of Existing Irrigation System

1. Existing Irrigation System

The Machhagaon Canal was built during the mid-19th century and was originally built for both irrigation & navigation. Due to commencement of surface transport system, navigation becomes absolutely ceased and the canal is now used extensively for irrigation. The design capacity of the canal at the Head works is 39 m³/sec. In the Kharif season, canal water is used for supplementary irrigation and between 70 to 80 percent of the command area is cultivated mainly under paddy. In the Rabi season only 25 to 30 percent of the command area can be irrigated and the main crop is pulses. The salient features of the scheme are given below:

Original command area	-	51460ha.
Revised command area (in the year-2008)	-	36417ha.
Revised design discharge (in the year-2008)	-	38.10 m ³ /sec
Revised design discharge (app. D.S. of 2011)	-	39.00 m ³ /sec
Length of main canal	-	52.425Km.
No of distributaries from Main Canal	-	10 Nos
Minors taking-off from Main Canal	-	8 Nos
Sub-minors from Main Canal	-	32 Nos
Field channels from Main Canal	-	34 Nos
Locks (Cross Regulator falls)	-	4 Nos
Escapes	-	3 Nos
Total number of outlets in command area	-	1863 Nos
Average command area per outlet	-	10.04ha.

The condition of the main canal, distributaries and ancillary structures have been deteriorated, resulting in reduced flows, distribution problems and increased maintenance. The scope of the proposed works include the rehabilitation of 52.425Km of Machhagaon Main Canal and 13 (Thirteen) nos. of distributaries of namely Dy-2, Dy-7, Dy-8, Dy-10, Dy-10H, Dy-13, Dy-13C, Dy-15, Dy-15A, Dy-16, Dy-19, Dy-19(A) & Bhagalpur Disty. and the repair / up-grading of structures, comprising 56 head regulators (HR), 62 Village Road Bridges, 6 Weirs, 25 Cross Drainage structures (DS), 3 Escapes, 20 Cross Regulators (CR) and 17 Bathing ghats. In addition 26 new village road bridges

(VRB), 2400m Guard wall, 902 Outlets, 157 Bed bars, 29 Bathing ghats and one cross regulator structure have been identified to be constructed newly.

A summary of the main canal and thirteen distributaries include in the sub-project are given in table.

2. Main Canal - Distributaries : Machhagaon Canal System

Table

Sl. No	Canal System as per existing Nomenclature	Offtaking R.D. in Km.	Command area (CCA) in Ha.	Designed discharge of canal in cumecs as per approved D.S.	Length of Canal in Km.	Identification as per Q & CCA Criteria
1	2	3	4	5	6	7
1	Machhagaon Main Canal	11.355 of TMC	36417.00	39.000	52.425	Main Canal
2	Distriburary - 2	7.798 of MMC	1358.62	1.059	8.120	Distributary
3	Distriburary - 7	25.417 of MMC	1863.67	1.450	18.960	Distributary
4	Distriburary - 8	26.034 of MMC	2300.00	1.790	15.685	Distributary
5	Distriburary - 10	31.660 of MMC	5909.81	4.610	15.000	Distributary
6	Distriburary - 10(H)	6.200 of Dy-10	1482.00	1.156	12.739	Distributary
7	Distriburary - 13	41.721 of MMC	4070.000	3.175	12.134	Distributary
8	Distriburary - 13C	5.135 of Dy-13	1797.000	1.256	13.052	Distributary
9	Distriburary - 15	52.425 of MMC	1881.000	1.467	7.690	Distributary
10	Distriburary - 15(A)	52.376 of MMC	1816.000	1.416	12.560	Distributary
11	Distriburary - 16	40.415 of MMC	1508.000	1.176	5.242	Distributary
12	Distriburary - 19	19.940 of MMC	5445.63	4.230	31.905	Distributary
13	Distriburary - 19(A)	1.274 of Dy-19	2123.000	1.656	22.240	Distributary
14	Bhagalpur Disty.	14.500 of MMC	1643.75	1.282	12.170	Distributary

Executive Engineer
Machhagaon Canal Division, Kaijanga.

**Data on Canals & Distributaries under Machhagaon Canal
Division, Kaijanga.**

Name of the District - Jagatsinghpur

**Blocks covered : Cuttack, Raghunathpur,
Biridi, Jagatsinghpur,
Balikuda, Tirtol & Earsama**

Length of main canal : 52.425 Km.

**Length of 13 distributaries : 187.497 Km.
(Dy-2, Dy-7, Dy-8, Dy-10,
Dy-10H, Dy-13, Dy-13C,
Dy-15, Dy-15A, Dy-16, Dy-19,
Dy-19A & Bhagalpur Ditsy.)**

REPORT ON MACHHAGAON CANAL DIVISION

This is a newly created Division, which is functioning since 10.08.2012 to look after the REM works of Machhagaon Main Canal and 13 (Thirteen) Nos distributaries under Tranche – II of ADB assisted funds with head quarters at Kaijanga.

It is proposed to take up the Rehabilitation, Extension and Modernization works of Machhagaon Canal on ADB assisted funding under OIIAWMIP scheme in tranche – II. Accordingly, the DPR has been prepared for a project cost of **Rs. 89.50 cores** for taking up the REM works of Machhagaon Canals, to provide better Irrigation facilities to **36,417.90Ha.**

The jurisdiction of Machhagaon Canal Division, Kaijanga comprises of 3 Nos. of Sub-Divisions i.e. (1) Machhagaon Canal Sub-Division-I, Kaijanga, (2) Machhagaon Canal Sub-Division-II, Balia & (3) Machhagaon Canal Sub-Division-III, Jagatsinghpur. These three nos of Sub-Divisions are looking after the Renovation, Extension and Modernization of Main Canal and 13 Distributaries of Machhagaon Canal.

The tenders for all the REM works of Machhagaon Main Canal and 13 Nos of Distributaries are completed. There are total 07 (Seven) Nos of civil work packages. The ongoing works of the packages are depicted in table -1.

*Executive Engineer
Machhagaon Canal Division
Kaijanga*

STATEMENT SHOWING THE NAME OF OFFICER-IN-CHARGE OF THE REM WORKS FOR THE YEAR 2015-2016 UNDER MACHHAGAON CANAL DIVISION, KAIJANGA.

Sl. No.	Name of Officer	Designation & place of posting	Telephone	Remarks
1	Sri Narsingha Sahoo	Executive Engineer	9437511123	The concerned Assistant Executive Engineers and Junior Engineers are entrusted with supervision works of the REM of Machhagaon Main Canal & 13 Nos of Distributaries.
2	Sri Surendranath Sahoo	A.E.E. (Estimator)	9938543030	
3	Sri Youdhithira Jena	A.E.E. M.C. Sub-Division No-I, Kaijanga.	9439099558	
4	Sri Sunit Mahipal Kujur	A.E.E. M.C. Sub-Division No-II, Balia.	9437249498	
5	Sri Kailash Chandra Sethy	A.E.E. M.C. Sub-Division No-III, Jagatsinghpur.	9439565440	
6	Miss Deepika Behera	J.E. M.C. Sub-Division No-I, Kaijanga.	9853925287	
7	Sri Bijendra Kumar Nayak	J.E. M.C. Sub-Division No-I, Kaijanga.	9438659121	
8	Sri Rabindra Shanti	J.E. M.C. Sub-Division No-II, Balia.	8280129093	
9	Sri Tushar Mohapatra	J.E. M.C. Sub-Division No-II, Balia.	9861351688	
10	Miss Surekha Behera	J.E. M.C. Sub-Division No-II, Balia.	9853525393	
11	Sri Sanat Mahali	J.E. M.C. Sub-Division No-III, Jagatsinghpur	8908322320	
12	Sri Bijaya Kumar Singh	J.E. M.C. Sub-Division No-III, Jagatsinghpur	9853008146	

Construction , Supervision & Management Staff

Sl. No.	Name of Officer	Designation & place of posting	Telephone	Remarks
1	Er. Rabinarayan Swain	Construction Management Engineer	9437494226	The concerned CSM staffs are engage with supervision, monitoring including quality control aspects of the contract works.
2	Er. Mahendra Prasad Mohanty	Resident Engineer	9437292097	
3	Er. Saradakanta Mohapatra	-do-	9439488562	
4	Er. Dhadi Sahu	Quality Control Assistant	9437309440	
5	Er. Premananda Subudhi	-do-	9437704491	
6	Er. Chandan Kumar Biswal	Surveyor	9090006739	

**Executive Engineer
Machhagaon Canal Division, Kaijanga.**

RP Implementation

Implementation of RP has been taken-up in Machhagaon Sub project as per the approved entitlement matrix. The Entitlement Enumeration Survey (EES) for the RP was taken up during December' 2012 to January' 2013 by the O&M Divisions, Jagatsinghpur Irrigation Division. Life Academy of vocational Studies (LAVS) is engaged as Civil Society organization to implement the social safeguard requirements and to assist the SIO (EE) in Implementing the RP. Disbursement of compensation to **618** Nos of affected persons (AP's) have already been made out of total 718 (AP's) under the project excluding CPR and number of structures not in existence which is shown in Table - 1. The revised estimates for Implementation of Resettlement Plan (RP) as per Corrective Action Plan (CAP) for Machhagaon Sub-Project has been Sanctioned by Chief Engineer-Cum-Project Director, PMU, Bhubaneswar on 22.03.2017 and the payment process has been started from 25.03.2017.

The Details of works under taken by this Division during fiscal 2016-17(Table -1)

SI No	PKG. No.	Name of the work	Agreement No./ Name of Agency	Date of Commt. / Date of Compn.	Performance during year 2016-17	Scope of Work	Present work status as on 31.03.2017	Agt. Amount / Estimate Cost In lakh	Expenditure up to 31.03.2017 In Lakh	% of work done	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
1	MAC-01	R.E.M. of Machhagaon canal from RD. 0.00 km to 14.60 km	01/ NCB-MAC of 2015-16/ Sri Ajit Ku. Swain , Spl. Class Contractor At/ Po. Khapurua Madhupatna Cuttack.	25.01.16 /25.01.16	Work in Progress	a) Re-Sectioning of Canal 00 to 14.60KM b) New VRB Construction – 2 Nos. R.D. 4.70KM & 6.40KM c) New CR – 1 No.R.D. 14.52KM d) Guard wall 600M e) Bathing Ghat-25Nos. f) New Outlet-3 Nos. Repair of Old Structure a) HR- 6 Nos. and V.R.B 2 Nos. b) Drainage Syphone – 2 Nos. c) Weir – 2 Nos.	a) Re- Sectioning in Progress 14.60KM b) VRB at RD 4.7 km and 6.40 km are completed , c) CR at RD 14.52 km is in progress. d) Guard wall 500 M completed. e) Bathing Ghat-15 Nos Repair of Old Structure a)H/R Repair 4 Nos. completed b) Drainage Syphone – 2 Nos in progress. c) Weir 2 Nos. in progress	835.93	492.36	57.53	
2	MAC-02	R.E.M. of Machhagaon canal from RD. 14.60 km to 29.20 km	02/ NCB-MAC of 2015-16/ Sri Ajit Ku. Swain , Spl. Class Contractor At/ Po. Khapurua Madhupatna Cuttack.	9.02.16 / 8.02.18	Work in Progress	a) Re-Sectioning of Canal 14.60KM to 29.20KM b) New VRB Construction – 3 Nos. R.D. 16.70KM, 23.128KM & 25.41KM c) Guard wall 600M d) Bathing Ghat-25Nos. e) New Out let- 11 Nos. Repair of Old Structure a) HR- 11 Nos.,VRB – 7 Nos. b) Weir – 1 No.,Escape – 1 No. c) Drainage Syphone – 1 No	a) Re- Sectioning in Progress 14.60 KM b) VRB at RD 16.7 km and 23.128 km & 25.41 are in progress . c) Guard wall – 300 M completed . d) Bathing Ghat -15 Nos. Repair of Old Structure a) VRB repair 3 Nos. completed d) Weir 1 No. in Progress	827.10	410.81	44.67	
3	MAC-03	R.E.M. of Machhagaon canal from RD. 29.20 km to 52.425	03/ NCB-MAC of 2015-16/ Sri Ajit Ku. Swain , Spl. Class Contractor At/ Po. Khapurua Madhupatna Cuttack.	9.02.16 / 8.02.18	Work in Progress	a) Re-Sectioning of Canal 23.225KM b) New VRB Construction – 6 Nos. R.D. 38.65KM, 40.41Km, 43.121KM, 45.30KM , 46.00KM, 51.187KM c) Bathing Ghat – 29 Nos. d) Out let- 38 Nos. e) Bed Bar- 46 Nos. Repair of Old Structure HR- 14 Nos.,VRB – 13 Nos.,Weir – 2 Nos.,Escape – 2 Nos.	a) Re- Sectioning in Progress 23.00KM b) 3 Nos. New VRB at RD 38.65 km , 40.410 KM & 51.187 completed & 3 Nos. VRB at RD 46.00Km, 45.30KM & 43.121KM in progress c) Bathing Ghat 20 Nos. completed. d) Out let – 6 Nos. in progress.	972.45	306.82	25.35	

SI No	PKG. No.	Name of the work	Agreement No./ Name of Agency	Date of Commt. / Date of Compn.	Performance during year 2016-17	Scope of Work	Present work status as on 31.03.2017	Agt. Amount / Estimate Cost In lakh	Expenditure up to 31.03.2017 In Lakh	% of work done	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
4	MAC-04	R.E.M. of Distry No.2 , Bhagalpur Distributary & Distry- 19 of Machhagaon Canal System	03/ NCB-MAC 2016-17 M/S Unicorn Construction At/ Po- Salipur Dist:- Cuttack	15.12.16 / 14.08.18	a) Tender Processed & Agreement drawn. b) Work in Progress.	a) Re-Sectioning of Canal 51 KM b) New VRB Construction – 5 Nos. c) New Out let- 169 Nos. d) New Guard wall- 600 Nos. <u>Repair of Old Structure</u> a)HR- 13 Nos.& VRB – 6 Nos., b)Drainage Syphone – 1 No., c) CR – 4 Nos.	a) Re-Sectioning of Canal in progress 19KM. b) VRB– 2 Nos. completed c) Out let 10 Nos. completed d)Guard wall 400 M completed <u>Repair of Old Structure</u> a)H.R. Repair 2 Nos. completed	473.56	176.29	32.00	
5	MAC-05	R.E.M. of Distry No. 7 & 19-A of Machhagaon Canal System	04/ NCB-MAC of 2015-16/ Sri Karunakar Routray , Spl. Class Contractor At- Saliganga Post- Sabamul Dist- Jagatsinghpur	15.02.16 / 14.02.18	Work in progress	a) Re-Sectioning of Canal41.00KM b) New VRB Construction – 3 Nos. c) Bed Bar - 82 Nos. d) New Out let new & repair - 214 Nos. e) Guard wall -500M f) Bathing Ghat – 17 Nos. <u>Repair of Old Structure</u> a) HR- 4 Nos. & VRB – 6 Nos., b) D.S. – 1 No.,, CR – 4 Nos.	a) Re- Sectioning work in Progress 20.00KM b) VRB- 3 Nos. Completed. c) Bed Bar -20Nos. Completed. d)Outlet 150 Nos. completed. e) Guard wall – 300 m completed. f) Bathing Ghat – 7 Nos. completed. <u>Repair of Old Structure</u> a) Repair of H.R. 4 Nos .completed & VRB 2 Nos in progress. b) Repair of C.R. 3 Nos. completed.	507.78	337.36	66.40	
6	MAC-06	R.E.M. of Distry No.8 , 10 & 10-H of Machhagaon Canal System	01/ NCB-MAC 2016-17 M/S Unicorn Construction At/ Po- Salipur Dist:- Cuttack	25.11.16 / 24.11.18	a) Tender Processed & Agreement drawn. b) Work in Progress.	a) Re-Sectioning of Canal43.00 KM b) New VRB Construction – 1 No. c) New Out let- 255 Nos. d) Guard wall – 500M <u>Repair of Old Structure</u> a) HR- 2 Nos.& VRB – 10 Nos. b)D. S. – 3 Nos.& CR – 6 Nos.	a) Re-Sectioning of Canal progress 15.00 Km b) VRB 1 No. completed c) Out let 50 Nos. completed d) Guard wall -200 M completed <u>Repair of Old Structure</u> a) H.R. Repair 1 No. completed & VRB 2 Nos. in progress.	543.15	119.39	13.33	

SI No	PKG. No.	Name of the work	Agreement No./ Name of Agency	Date of Commt. / Date of Compn.	Performance during year 2016-17	Scope of Work	Present work status as on 31.03.2017	Agt. Amount / Estimate Cost In lakh	Expenditure up to 31.03.2017 In Lakh	% of work done	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
7	MAC-07	R.E.M. of Distry No.13 , 13-C , 15 ,15-A & 16 of Machhagaon Canal System	02/ NCB-MAC of 2016-17/ Sri Karunakar Routray , Spl. Class Contractor At- Salijanga Post- Sabamul Dist- Jagatsinghpur	25.11.16 / 24.11.18	a) Tender Processed & Agreement drawn. b) Work in Progress.	a) Re-Sectioning of Canal 50.00KM b) New VRB Construction – 6 No. c) New Out let- 212 Nos. d) Bathing Ghat 30Nos. e) Bed bar 100Nos. Repair of Old Structure a) HR- 6 Nos.& VRB – 18 Nos. b) D.S. – 17 Nos.& CR – 6 Nos.	a) Re-Sectioning of Canal work is in progress 20.00KM. b) VRB 2 No. completed c) Out let 20Nos. completed. d) Bathing Ghat 10 Nos. completed e) Bed Bar 10 Nos. Completed	638.12	153.44	15.71	
8		Consultancy service for implementation of resettlement Plans for Machhagaon , Pattamundai & HLC –Range-1 under OIIAWMIP	01 / RP – 2015-16 Life Academy for Vocational Studies , 17 AV Complex, Gadakana Mancheswar Railway Colony, Bhubaneswar.		Work Completed	Payment to the affected persons who have encroached the Govt land on Canal bank	Preparation of Inception Report, updating of AP database, monthly progress Report-1, including Report submission on grievance, Identification of AP and issued Identity cards. Work completed.	15.99	6.396	100	
9		Implementation of R.P for Machhagaon Canal system	-----			Payment to the affected persons who have encroached the Govt land on Canal bank (718 No.)	Payment made to 718 Aps	70.198	60.747	100	
10		Implementation of Resettlement Plan as per Corrective Action Plan for Machhagaon Canal Sub-Project			Estimate sanctioned on 22.02.2017 by CE Cum PD PMU BBSR	Payment to the affected persons as per Corrective Action Plan who have encroached the Govt land on Canal bank .	Payment made to APs in Progress	346.084	5.350	1.54	

Executive Engineer
Machhagaon Canal Division
Kaijanga

