GOVERNMENT OF ODISHA
DEPARTMENT OF WATER RESOURCES

ANNUAL ACTIVITY REPORT
FOR
THE YEAR 2017-2018

PADAMPUR INVESTIGATION DIVISION,
PADAMPUR

Executive Engineer
Padampur Investigation Division
Padampur

CONTENTS

BRIEF HISTORY

Padmapur Investigation Division, Padampur was established in the year 1991, after rename of Padmapur Irrigation Division, which was created in the year 1981. It is about 440 kilometres from its capital city of Bhubaneswar and almost 80 km from its district headquarters, Bargarh. It is about 80 km from Bolangir, the District Headquarter of its neighbouring district to its south, thus Padampur, Bargarh and Bolangir roughly form an equilateral triangle, each urban centre located at the three corners. This Division looks after the survey and investigation work of different major, medium and lift irrigation projects and studies their feasibility. Besides these this division plays a major role in the preparation of DPR, Cost Estimation and Forest Clearance of the project. Apart from these, this Division took over the charges of S/I works of some projects of Titilagarh Irrigation Division, Titilagarh, after abolishing of the same in December 2017.

Padampur Investigation Division comprises of 4 no.s of Sub-Divisions and ten no.s of Sections as detailed below.

A. Padampur Inv. Sub-Div, No.-I, Padampur

1) Section-I, Padampur
2) Section-II, Padampur
3) Section-III, Padampur

B. Padampur Inv. Sub-Div, No.-II, Padampur

1) Section-I, Padampur
2) Section-II, Padampur
3) Section-III, Padampur

C. Padampur Inv. Sub-Div, No.-III, Padampur

1) Section-I, Padampur
2) Section-II, Padampur

D. Padampur Inv. Sub-Div, No.-IV, Padampur

1) Section-I, Padampur
2) Section-II, Padampur

STAFF POSITION OF PADAMPUR INVESTIGATION DIVISION, PADAMPUR

Sl. No.	Gazetted	Sanctioned	Existing	Vacancy	Remarks
1	Executive Engineer	1	1	0	
2	A.E.E.	4	4	0	
3	A.E.	5	5	0	1 No. A.E. deputed to Cuttack Investigation Division, Cuttack
4	J.E.	6	3	3	
	Total =	**16**	**13**	**3**	
	Non-Gazetted				
1	Head Clerk	1	0	1	
2	Sr. Clerk	1	1	0	
3	Jr. Clerk	6	3	3	
4	Tracer	1	0	1	
5	Draughts Man	1	1	0	
6	Peon	8	7	0	
7	Daftary	1	1	0	
8	Night Watchman Cum Sweeper	1	1	0	
9	Work Charge & Wages	13	13	0	
	Total =	**33**	**27**	**5**	

BRIEF NOTES ON S/I WORKS OF PROJECTS UNDER PADAMPUR INVESTIGATION DIVISION ARE GIVEN BELOW.

1. JEERA IRRIGATION PROJECT (JIP)

Jeera Irrigation Project is a reservoir project proposed across Jeera River, a tributary to Mahanadi River in Mahandi Basin, near village **Duanpali**; in Karandola GP of Bhatli Block under **Bargarh** District, Odisha at **Latitude- 21^0-23'-11" N and Longitude-83^0-26'-13" E (Reference to Topo sheet No. 64-0/7 and 64-0/11)**. The site is approachable from Bargarh via National highway (NH-6) near Sohela (Haldipali chowk) which is at about 40 km from district headquarter. The catchment area intercepted at the proposed Dam site is 124.90 sq.km. The 75 % dependable yield has been computed to be 4679.40 Ham. The project envisages construction of a 1958 m long Homogeneous Rolled Fill Earth dam, besides a spillway of length 72m proposed at the central portion of the dam axis. The proposed length of **left main canal is 13.25 km** and that of **right main canal is 7.25 Km.** This medium irrigation project will provide irrigation facility to **6000 ha of G.C.A** and **4800 ha of C.C.A** in most drought prone areas of Bhatli, Bargarh & Sohela block of Bargarh District.

CWC clearance for the project has been obtained in the year 2010. Conditional environmental clearance obtained from MoEF & CC of Govt. of India and the Director, Environmental & River Valley Projet, MoEF & CC of Govt. of India has been requested for issue of final environmental clearance. R&R Clearance has already been obtained from MoTA. As regards forest clearance, the work has been awarded to M/s OCC Ltd., Stage-I clearance has been obtained and Stage-II clearance is under process.

2. RANJJORE IRRIGATION PROJECT (RIP)

Ranjjore Irrigation Project is a reservoir project proposed across Ranjjore river a tributary to Jeera river which is in turn a tributary to Mahanadi River in Mahandai Basin, near village **Sarandapali** in **Sarandapali GP** of **Barpali Block** under **Bargarh** District, Odisha at **Latitude- 21^0-14'-29" N and Longitude-83^0-29'-07" E (Reference Topo sheet No. 64 O/7, 64 O/8,64 O/11,64 O/12)**..The project envisages construction of a 1920m long Homogeneous Rolled Fill Earth dam, besides a spillway of length 72m proposed at the central portion of the dam axis. The catchment area intercepted at the proposed Dam site is **123.00 sq.km**. The 75 % dependable yield has been computed to be 4608.20 Ham. The length of **left main canal is 7.50 km** and that of **right main canal is 10.00 Km.** This medium irrigation project will provide irrigation facility to **5500 ha of G.C.A** and **4125 ha of C.C.A**, in most drought prone areas of Bijepur & Barpali Block of Bargarh District.

CWC clearance has been obtained from CWC, Bhubaneswar in the year 2010. Conditional Environmental Clearance given by State EIA Authority and the member secretary SEIAA, Odisha has been requested to issue final Environmental Clearance. R & R clearance has been obtained from MoTA, Govt. of India. As regards forest clearance, the work has been awarded to M/s OCC Ltd., Stage-I clearance has been obtained and Stage-II clearance is under process.

3. KATANGI IRRIGATION PROJECT (KIP)

Katangi Irrigation Project is a reservoir project proposed across Katangi Nallah a tributary of river Suktel in Mahanadi Basin near village **Banjipalii** in **Dhandamunda GP** of **Khaprakhol Block** under Bolangir District, Odisha at **Latitude- 20º- 45'- 45" N and Longitude-82º- 57'-20" E** (Reference **Topo sheet No. 64 L/13, 64 L/14, 64 P/1**). The project envisages construction of a **2118.50m long Earth dam** with Central spillway of length **21.91m** proposed at the central portion of the dam axis. The catchment area intercepted at the proposed Dam site is **180.00 sq.km**. The 75 % dependable yield has been computed to be **2827.22 Ham**. The proposed length of left main canal is **19.92 km** and that of right main canal is **8.95 Km.** This medium irrigation project will provide irrigation facility to **4909.20 ha of G.C.A** and **3681.90 ha of C.C.A**, in most drought prone areas of Khaparakhol Block in Bolangir District & Padampur Block of Bargarh District.

The Feasibility Report was submitted to CWC regional office Bhubaneswar by CE, PPF & I during Dec 2017 which is under scrutiny by CWC.

4. BIJEPUR LIFT IRRIGATION PROJECT

The proposal of Bijepur Lift Irrigation Project envisages provision of irrigation facilities to **Bijepur, Sohela and Barpali** Blocks of Bargarh District by lifting water from **Bargarh Main Canal** at **RD 34.10 Km** through a system of pressurised underground pipelines (UGPL) flow to proposed Barihapali Reservoir and then to supply irrigation to **113 nos.** of backward tribal villages covering 25600 Ha of CCA through underground pipe line gravity flow. These villages are chronically affected by drought due to erratic and uncertain rainfall in the locality. The livelihood of villagers are below the poverty line.

The S/I works has been awarded to M/s OCC Ltd and major S/I works has bee completed. The DPR is under preparation by M/s OCC Ltd. through the consultant Vision Tech.

5. UPPER LANTH MEDIUM IRRIGATION PROJECT

Upper Lanth Medium Irrigation Project is a reservoir project proposed across river Lanth, a tributary of River Tel, in Mahanadi Basin near village **Chikili**; in Ghagurli GP of Belpara Block under Patnagarh Sub-Division of **Bolangir** District, Odisha at **Latitude- 20^0-38'-20" N and Longitude-82^0-53'-20" E (Ref. to Topo sheet No. 64-P/2, 64-L/14 and 64-L/10)**. The site is approachable from Bolangir (Dist. HQ) via State highway (SH-42) near Belpada (Patrapada chowk) which is at about 70 km from Bolangir. The project envisages construction of a 2495 m long Homogeneous Rolled Fill Earth dam, besides a spillway of length 99 m proposed at the dam axis. The catchment area intercepted at the proposed Dam site is 189.07 sq.km. The 75 % dependable yield has been computed to be 4697 Ham. The length of **left main canal is 16.08 km** and that of **right main canal is 6.66 Km.** This medium irrigation project will provide irrigation facility to **6170 ha of G.C.A** and **4700 ha of C.C.A**, in most drought prone area of Belpara Block of Bolangir District.

CWC approval has been obtained in 73rd meeting of MoWR on dated 31-05-2000. For Environmental Clearance, ToR has been approved by State Level Expert Appraisal Committee (SEAC). As regard Forest Clearance the work was awarded to M/s OCC Ltd. The status of Forest Clearance is under process by Forest Department and the FRA certificate have to be obtained from collector & DM Bolangir.

6. <u>SUNGARH IRRIGATION PROJECT</u>:-

Sungarh Irrigation Project is a reservoir project proposed across Sungarh River, a tributary to **Tel River**, in **Mahanadi basin** near village **Bhutiarbahal; in Bhutiarbaha GP of Bolangir Block** under Bolangir District, Odisha at Latitude- 20^0-35'-41" N, Long. 83^0-19'-25"E (with reference to the Topo sheet No. 64 P/2, P/6 & P/7). The site is approachable from Bolangir via National highway (NH-201) near Deogaon Chowk which is at about 34 km from district headquarter. The project envisages construction of a 1550 m long Homogeneous Rolled Fill Earth dam, besides a spillway of length 56 m proposed at the central portion of the dam axis. The catchment area intercepted at the proposed Dam site is **131 sq.km**. The calculation for 75% dependable yield comes to **3930.00 Ham**. There will be two main canal on left and right side of river Sungarh having **6 Km** & **12 km** lengths respectively. This medium irrigation project will provide irrigation facility to **3000 ha of G.C.A** and **2250 ha of C.C.A** covering 18 no.s of villages in Deogaon & Tushura Block of Bolangir District. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The pre-feasibility report has been approved by the CE PPF & I. The detailed hydrology study is under scrutiny in the office of the CE PPF & I, Odisha, BBSR**.**

7. <u>LOWER LANTH IRRIGATION BARRAGE PROJECT NEAR VILLAGE TUSTAPALI :</u>

The proposed project envisages construction of a barrage project across river Lanth, a tributary of Tel river, in Mahanadi Basin, near village Tustapali of Titilagarh Sub-division under Bolangir district at Lat 20°25'15"N and Long 83°13'17"E (Topo sheet No 64P/3). The catchment area intercepted at the proposed Dam site is **1426 sq.km**. on completion the project will provide irrigation to 3151 Ha of CCA in most drought prone areas of Saintala and Titilagarh Blocks of Balangir District.

S/I works of this project had been received from Titilagarh Irrigation Division, Titilagarh, after abolishing of the same in Dec 2017. All the S/I works except canal alignment has been completed by Titilagarh Irrigation Division. Now the survey works for canal alignment is under process by this division. After completion of S/I works steps will be taken for preparation of DPR.

8. <u>LOWER LANTH IRRIGATION BARRAGE PROJECT NEAR VILLAGE DENG</u>:-

The proposed project envisages construction of a barrage project across river Lanth, a tributary of Tel river, in Mahanadi Basin, near village Deng of Titilagarh Sub-division under Bolangir District at Lat 20°25'49"N and Long 83°19'28"E. The

catchment area of the project at the present location is 1456 Sq. Km and the proposed GCA will be 9712 Ha approximately during kharif only.

The major S/I works had been completed by the defunct Bolangir Investigation Division and Titilagarh Irrigation Division. After introduction of Mega lift Irrigation schemes across river Tel under cluster XIV & XV, major portion of left & right ayacut is overlapping for which the ayacut of the barrage project is decreased and the available ayacut after introduction of Mega lift scheme is 3122 Ha GCA. For which clearance from CE PPF&I is awaited for execution of left out S/I works. S/I works of this project had been received from Titilagarh Irrigation Division, Titilagarh, after abolishing of the same in Dec 2017.

9. <u>TEL IRRIGATION BARRAGE PROJECT NEAR VILLAGE KUKEDMAL</u>:-

The proposed project envisages construction of a barrage project across river Tel, in Mahanadi Basin near village Kukedmal under Subarnapur District at Lat 20°25'0"N and Long 83°27'30"E (Topo sheet No. 64 P/7, P/10 & P/11). The catchment area of the project at proposed site is 9416 Sq. Km. It will irrigate approximately 9834 Ha of C.C.A. during khariff only.

The major S/I works had been completed by the defunt Bolangir Investigation Division and Titilagarh Irrigation Division. After introduction of Mega lift Irrigation schemes across river Tel under cluster XIV & XV, major portion of left & right ayacut is overlapping for which the ayacut of the barrage is decreased. On the left ayacut of the barrage project, six nos of Mega lift schemes namely 15-Tandigaon, 260-Kapsila, 262-Amdahan, 12-Sasanpali, 10-Brahmanipala and 263-Ainlapali are overlapping with a total GCA of 4760 Ha and major reserve forest is situated inside the balance ayacut with a total area of 2530 Ha. Again on the right ayacut of the barrage project, four mega lift schemes namely 13-Tentulikhunti, 12-Mahajanpara, 33-rekdol and 34-Tambasina are overlapping with a total GCA of 5620 Ha approximately. Under such situation, the ayacut of the barrage project is restricted to a GCA of 1710 Ha on left and 0.00 Ha on right. The total designed ayacut for both left and right ayacut was 14048 Ha GCA and the available ayacut after delition of Mega lift ayacut is 1710 Ha GCA. For which clearance from CE PPF&I is awaited for execution of left out S/I works. The S/I works of this project had been received from Titilagarh Irrigation Division, Titilagarh, after abolishing of the same in Dec 2017.

10. <u>TEL IRRIGATION BARRAGE PROJECT NEAR VILLAGE MANIKPUR</u> :-

The proposed project envisages construction of a barrage project across river Tel, in Mahanadi Basin near village Manikpur under Boudh District at Lat 20°34'30"N and Long 83°42'0"E (Topo sheet No.P/10). The catchment area of the project at the proposed site is 12612 Sq. Km. It will irrigate approximately 15890 Ha of G.C.A. during khariff only.

The major S/I works had been completed by the defunt Bolangir Investigation Division and Titilagarh Irrigation Division. After introduction of Mega lift Schemes across river Tel under cluster XIV & XV, major portion of left & right ayacut is overlapping for which the ayacut of the barrage project is decreased. On the left ayacut of the barrage project, two Mega lift schemes namely 264-Gunjimunda and 265-Pankimal are overlapping with a total GCA of 2340 Ha. Again on the right ayacut of the barrage project, two Mega lift schemes namely 31-Kantamal and 32-Tikrapada are overlapping with a total of 1740 Ha approximately. Under such situation, the ayacut of the barrage project is restricted to a GCA of 3020 Ha on left and 8790 Ha on right. The total designed ayacut for both left and right ayacut was 15890 Ha GCA and the available ayacut after deletion of mega lift ayacut is 11810 ha approximately. . For which clearance from CE PPF&I is awaited for execution of left out S/I works. The S/I works of this project had been received from Titilagarh Irrigation Division, Titilagarh, after abolishing of the same in Dec 2017.

11. <u>SAMANDU IRRIGATION PROJECT</u> (SIP)

Samandu Irrigation Project is a reservoir project proposed a tributary of Tikra river which is in turn a tributary of Brahmani across Samandu Nallah near village Ambajhar in **Salebhata GP** of **Naktideoul Block** in **Sambalpur District**, Odisha at **Latitude- 21^0-19'-20"N and Longitude-84^0-41'-10"E (Reference Topo sheet No. 73 C/11)**. The site is approachable from Sambalpur via National highway (NH-55) near Rairakhol which is at about 120 km from district head quarter. The project envisages construction of a **264 m long** Earth dam with Central spillway proposed at the central portion of the dam axis. This medium irrigation project will provide irrigation facility to **3753.54 ha of G.C.A** and **2815.15 ha of C.C.A**, in most drought prone areas of Naktideol Block of Sambalpur District. The catchment area intercepted at the proposed Dam site is **75.00 sq.km**. Hydrology data submitted to CE PPF & I for feasibility study. At the proposed site the feasibility study has been conducted and found not suitable for dam project.

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12. <u>BARGARH NALLAH IRRIGATION PROJECT</u>

This project envisages construction of an earthen dam across river **Bargarh Nallah** a tributary of Ranjjore river located near village **Tangarpali at Lat. 21^0-05'-21"N, Long.83^0-32'-12"E (with reference to the topo sheet No.64 O/11, 64 O/12)** in **Nileswar GP** under **Bargarh Block** of **Bargarh District**. The catchments calculated at the dam site is 17.00 Sq. Km. The calculation for 75% dependable yield comes to 510.00 ham to provide irrigation to of 429.80 ha. of C.C.A.. The F.R.L. is proposed to be fixed at 184.00 mtr. submerging 339.68 ha. of land. All the S/I wo are rks has been completed so far. Since the submergence area is nearly equal to the proposed CCA, it is decided by the SE, NIC to construct an in-stream storage structure to provide lift irrigation to the proposed ayacut.

13. BANJARI NALLAH IRRIGATION PROJECT

This project envisages construction of an earthen dam across river **Banjari Nallah** a tributary of Jeera river located near village **Patharla** at **Lat. 21^0-17'-58"N, Long.83^0-32'-56"E (with reference to the topo sheet No.64O/11 & 64 O/12)** in **Patharla GP** under **Bargarh Block** of **Bargarh District**. The catchments area calculated at the dam site is 31.00 Sq. Km. The calculation for 75% dependable yield comes to 930.00 ham, which will create an irrigation potential of 329.52 ha.of C.C.A. The F.R.L. is proposed to be fixed at 185.50 mtr. submerging 355.68 ha. of land. All the S/I works has been completed so far. Since the submergence area is greater than the proposed CCA, it is decided by the SE, NIC to construct an in-stream storage structure to provide lift irrigation to the proposed ayacut.

14. INSTREAM STORAGE STRUCTURES:-

11 nos. of projects under In-Stream structure under this division has been sanctioned by CE, PPF&I basing on the water availability study. The details of In-Stream structure and S/I works executed so far are given below.

A. IN-STREAM STORAGE STRUCTURE DAMAIPALI ON RIVER SUKTEL

This project envisages construction of an In-stream storage structure across river **suktel** a tributary of Tel river in Mahanadi Basin near village **Damaipali** at **Lat. 20^0-48'-48"N, Long.83^0-01'-22"E (with reference to the topo sheet No.64 L/13, P/1 ,P/5)** in **Dhandamunda GP** under **Khaprakhol Block** under **Bolangir District**. The **catchment area calculated** at the dam site is **42.00 Sq. Km.**. The Gross Command area **(GCA)** proposed for this project is **780 ha. and CCA 624ha.** by irrigated through flow irrigation**.** The ayacut covers 03 nos. of villages (Damaipali, Juriya, & Gourpali) of Khaprakhol Block of Bolangir district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as River L.S. & C.S at the proposed site has been completed.

B. IN-STREAM STORAGE STRUCTURE JAMSET ON RIVER ONG

This project envisages construction of an In-stream storage structure across river **Ong** a tributary of Mahanadi river in Mahanadi Basin near village **JAMSET** at **Lat. 20^0-48'-56"N, Long.82^0-42'-51"E (with reference to the topo sheet No.64 K, L, O, P)** in **Jamset GP** under **Paikmal Block** under **Bargarh District**. The **catchment area calculated** at the dam site is **376.50 Sq. Km.** and the **H.F.L**. is proposed to be fixed at **242.45 mtr**. The Gross Command area **(GCA)** proposed for this project is **900ha. and CCA 720ha.** by irrigated through mega lift irrigation. The ayacut covers 03 nos. of villages (Jamseth, Bharuwamunda & Bartunda) of Paikmal Block of Bargarh district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as Ayacut survey, River L.S. & C.S at the proposed site has been completed.

C. IN-STREAM STORAGE STRUCTURE KHURSEL ON RIVER SUKTEL

This project envisages construction of an In-stream storage structure across river **Suktel** a tributary of Tel River in Mahanadi Basin near village **Khursel** at **Lat. 20^0-49'-33"N, Long.83^0-08'-24"E** (with reference to the topo sheet No.64 P/1) in **Larambha GP** under **Patnagarh Block** under **Bolangir District**. The **catchment area calculated** at the dam site is **625.00 Sq. Km.** and the **H.F.L**. is proposed to be fixed at **229.50 mtr**. The Gross Command area **(GCA)** proposed for this project is **775 ha. and CCA 620 ha.** by irrigated through flow irrigation **.** The ayacut covers 03nos. of villages (Khursel, Rengali & Indpur) of Patnagarh Block of Bolangir district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as Ayacut survey, River L.S. & C.S and drilling at dam axis at the proposed site has been completed.

D. IN-STREAM STORAGE STRUCTURE KIRABAHAL ON RIVER SUKTEL

This project envisages construction of an In-stream storage structure across river **Suktel** a tributary of Mahanadi river in Mahanadi Basin near village **Kirabahal** at **Lat. 20^0-48'-39"N, Long.83^0-02'-24"E (with reference to the topo sheet No.64 L/13, P/1, P/5)** in **Dhandamunda GP** under **Khaprakhol Block** under **Bolangir District**. The **catchment area calculated** at the dam site is **48.00 Sq. Km.** The Gross Command area **(GCA)** proposed for this project is **630 ha. and CCA 504 ha.** by irrigated through flow/lift irrigation**.** The ayacut covers 03 nos. of villages (Kirabahal, Dangiyabahal & Hirli) of Khaprakhol Block of Bolangir district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as Ayacut survey, River L.S. & C.S at the proposed site has been completed.

E. IN-STREAM STORAGE STRUCTURE LARAMBHA ON RIVER SUKTEL

This project envisages construction of an In-stream storage structure across river **Suktel** a tributary of Tel River in Mahanadi Basin near village **Larambha** at **Lat. 20^0-50'-04"N, Long.83^0-10'-30"E** (with reference to the topo sheet No.64 P/1) in **Larambha GP** under **Patnagarh Block** under **Bolangir District**. The **catchment area calculated** at the dam site is **656.00 Sq. Km.** and the **H.F.L**. is proposed to be fixed at **220.80 mtr**. The Gross Command area **(GCA)** proposed for this project is **815 ha. and CCA 652 ha.** by irrigated through flow irrigation **.** The ayacut covers 03nos. of villages (Larambha,Ghasian & Kuturla) of Patnagarh Block of Bolangir district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as Ayacut survey, River L.S. & C.S and drilling at dam axis at the proposed site has been completed.

F. IN-STREAM STORAGE STRUCTURE MANDIADHIPA ON RIVER ONG

This project envisages construction of an In-stream storage structure across river **Ong** a tributary of Mahanadi river in Mahanadi basin near village **Mandiadhipa** at **Lat. 20^0-58'-54"N, Long.83^0-30'-17"E (with reference to the topo sheet No.64 K, L, O, P)** in **Mandiadhipa GP** under **paikmal Block** under **Bargarh District**. The **catchment area calculated** at the dam site is **787.50 Sq. Km.** and the **H.F.L**. is proposed to be fixed at **242.45 mtr**. The Gross Command area **(GCA)** proposed for this project is **675 ha. and CCA 540ha.** by irrigated through flow/lift irrigation**.** The ayacut covers 04 nos. of villages (Mandiadhipa, Chuhapali, Anadibahal & Amthi) of Paikmal and Jharbandh Block of Bargarh district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as Ayacut survey, River L.S. & C.S at the proposed site has been completed.

G. IN-STREAM STORAGE STRUCTURE NUAPALI ON RIVER GIRISULIJORE

This project envisages construction of an In-stream storage structure across river **Girisulijore** a tributary of Jeera River in Mahanadi Basin near village **Nuapali** at **Lat. 21^0-25'-34"N, Long.83^0-32'-50"E** (with reference to the topo sheet No.64/O) in **Halupali GP** under **Bhatli Block** under **Bargarh District**. The **catchment area calculated** at the dam site is **11.25 Sq. Km.**. The Gross Command area **(GCA)** proposed for this project is **460 ha. and CCA 368 ha.** by flow irrigation **.** The ayacut covers 04 nos. of villages (Nuapali, Chadeigaon & Tukurla.) of Bhatli Block of Bargarh district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as River L.S. & C.S at the proposed site has been completed.

H. IN-STREAM STORAGE STRUCTURE PHATAMUNDA ON RIVER SUKTEL

This project envisages construction of an In-stream storage structure across river **Suktel** a tributary of Tel River in Mahanadi Basin near village **Phatamunda** at **Lat. 20^0-49'-48"N, Long.83^0-12'-34"E** (with reference to the topo sheet No.64 P/1) in **Phatamunda GP** under **Patnagarh Block** under **Bolangir District**. The **catchment area calculated** at the dam site is **768.00 Sq. Km.** and the **H.F.L**. is proposed to be fixed at **212.47 mtr**. The Gross Command area **(GCA)** proposed for this project is **625 ha. and CCA 500 ha.** by irrigated through flow irrigation **.** The ayacut covers 03nos. of villages (Phatamunda, Jalpali & Pudapadar) of Patnagarh Block of Bolangir district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as Ayacut survey, River L.S. & C.S and drilling at dam axis at the proposed site has been completed.

I. IN-STREAM STORAGE STRUCTURE TAMIYA ON RIVER SUKTEL

This project envisages construction of an In-stream storage structure across river **Suktel** a tributary of Tel River in Mahanadi Basin near village **Tamiya** at **Lat. 20^0-47'-26"N, Long.83^0-14'-09"E** (with reference to the topo sheet No.64 P/1) in **Tamiya GP** under **Patnagarh Block** under **Bolangir District**. The **catchment area calculated** at the dam site is **812.00 Sq. Km.** and the **H.F.L**. is proposed to be fixed at **206.53 mtr**. The Gross Command area **(GCA)** proposed for this project is **700 ha. and CCA 560 ha.** by irrigated through flow irrigation **.** The ayacut covers 03nos. of villages (Tamiya,Mudelsar and Bhatpali) of Patnagarh Block of Bolangir district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as Ayacut survey, River L.S. & C.S and drilling at dam axis at the proposed site has been completed.

J. IN-STREAM STORAGE STRUCTURE AINLABHATA ON RIVER ONG

This project envisages construction of an In-stream storage structure across river Ong a tributary of Mahandi River in Mahanadi Basin near village **Ainlabhata** at **Lat. 20^0-59'-35"N, Long.83^0-10'-56"E** (with reference to the topo sheet No.64 P/1) in **Talpali GP** under **Gaisilet Block** under **Bargarh District**. The **catchment area calculated** at the dam site is **3049.00 Sq. Km.** and the **H.F.L**. is proposed to be fixed at **168.00 mtr**. The Gross Command area **(GCA)** proposed for this project is **565 ha. and CCA 452 ha.** by irrigated through mega Lift irrigation **.** The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as River L.S. & C.S and drilling at dam axis at the proposed site has been completed.

K. IN-STREAM STORAGE STRUCTURE TENTELPALI ON RIVER RANJJORE

This project envisages construction of an In-stream storage structure across river Ranjjore a tributary of Jeera river in Mahanadi Basin near village **Tentelpali** at **Lat. 21^0-07'-22"N, Long.83^0-33'-00"E** (with reference to the topo sheet No.64 O/1) in **Agalpur GP** under **Barpali Block** under **Bargarh District**. The **catchment area calculated** at the dam site is **231.00 Sq. Km.** and the **H.F.L**. is proposed to be fixed at **164.42.00 mtr**. The Gross Command area **(GCA)** proposed for this project is **550 ha. and CCA 440 ha.** by irrigated through mega Lift irrigation**.** The ayacut covers 03nos. of villages (Dhangerpali, Mahada & Sujia) of Barpali Block of Bargarh district. The inhabitants of this area are mostly dominated by Schedule Tribes and Schedule Caste.

The S/I work such as Ayacut Survey River L.S. & C.S and drilling at dam axis at the proposed site has been completed.

PROJECT WISE SALIENT FEATURES

1. JEERA IRRIGATION PROJECT

I	**GENERAL**		
1	State	:	ORISSA
2	District	:	Bargarh
3	Sub-Division	:	Bargarh
4	Block	:	Bhatli
5	Village	:	U/S of Duanpali (15 km.from Sohela).
6	River	:	Jeera
7	Location	:	Latitude- 21^0-23'-11" N
			Longitude-83^0-26'-13" E
8	Topo sheets	:	64-0/7 and 64-0/11
9	Nearest Railway Station	:	Bargarh.
II.	HYDROLOGY		
1	Catchment area	:	124.90 Sq.Km.
	Max. Mansoon Rainfall	:	1475.80 mm
	Min. Mansson Rainfall	:	704.60 mm
	75% dependable rainfall	:	874.92 mm
	75% dependable yield	:	4679.40 Ham.
	Design flood discharge	:	1696.00 Cumecs
	Average Normal rainfall	:	1041.07 mm
III.	RESERVOIR		
	Gross storage capacity	:	2742.10 Ham.
	Live storage capacity	:	2343.00 Ham
	Dead Storage capacity	:	399.50 Ham
	D.S.L. of Dam	:	202.00 M
	F.R.L. of reservoir	:	207.50 M
	T.B.L. of dam	:	210.50 M

	Deepest bed level of river	:	195.07 m.
IV	DAM		
	Type of dam	:	Homogenous rolled
		:	eartjh fill dam
	Total Length	:	1958.00 m
	Max. height	:	17.58 m
	Top width	:	6.00 m
V	SPILLWAY		
	Type	:	Ogee crested
	Effective length	:	72.00 m
	Crest level	:	202.00 M
	Spillway Capacity	:	1696.00 Cumecs
VI	SUBMERGENCE:		
1	Submergence at F.R.L.	:	626.684 ha.
2	Total no.of fully affected village	:	Nil
3	No.of partially affected villages	:	7
4	Total no.of villages affected	:	7 Nos
	Forest Area Affected		
	(a) Reserve Forest	:	-nil-
	(b) Village Forest	:	5.391 Ha.
	(c) Govt. land	:	137.689 Ha.
	(d) Pvt. Land	:	535.184 Ha.
	Total	:	678.264 Ha.
VII	DETAILS OF COMMAND AREA		
1	Gross command area	:	6000 Ha.
2	Cultivable command area	:	4800 Ha.
3	Percentage of GCA to CCA	:	80%

4	Area of Khariff	:	4320.00 Ha
5	Area of Rabi	:	1520.00 Ha
6	Intensity of irrigation	:	122%
7	No.of villages to be benefitted	:	25 Nos.

CANAL SYSTEM

1	Length of left main canal	:	13.25 Km.
	C.C.A.	:	3600.00 Ha
	Khariff area	:	3240.00 Ha
	Rabi Area	:	1140.00 Ha
2	Length of right main canal	:	7.25 Km.
	C.C.A.	:	1200.00 Ha
	Khariff area	:	1080.00 Ha
	Rabi Area	:	380.00 Ha.
	Interstate aspect and impact on	:	124.90/83400=0.0015
	Hirakud Catchment	:	Impact on HIrakud Catchment
IX	COST OF THE PROJECT		is negligible.
1	Cost of Head Works	:	Rs.8229.34 Lakhs
2	Cost of distribution system	:	Rs. 3089.79 Lakhs
3	Total cost of the project	:	Rs.12379.00 Lakhs
4	Cost per Hectare of Annual Irrigation	:	Rs.2,11,969.00
5	B.C.Ratio	:	2.09

2. RANJJORE IRRIGATION PROJECT

I.	GENERAL		
1	State	:	Odisha
2	District	:	Bargarh
3	Sub-Division	:	Padampur
4	Block	:	Barpali
5	Village		Sarandapali
6	River	:	Ranjjore/Mahanadi
7	Location	:	Latitude-21^0-14'-29" N Longitude- 83^0-29'-07" E (Near village Sarandapali which is 6 kms. From Bijepur)
8	Topo sheet reference		64 O/7,64 O/8,64 O/11,64 O/12
9	Category of the project	:	Medium
II.	HYDROLOGY		
1	Catchment area	:	123.00 Sq.Km.
2	Max. Mansoon Rainfall	:	1475.80 mm
3	Min. Mansson Rainfall	:	704.60 mm
4	75% dependable rainfall	:	874.92 mm
5	75% dependable yield	:	4608.20 Ham.
6	Design flood discharge	:	1185.00 Cumecs
7	Average Normal rainfall	:	1041.07 mm
III.	RESERVOIR		
1	Gross storage capacity	:	2897.00 Ham.
2	Live storage capacity	:	2576.00 Ham
3	Dead Storage capacity	:	321.00 Ham
4	D.S.L. of Dam	:	191.60 M

5	F.R.L. of reservoir	:	196.60 M
6	T.B.L. of dam	:	198.60 M
7	Deepest bed level of river	:	185.65 m.
IV	DAM		
1	Type of dam	:	Homogenous rolled earth fill dam
2	Total Length	:	1920.00 m
3	Max. height	:	12.95 m
4	Top width	:	6.00 m
V	SPILLWAY		
1	Type	:	Ogee crested
2	Effective length	:	72.00 m
3	Crest level	:	191.60 M
4	Spillway Capacity	:	1185.00 Cumecs
VI	SUBMERGENCE:		
1	Submergence at F.R.L.	:	840.555 ha.
2	Total no.of fully affected village	:	Nil
3	No.of partially affected villages	:	10 Nos
4	Total no.of villages affected	:	10 Nos
5	Forest Area Affected		
	(a) Reserve Forest	:	-nil-
	(b) Village Forest	:	7.054 Ha.
	(c) Govt. land	:	109.517 Ha.
	(d) Pvt. Land	:	777.623 Ha.
	Total	:	894.194 Ha.
VII	DETAILS OF COMMAND AREA		
1	Gross command area	:	5500Ha.
2	Cultivable command area	:	4125 Ha.

3	Percentage of GCA to CCA	:	75%
4	Area of Khariff	:	3750.00 Ha
5	Area of Rabi	:	1000.00 Ha
6	Intensity of irrigation	:	115%
7	No.of villages to be benefitted	:	17 Nos.

CANAL SYSTEM

1	Length of left main canal	:	7.50 Km.
	C.C.A.	:	2250.00 Ha
	Khariff area	:	2100.00 Ha
	Rabi Area	:	675.00 Ha
2	Length of right main canal	:	10.00 Km.
	C.C.A.	:	1875.00 Ha
	Khariff area	:	1650.00 Ha
	Rabi Area	:	325.00 Ha.

IX COST OF THE PROJECT

1	Cost of Head Works	:	Rs.7778.37 Lakhs
2	Cost of distribution system	:	Rs.2411.05 Lakhs
3	Total cost of the project	:	Rs.10809.00 Lakhs
4	Cost per Hectare of Annual Irrigation	:	Rs.2.27 Lakhs
5	B.C.Ratio	:	2.57

3. KATANGI IRRIGATION PROJECT

I. General

1.	State	: Orissa
2.	District	: Bolangir
3.	Sub-division/Block	: Patnagarh/Khaprakhol
4.	Village	: Banjipali
5.	River	: Katangi Nallah
6.	Location	: Lat. - 20º- 45’ 45” N Longitude- 82º- 57’- 20” E
7.	Topo Sheet Ref.	: 64 L/13, 64 L/14, 64 P/1

II. Hydrology

1.	Catchment Area	: 180 Sq. Km.
2.	Rainfall	
a.	Maximum monsoon rainfall	: 1858.73 mm
b.	Minimum monsoon rainfall	: 716.49 mm
c.	75% dependable rainfall	: 1451.94 mm
d.	Average normal rainfall	: 1273.31 mm
3.	Yield	
a.	Average annual yield	: 3975.30 Ham
b.	75% dependable yield	: 2827.22 Ham
4.	Flood	
	Design flood at Dam Site	: 1088 Cumec (100 Years)
5.	Reservoir	
	Gross storage capacity at FRL	: 2645.70 Ham
	Live storage capacity	: 2614.25 Ham
	Dead storage capacity	: 31.45 Ham
	FRL	: 280.00 M.
	DSL	: 271.80 M.
	Deepest bed level of river	: 267.00 M.

III.	**Dam**	
	Type of Dam	: Earth dam with central spillway
	Length of Dam	: 2118.50 M
	Maximum height of dam	: 16.00 M
	Top width	: 6.00 M
	Top Level of dam	: 283.00 M.
IV.	**Spillway**	
a.	Type	: Ogee Crested
b.	Effective length	: 21.91 M
c.	Crest level	: 271.80 M
d.	Spillway capacity	: 1079 Cumecs
V.	**Submergence**	
1.	Area submerged by reservoir at FRL	: 775.69 Ha
	(i) Village submerged	: Fully = Nil Partly = 06 Total = 06
	(ii) Population Affected	: Nil
3.	Forest area affected	1. Reserve forest – 0.00 Ha 2. Village forest --10.41 Ha Total –10.41 Ha
4.	Length of NH to be submerged	: Nil
	Length of MDR to be submerged	: Nil
VI.	**Command area**	
	G.C.A.	: 4909.20 Ha
	C.C.A.	: 3681.90 Ha
	Percentage of C.C.A. to G.C.A.	: 75 %
	Area to be irrigated during Kharif	: 3120 Ha
	Area to be irrigated during Rabi	: 1000 Ha
VII.	**Canal System**	
1.	Left Main canal	: Length – 19.92 Km C.C.A. – 2854.00 Ha Kharif –2418.45 Ha, Rabi-1162.71 Ha

2. Right Main canal : Length –8.95 Km.

C.C.A. – 827.00 Ha

Kharif- 701.55 Ha, Rabi- 224.86 Ha

VIII. Blocks to be Benifited.

(i) Khaprakhol(Bolangir) (19 os. of villages)

(ii) Rajborasamber (Bargarh) (05 Nos of villages.)

IX. Interstate Aspect : No Interstate Aspect

4. BIJEPUR LIFT IRRIGATION PROJECT

I. General / Location

1.	State	:	Odisha
2.	District	:	Bargarh
3.	Sub-Division	:	Padampur
4.	Block	:	Bijepur, Sohela & Barpali
5.	Nearest Town	:	Bargarh
6.	Topo sheet Ref.	:	$64\ \frac{0}{15}$
7.	Nearest Railway Station	:	Bargarh

II. Ayacut Area

i.	Bijepur Block (GCA)	:	19000 ha.
ii.	Sohela Block (GCA)	:	8000 ha.
iii.	Barpali (GCA)	:	5000 ha.
iv.	Total GCA	:	32000 ha.
v.	Total CCA	:	25600 ha.
vi.	Scheme	:	Bijepur Lift Irrigation Project in Bargarh District.
vii.	Source of water	:	Bargarh Main Canal (Hirakud Reservoir)
viii.	Discharge available	:	27.70 cumecs
ix.	Intake well site Location	:	Latitude - 21° - 20'-42°- 89"N Longitude - 83°-34'6.18"E. Near village Turunga and at RD 34.10 Km. of Bargarh Main Canal
x.	Type of pumps	:	VT pumps
xi.	Drawal of Irrigation water through pumps.	:	10.63 Cumecs (Month of July)
xii.	Rising main and balancing reservoir details :-		
	(a) Length of Conveyance Pipe Line	:	17.01 Km.

	(b) Diameter of pipe	:	2.50m.
	(c) No. of rows	:	4
	(d) Delivery Chamber	:	Barihapali pond
	(e) Full Pond Level	:	RL 220.0
	(f) Area of Barihapali pond	:	14.50 ha
xiii.	**Distribution system**	:	Underground pipeline network (gravity flow)
xiv.	**Irrigation Provided:-**		
	(a) Khariff	:	21000 ha.
	(b) Rabi	:	12000 ha.
	(c) Total crop water Demand	:	11578 Ham.
xv.	**No. of Villages benefitted**	:	
	Bijepur Block	:	74
	Sohela Block	:	25
	Barpali Block	:	14
xvi.	Project cost	:	1246.56 Crores
xvii.	B.C. Ratio	:	1.78
xviii.	IRR.	:	17.03%

5. UPPER LANTH MEDIUM IRRIGATION PROJECT

3.SALIENT FEATURES

I) **LOCATION OF THE DAM SITE:**

1	Nearest Village	:	Chikili
2	River	:	Lanth , A tributary of river Tel in Mahanadi Basin.
3	District	:	Bolangir
4	Sub-Division	:	Patnagarh
5	Police Station	:	Patnagarh
6	Gram Panchayat	:	Ghagurli
7	Location	:	Latitude- 20°-38'-20" N
		:	Longitude- 82°-53'-20" E
8	Topo Sheet Reference	:	64 P/2, 64 L/14, 64 L/10
9	Nearest Railway Station	:	Kantabanji

II) **HYDROLOGY:**

1	Catchment area	:	189.07 Sq.Km.
2	Mean Annual monsoon rainfall	:	1099.67 mm
3	Maximum Annual Monsoon Rainfall	:	1508.10 mm
4	Minimum Annual Monsoon Rainfall	:	102.00 mm
5	Run off available at the dam site in a 75% dependable year.	:	4697.27 Ham
6	Spillway Design flood discharge at dam site	:	1864.6 Cumec.

III) **RESERVOIR:**

1	Full reservoir level (F.R.L.)	:	295.50 m.
2	Maximum water level (M.W.L.)	:	295.5 m.
3	Dead storage level (D.S.L.)	:	285.0 m.
4	Gross storage at (F.R.L.)	:	4650.0 Ha.m.
5	Live storage	:	4086.0 Ha.m
6	Dead storage	:	564.0 Ha.m.
7	Total area under submergence including canal area.	:	877.20 Ha.

8	Total Forest area under submergence including canal area.	:	341.23 Ha.
9	No. Of villages submerged	:	2 nos. Villages (Fully)
10	No. Of families affected	:	595
11	Population affected	:	1000 nos.

VI) **TYPE OF DAM:**

1	Type of Dam	:	Earth Dam , Homogeneous Type
2	Total length of dam	:	2495 m.
3	Maximum height of dam from Bed Level	:	23.5 m.
4	Deepest bed level	:	275 m.
5	To width	:	6.00 m.
6	Free board	:	3.0 m.
7	Top level of Dam	:	298.50 m

V) **SPILLWAY:**

1	Type of Spillway	:	Concrete ogee type.
2	Length of Spillway	:	99.00 m
3	Crest level of Spillway	:	289.50 m
4	Size and number of gate	:	7 Nos.(12m x 6.5m size)
5	Type of Gate	:	Radial

VI) **DISTRIBUTION SYSTEM:**

1	Gross command Area (GCA)	:	6170 Ha.
2	Cultivated Command area (CCA)	:	4700 Ha.
3	Percentage of C.C.A to G.C.A.	:	76.17%
4	Intensity of Irrigation during khariff.	:	85.00%
5	Intensity of Irrigation during Rabi.	:	45.00%
6	Area Irrigated During Khariff	:	3990 Ha.
7	Area Irrigated During Rabi	:	2115 Ha.
8	Annual Intensity of Irrigation	:	130%
9	Area Irrigated Annually	:	6105 Ha.
10	Length of Right Main Canal	:	6.66 Km
11	Length of Left Main Canal	:	16.08 Km

	12	Capacity of Right Main Canal	:	0.53 Cumec
	13	Capacity of Left Main Canal	:	3.68 Cumec
	14	CCA of Right Canal Ayacut	:	647.60 Ha
	15	CCA of Left Canal Ayacut	:	4052.40 Ha.
	16	Area Irrigated Annually	:	6105 Ha.
	17	District wise CCA	:	Bolangir- 4700 Ha.
VII)	**POWER GENERATION:**			
	1	Proposed Hydra power unit to be installed	:	1 No.x210 KW (to be the head of left main canal
	2	Cost of installation	:	Rs.7.41 lakhs
VIII)	**PROVISION OF DRINKING WATER**			
	1	Provision of drinking water	:	2.19 Mcum for 30,000 people.
IX)	**COST ESTIMATE:**			
	1	Cost of Unit-I Head works	:	Rs.9950.644 lakhs (Revised)
	2	Cost of Unit-II Main canal and its distribution system.	:	Rs.4509.056 lakhs (Revised)
	3	Cost of installation of Mini Hydel project	:	Rs. 50.00 lakhs (Revised)
	4	Total cost of the Project.	:	Rs.14459.70 lakhs (Revised)
	5	Cost per ha. of CCA (4700 Ha)	:	Rs. 307653/ Ha.
	6	B.C. Ratio at 10% rate of interest	:	1.112 :1 (Revised)

6. SUNGARH IRRIGATION PROJECT

1.	District	:	Bolangir
2.	Sub-Division	:	Bolangir
3.	River	:	Sungarh
4.	Village	:	Bhutiar Bahal
5.	Location	:	Lat. - 20^0-35'-41" N Long. - 83^0-19'-25" E
6.	Category of project	:	Medium
7.	Catchment Area	:	131.00 Sq.km.
8.	Dead Storage capacity	:	
9.	Live Storage capacity	:	
10.	Submergence at F.R.L.	:	350.00 Ha.
11.	Full Reservoir Level	:	200.00 M.
12.	Dead Storage level	:	
13.	Top level of dam	:	203.00 M.
14.	Deepest bed level	:	191.00 M.
15.	Maximum height of dam	:	9.00 M.
16.	Length of the Dam	:	1550 Mtr.
17.	Width of River	:	56 M.
18.	Top width	:	6.00 M.
19.	Type of dam	:	Earth dam with central spillway
20.	Gross Command Area	:	3000 Ha.
21.	Culturable Command Area (C.C.A.)	:	2250 Ha. (75 % of G.C.A.)
22.	No. of villages to be Submerged	:	Fully - Nil, Partly – 04 (Four)
23.	No. of villages to be Benefited	:	18 (Eighteen)
24.	Main Canal	:	2 (two) Nos. Left Main Canal– 07.00 Km. (700 Ha) Right Main Canal – 11.00 Km. (2300 Ha)
25.	Approximate Cost	:	99.03 Crores

7. LOWER LANTH IRRIGATION BARRAGE PROJECT NEAR VILLAGE TUSTAPALI

1. General / Location

I.	State	:	Odisha
II.	District	:	Bolangir
III.	Sub-Division	:	Titilagarh
IV.	Nearest village	:	Bankel near Tustapali
V.	Pond Area at 160 m TBL	:	600 Ha.
VI.	River	:	Lanth
VII.	Location	:	Latitude - 20°-25'-15"N Longitude - 83°-13'-17"E.
VIII.	Topo sheet Ref.	:	64 P/3
IX.	Nearest Railway Station	:	Saintala

2. Hydrology:

a. I.	Catchment Area	:	1150 Sq Km.
II.	Design Flood	:	4931 Cumecs
III.	75% dependable Yield Deducting 10% for u/s Utilization		

b. Rainfall:

I.	Maximum annual Rainfall (1991-2000)	:	1911 mm
II.	Minimum annual Rainfall	:	186 mm
III.	Average annual Rainfall	:	979 mm
IV.	70% dependable Yield	:	

3. Flood

	Design Flood at Barrage site	:	

4. Principal Levels:

I.	T.B.L.	:	205.500 M.

II.	M.W.L.	:	203.500 M.
III.	Pond Level	:	201.500 M.
IV.	Crest Level	:	197.500 M.
V.	Average Bed Level	:	195.000 M.
VI.	Deepest Bed Level	:	194.500 M.

5. Submergence Details:

I.	Submergence at M.W.L.	:	no submergence

6. Barrage and Afflux Bunds :

A. Barrage

1.	Location	:	Latitude - 20°-25'-15"N Longitude - 83°-13'-17"E. Village – Tustapali
2.	Type	:	Concrete barrage with sloping glacies
3.	Length of Barrage	:	350 M.
4.	Number of Bays	:	24 nos.
5.	Size of Gates	:	6 M x 12 M.
6.	Type of Gates	:	Radial

B. Afflux Bunds

1.	Location and Number	:	Left & Right
2.	Length of Dyke	:	600 m + 660 m. = 1260 M.
3.	Maximum height of Dyke	:	6 mtr.
4.	Top Width	:	6 mtr.

7. Details of Command:

			Left	Right	Total
1.	G.C.A.	:	2025 Ha.	+ 2475 Ha.	= 4500 Ha.
2.	C.C.A.	:	1418 Ha.	+ 1733 Ha.	= 3151 Ha.

3. Irrigation:

a.	Khariff	:	3151 Ha.

	b. Rabi	:	Nil	
	c. Annual Irrigation	:	3151 Ha.	
8.	Total Cost of Project	:	Rs.3200.00 Lakhs.	
9.	Canal System			
	Main Canal		Left	Right
1.	Discharge	:	2.00 cumec	2.5 cumec
2.	Length	:	9.50 Kms.	10.00 Kms.

8. LOWER LANTH IRRIGATION BARRAGE PROJECT NEAR VILLAGE DENG

1. General / Location

I.	State	:	Odisha
II.	District	:	Balangir
III.	Sub-Division	:	Titilagarh
IV.	Nearest village	:	Deng
V.	Pond Area at 160 m TBL	:	1100 Ha.
VI.	River	:	Lanth
VII.	Location	:	Latitude - 20° - 25'-49"N Longitude - 83°-19'-28"E.
VIII.	Topo sheet Ref.	:	$64\frac{P}{7}$
IX.	Nearest Railway Station	:	Balangir/Saintala

2. Hydrology:

a. I.	Catchment Area	:	1456 Sq. Km.
II.	Design Flood	:	4931 Cumecs
III.	75% dependable Yield Deducting 10% for u/s Utilization		

b. Rainfall:

I.	Maximum annual Rainfall (1991-2000)	:	1911 mm
II.	Minimum annual Rainfall	:	186 mm
III.	Average annual Rainfall	:	979 mm
IV.	70% dependable Yield	:	

3. Flood

	Design Flood at Barrage site	:	4131 cumecs

4. Principal Levels:

I.	T.B.L.	:	176.000 M.
II.	M.W.L.	:	174.5000 M.
III.	Pond Level	:	172.000 M.
IV.	Crest Level	:	172.000 M.
V.	Average Bed Level	:	
VI.	Deepest Bed Level	:	171.000 M.

5. Submergence Details:

I.	Submergence at M.W.L.	:	No submergence

6. Barrage and Afflux Bunds :

A. Barrage

1.	Location	:	Latitude - 20°-25'-49°- 89"N Longitude - 83°-19'-28"E. Village – Bargaon
2.	Type	:	Concrete barrage with sloping glacies
3.	Length of Barrage	:	350 M.
4.	Number of Bays	:	24 nos.
5.	Size of Gates	:	6 M. x 12 M.
6.	Type of Gates	:	Randial

B. Afflux Bunds

1.	Location and Number	:	Left & Right
2.	Length of Dyke	:	750 Mtr.
3.	Maximum height of Dyke	:	6 mtr.
4.	Top Width	:	6 mtr.

7. Details of Command:

		:	Left	Right		Total
1.	G.C.A.		4706 Ha.	+ 5006 Ha.	=	9712 Ha.
2.	C.C.A.	:	3294 Ha.	+ 3504 Ha.	=	6798 Ha.

3. Irrigation:

a.	Khariff	:	6798 Ha.
b.	Rabi	:	Nil
c.	Annual Irrigation	:	6798 Ha.

8. Total Cost of Project : Rs.6800.00 Lakhs

9. Canal System

Main Canal		Left	Right
1. Discharge	:	5.00 cusec	7.0 cumec
2. Length	:	14.25 Kms	15.75 Kms

9. TEL IRRIGATION BARRAGE PROJECT NEAR VILLAGE KUKEDMAL:-

1. General / Location

I.	State	:	Odisha
II.	District	:	Balangir, Boudh
III.	Sub-Division	:	Balangir
IV.	Nearest village	:	Kukedmal
V.	Pond Area at 160 m TBL	:	3560 Ha.
VI.	River	:	Tel
VII.	Location	:	Latitude - 20°-25'-20"N Longitude - 83°-27'-30"E.
VIII.	Topo sheet Ref.	:	64 P/7, P/10 & P/11
IX.	Nearest Railway Station	:	Deagon

2. Hydrology:

a. I.	Catchment Area	:	9416 Sq Km.
II.	Design Flood	:	
III.	75% dependable Yield Deducting 10% for u/s Utilization		

b. Rainfall:

I.	Maximum annual Rainfall (1991-2000)	:	
II.	Minimum annual Rainfall	:	
III.	Average annual Rainfall	:	
IV.	70% dependable Yield	:	

3. Flood

Design Flood at Barrage site :

4. Principal Levels:

I.	T.B.L.	:	160.000 M.
II.	M.W.L.	:	158.000 M.
III.	Pond Level	:	156.000 M.
IV.	Crest Level	:	152.000 M.
V.	Average Bed Level	:	149.000 M.
VI.	Deepest Bed Level	:	148.500 M.

5. Submergence Details:

I.	Submergence at M.W.L.	:	no submergence

6. Barrage and Afflux Bunds :

A. Barrage

1.	Location	:	Latitude - 20°-25'-20°N Longitude - 83°-27'-30"E. Village – Kukedmal
2.	Type	:	Concrete barrage with sloping glacies
3.	Length of Barrage	:	540 M.
4.	Number of Bays	:	33 nos.
5.	Size of Gates	:	6 M x 12 M.
6.	Type of Gates	:	Radial

B. Afflux Bunds

1.	Location and Number	:	Left & Right
2.	Length of Dyke	:	915 m + 1000 m. = 1915 M.
3.	Maximum height of Dyke	:	6 mtr.
4.	Top Width	:	6 mtr.

7. Details of Command:

1.	G.C.A.	:	14,048 Ha.
2.	C.C.A.	:	9,834 Ha.

3. Irrigation:

a. Khariff : 9834 Ha.

b. Rabi : 4900 Ha.

c. Annual Irrigation : 14734 Ha.

8. Total Cost of Project : Rs.9880.00 Lakhs.

9. Canal System

Main Canal		Left	Right
1. Discharge	:	6.00 cumec	5.0 cumec
2. Length	:	34 Kms.	33 Kms.

10. TEL IRRIGATION BARRAGE PROJECT NEAR VILLAGE MANIKPUR :-

1.	General / Location		
I.	State	:	Odisha
II.	District	:	Sonepur, Boudh
III.	Sub-Division	:	Sonepur, Boudh
IV.	Nearest village	:	Manikpur
V.	Pond Area at 160 m TBL	:	1940 Ha.
VI.	River	:	Tel
VII.	Location	:	Latitude - 20°-34'-30"N Longitude - 83°-42'-0"E.
VIII.	Topo sheet Ref.	:	64 P/10
IX.	Nearest Railway Station	:	Bolangir
2.	Hydrology:		
a. I.	Catchment Area	:	12,612 Sq Km.
II.	Design Flood	:	
III.	75% dependable Yield Deducting 10% for u/s Utilization		
b.	Rainfall:		
I.	Maximum annual Rainfall (1991-2000)	:	
II.	Minimum annual Rainfall	:	
III.	Average annual Rainfall	:	
IV.	70% dependable Yield	:	
3.	Flood		
	Design Flood at Barrage site	:	
4.	Principal Levels:		

I.	T.B.L.	:	140.000 M.
II.	M.W.L.	:	138.000 M.
III.	Pond Level	:	136.000 M.
IV.	Crest Level	:	132.000 M.
V.	Average Bed Level	:	129.000 M.
VI.	Deepest Bed Level	:	128.500 M.

5. Submergence Details:

I.	Submergence at M.W.L.	:	no submergence

6. Barrage and Afflux Bunds :

A. Barrage

1.	Location	:	Latitude - 20°-34'-30"N Longitude - 83°-42'-0"E. Village – Manikpur
2.	Type	:	Concrete barrage with sloping glacies
3.	Length of Barrage	:	400 M.
4.	Number of Bays	:	25 nos.
5.	Size of Gates	:	6 M x 12 M.
6.	Type of Gates	:	Radial

B. Afflux Bunds

1.	Location and Number	:	Left & Right
2.	Length of Dyke	:	600 m + 660 m. = 1260 M.
3.	Maximum height of Dyke	:	6 mtr.
4.	Top Width	:	6 mtr.

7. Details of Command:

1.	G.C.A.	:	15,890 Ha.
2.	C.C.A.	:	10,158 Ha.

3. Irrigation:

a. Khariff : 10,158 Ha.

b. Rabi : 5000 Ha.

c. Annual Irrigation : 15,158 Ha.

8. Total Cost of Project : Rs.10,200.00 Lakhs.

9. Canal System

Main Canal		Left	Right
1. Discharge	:	5.00 cumec	7.9 cumec
2. Length	:	19 Kms.	34 Kms.

11. SAMANDU IRRIGATION PROJECT (SIP)

1.	District	:	Sambalpur
2.	Sub-Division	:	Rairakhol
3.	River	:	Samandu
4.	Village	:	Ambajhar
5.	Location	:	Lat.- 21^0-19'-20"N
			Lang.-84^0-41'-10"E
			Topo sheet No. 73 C/11
6.	Category of project	:	Medium
7.	Catchment Area	;	75.00 Sq.km.
8.	Dead Storage capacity	:	
9.	Live Storage capacity	:	
10.	Submergence at F.R.L.	:	81.80 Ha
11.	Full Reservoir Level	:	184.00M.
12.	Dead Storage level	:	
13.	Top level of dam	:	187.00 M.
14.	Deepest bed level	:	171.695 M.
15.	Maximum height of dam	:	
16.	Length of the Dam	:	264.00 Mtr.
17.	Top width	:	6.00 M.
18.	Type of dam	:	Earth dam with central spillway
19.	Gross Command Area	:	3753.54 Ha.
20.	Culturable Command Area(C.C.A.)	:	2815.15 Ha.
21.	No. of villages to be submerged	:	Fully - Nil, Partly – 5(five)
22.	No. of villages to be benefited	:	11
23.	Main Canal	:	2(two) Nos.
			Left Main Canal – 14.35 Km.
			Right Main Canal – 17.00 Km.
24.	Approximate Cost	:	68.78 Crores.

12. BARGARH NALLAH IRRIGATION PROJECT

1.	District	:	Bargarh
2.	Sub-Division	:	Bargarh
3.	River	:	Bargarh Nallah
4.	Village	:	Tangarpali
5.	Location	:	Lat.- 21^0-05'-21"N Lang.-83^0-32'-12"E Topo sheet No. 64 O/11 & 64 O/12
6.	Category of project	:	Medium
7.	Catchment Area	:	17.00 Sq.km.
8.	Dead Storage capacity	:	
9.	Live Storage capacity	:	
10.	Submergence at F.R.L.	:	339.68 Ha
11.	Full Reservoir Level	:	184.00M.
12.	Dead Storage level	:	
13.	Top level of dam	:	187.00 M.
14.	Deepest bed level	:	177.50 M.
15.	Maximum height of dam	:	9.50 M.
16.	Length of the Dam	:	1608 Mtr.
17.	Top width	:	6.00 M.
18.	Type of dam	:	Earth dam with central spillway
19.	Gross Command Area	:	573.07 Ha.
20.	Culturable Command Area(C.C.A.)	:	429.80 Ha.
21.	No. of villages to be submerged	:	Fully - Nil, Partly – 5(Five)
22.	No. of villages to be benefited	:	05
23.	MainCanal	:	2(two) Nos. Left Main Canal –2.00 Km. Right Main Canal – 5.00 Km.
24.	Approximate Cost	:	42.14 Crores.

13. BANJARI NALLAH IRRIGATION PROJECT

1.	District	:	Bargarh
2.	Sub-Division	:	Bargarh
3.	River	:	Banjari Nallah
4.	Village	:	Patharla
5.	Location	:	Lat.- 21^0-17'-58"N Lang.-83^0-32'-56"E Topo sheet No. 64 O/11 & 64 O/12
6.	Category of project	:	Medium
7.	Catchment Area	:	31.00 Sq.km.
8.	Dead Storage capacity	:	
9.	Live Storage capacity	:	
10.	Submergence at F.R.L.	:	355.68 Ha
11.	Full Reservoir Level	:	185.50 M.
12.	Dead Storage level	:	
13.	Top level of dam	:	188.50 M.
14.	Deepest bed level	:	175.50 M.
15.	Maximum height of dam	:	13.00 M.
16.	Length of the Dam	:	1930 Mtr.
17.	Top width	:	6.00 M.
18.	Type of dam	:	Earth dam with central spillway
19.	Gross Command Area	:	439.36 Ha.
20.	Culturable Command Area(C.C.A.)	:	329.52 Ha.
21.	No. of villages to be submerged	:	Fully - Nil, Partly – 04(Four)
22.	No. of villages to be benefited	:	05
23.	MainCanal	:	2(two) Nos. Left Main Canal –4.3 Km. Right Main Canal – 1.2 Km.
24.	Approximate Cost	:	63.38 Crores.

PROJECT WISE EXPENDITURE INCURRED DURING THE FINANCIAL YEAR 2017-18

SL. NO.	NAME OF THE PROJECT	ESTIMATED COST	EXP. INCURRED UPTO MARCH-2017	EXP. INCURRED DURING THE FY 2017-18	CUMULATIVE EXP. AS ON MARCH-2018
1	**J**eera Irrigation Project (JIP)	4,15,64,192.40	3,59,96,381.00	63,41,309.00	4,23,37,690.00
2	Ranjjore Irrigation Project (RIP)	3,83,45,844.00	3,19,80,723.00	2,68,62,695.00	5,88,43,418.00
3	Katangi Irrigation Project (KIP)	97,22,700.00	89,47,517.00	7,29,098.00	96,76,615.00
4	Samandu Irrigation Project (SIP)	67,81,700.00	36,21,846.00	3,13,878.00	39,35,724.00
5	Bargarh Nallah Irrigation Project	75,03,000.00	18,66,147.00	52,601.00	19,18,748.00
6	Banjari Nallah Irrigation Project	79,88,400.00	19,47,685.00	32,828.00	19,80,513.00
7	Bijepur Lift Irrigation Project	2,75,87,750.00	91,71,123.00	88,17,791.00	1,79,88,914.00
8	Upper Lanth Med. Irrigation Project	1,48,51,859	48,43,589.00	58,86,405.00	1,07,29,994.00
9	Sungarh Irrigation Project	85,50,000.00	0.00	33,62,955.00	33,62,955.00
10	Instream Storage Structure (11 No.S)	1,13,84,363.27	26,90,395.00	47,17,652.00	74,08,047.00
Total Exp. Incurred during FY 2017-18 =				**5,71,17,212.00**	

The details of expenditure project wise and component wise during the financial year 2017-18 is enclosed at **Annexure-I**. The expenditure incurred against the allotment received during the year 2017-18 by this division is enclosed at **Annexure-II**

EXECUTIVE ENGINEER
PADAMPUR INVESTIGATION DIVISION
PADAMPUR

ANNEXURE-I

ANNUAL EXPENDITURE FOR THE YEAR 2017-18
PADAMPUR INVESTIGATION DIVISION, PADAMPUR

SL NO	ITEM OF WORK	TARGET	ACHIEVEMENT	EXPENDITURE INCURRED IN RS.	REMARKS
A	**JEERA IRRIGATION PROJECT (JIP)**				
1	Fixing of boundary stone pillars along the periphery	230 Nos.	230 Nos.	40,764.00	
2	Dam Axis Clearance for Five Years			42,000.00	
3	Payment made to NIT, Rourkela towards consultancy charges for preparation of deteiled project report, proposal for EIA & EMP, R&R Plan, Forest Diversion Proposal including obtaining TAC, Environment & R&R Clearance			800,000.00	
4	Stage-I Forest Clearance the cost of NPV has been deposited to D.F.O., Bargarh Forest Division, Bargarh in CAMPA A/C.	1 No., 5.391 Ha.	1 No., 5.391 Ha.	3,374,766.00	
5	W/Ch payment			2,083,779.00	
	Expenditure during the FY 2017-18 =			**6,341,309.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**35,996,381.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**42,337,690.00**	
	Estimated Cost as per Sanctioned Estimate =			**41,564,192.40**	
B	**RANJJORE IRRIGATION PROJECT (RIP)**				
1	Payment made to NIT, Rourkela towards consultancy charges for preparation of deteiled project report, proposal for EIA & EMP, R&R Plan, Forest Diversion Proposal including obtaining TAC, Environment & R&R Clearance.			800,000.00	
2	Stage-I Forest Clearance the cost of NPV, CA & CATP has been deposited to D.F.O., Bargarh Forest Division, Bargarh in CAMPA A/C and Salary.	1 No., 7.055 Ha.	1 No., 7.055 Ha.	23,581,704.00	
3	Miscellaneous Expenditures			1,301,620.00	
5	W/Ch payment			1,179,371.00	
	Expenditure during the FY 2017-18 =			**26,862,695.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**31,980,723.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**58,843,418.00**	
	Estimated Cost as per Sanctioned Estimate =			**38,345,844.00**	
C	**KATANGI IRRIGATION PROJECT (KIP)**				
1	Small T & P			10,000.00	
2	Hiring of vehicle visiting of officers of other department including R/M to vehicles for 5 years.			340,157.00	
3	Dam Axis Clearance for Five Years			24,725.00	
4	Miscellaneous Expenditures			354,216.00	
	Expenditure during the FY 2017-18 =			**729,098.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**8,947,517.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**9,676,615.00**	
	Estimated Cost as per Sanctioned Estimate =			**9,722,700.00**	
D	**SAMANDU IRRIGATION PROJECT (SIP)**				
1	Fixing of boundary stones including cost of stone.	500 No.s	500 No.s	261,298.00	
2	Hiring of vehicle visiting of officers of other department including R/M to vehicles for 5 years.			45,500.00	
3	Miscellaneous Expenditures			7080.00	
	Expenditure during the FY 2017-18 =			**313,878.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**3,621,846.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**3,935,724.00**	

	Estimated Cost as per Sanctioned Estimate =	**6,781,700.00**	

E	**BARGARH NALLAH**				
1	Command area survey on village (contour interval 1m.)	130.83 Ha	130.83 Ha	52,601.00	
	Expenditure during the FY 2017-18 =			**52,601.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**1,866,147.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**1,918,748.00**	
	Estimated Cost as per Sanctioned Estimate =			**7,503,000.00**	
F	**BANJARI NALLAH**				
1	Miscellaneous Expenditures			32,828.00	
	Expenditure during the FY 2017-18 =			**32,828.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**1,947,685.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**1,980,513.00**	
	Estimated Cost as per Sanctioned Estimate =			**7,988,400.00**	
G	**BIJEPUR LIFT IRRIGATION PROJECT**				
1	OCC (S & I)			8,729,765.00	
2	Hire Vehicle for CE			25,826.00	
3	RTI			14,260.00	
4	Payment to Amin			47,940.00	
	Expenditure during the FY 2017-18 =			**8,817,791.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**9,171,123.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**17,988,914.00**	
	Estimated Cost as per Sanctioned Estimate =			**27,587,750.00**	
H	**UPPER LANTH MED. IRRIGATION PROJECT**				
1	OCC (FDP)			4,916,977.00	
	Orsac			640,800.00	
	RTI			21,340.00	
	TOR Scrutiny Fee			300,000.00	
	Maps			7,288.00	
	Expenditure during the FY 2017-18 =			**5,886,405.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**4,843,589.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**10,729,994.00**	
	Estimated Cost as per Sanctioned Estimate =			**14,851,859.00**	
I	**SUNGARH IRRIGATION PROJECT**				
1	Reservoir Survey upto MWL+5m.	350 Ha	350 Ha	171,500.00	
2	Dam Base Survey	155 Ha	155 Ha	74,400.00	
3	Command area survey on village (contour interval 1m.)	2590.96 Ha	2590.96 Ha	1,165,932.00	
4	Strip contour plan to cover line of canal (Contour interval of 0.5m.)	18 Km	18 Km	270,000.00	
5	Carrying of G.T.S. Bench mark	30 Km	30 Km	64,500.00	
6	Drilling holes with diamond drill with water loss test.	10 No.	10 No.	1,170,250.00	
7	Drilling trial bore holes for fixation of Dam axis at Gaibahal as per field inspection note of Chief Engineer, PPF&I vide memo No. 1669 Dt.27.04.2017	2 No.	2 No.	248,931.00	
8	Marking F.R.L. line	10.24 Km	10.24 Km	72,089.60	
9	Marking F.R.L. below 2m. Line	7.96 Km	7.96 Km	56,038.40	
10	Marking F.R.L. below 4m. Line	8.84 Km	8.84 Km	62,234.00	
11	RTI			7,080.00	
	Expenditure during the FY 2017-18 =			**3,362,955.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**0.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**3,362,955.00**	
	Estimated Cost as per Sanctioned Estimate =			**8,550,000.00**	

J	INSTREAM STORAGE STRUCTURE (11 NO.S)				
1	Command area survey	5670 Ha	5670 Ha	1,915,756.00	
2	Carrying of G.T.S. Bench mark	0	0	0.00	
3	Pond area survey	0	0	0.00	
4	Dam Base Survey	0	0	0.00	
5	R/M to temporary jeepable road			40,307.00	
6	River Survey (L.S.)	0	0	0.00	
7	River Survey (C.S.)	0	0	0.00	
8	Fixing of Bench Mark Pillar	0	0	0.00	
9	Drilling of holes along the Dam Axis & Spillway			2,761,589.00	
10	Miscellaneous Expenditures	0	0	0.00	
	Expenditure during the FY 2017-18 =			**4,717,652.00**	
	Cumulative Expenditure Upto 31-03-2017 =			**2,690,395.00**	
	Cumulative Expenditure Upto 31-03-2018 =			**7,408,047.00**	
	Estimated Cost as per Sanctioned Estimate =			**11,384,363.27**	
	TOTAL EXPENDITURE For FY 2017-18 =			**57,117,212.00**	

ANNEXURE-II

HEAD WISE ALLOTMENT RECEIVED FOR FY 2017-18			
SL. NO.	**HEAD**	**ALLOTMENT RECEIVED IN TRS.**	**EXPENDITURE INCURRED IN TRS.**
1	S/I Works (Major Works)	51,885.00	51,858.00
2	T & P	760.00	693.00
3	Salary of W/C Employee	4,609.00	4,566.00
	Total =	**57,254.00**	**57,117.00**

EXECUTIVE ENGINEER,
PADAMPUR INVESTIGATION DIVISION,
PADAMPUR