TEL : 2564033/2563294
EPABX : 2561909/2562847
E-mail : paribesh1@ospboard.org
Website : www.ospcboard.org

STATE POLLUTION CONTROL BOARD, ODISHA

[DEPARTMENT OF FOREST & ENVIRONMENT, GOVERNMENT OF ODISHA]
Paribesh Bhawan, A/118, Nilakanthanagar, Unit-VIII,
Bhubaneswar – 751 012

No. 829 Dt. 27.5.2020

Ind-VI-BW/2824 (Pt. III) /19-20

Speed Post/ Email

To

Dr. D. P. Mathuria
Executive Director, National Mission for Clean Ganga
Department for Water Resources, River Development & Ganga Rejuvenation,
Ministry of Jal Shakti
1st Floor, Major Dhyan Chand National Stadium, India Gate, New Delhi-110 002

Sub : Submission of Monthly Progress Reports related to Control of River Pollution –Reg.

Ref : Email of Dt. 29.02.2020

Sir,

In Inviting a reference to above subject, the Monthly Progress Report for the month of March-2020 and April-2020 in compliance to the Proceedings of the 2nd Central Monitoring Committee are enclosed herewith for your kind information and necessary action.

Yours faithfully,

Encl : As above

27/05/2020
Member Secretary

Memo No. 830 **Date :** 27.5.2020

Copy forwarded to Dr. J.C. Babu, Addl. Director, WQM-I Division, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi -110032 for kind information and necessary action.

Encl : As above

27/05/2020
Member Secretary

Memo No. 831 **Date :** 27-5-2020

Copy forwarded to the Director, Env.-cum-Spl. Secy. To Government, Forest and Environment Department, for kind information and necessary action.

Encl : As above

27/05/2020
Member Secretary

National Mission for Clean Ganga

Format for Submission of Monthly Progress Report by States/ UTs

(Hon'ble NGT in the matter of OA No. 673/2018 dated 06.12.2019)

State : Odisha **Month : March and April, 2020**

Sl No.	Information sought for	Replies
6.1 (i)	identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment	List of Polluting stretches and their priority category are given in Annexure-1. Information on identification of drains contributing pollution to these river stretches are given in Annexure-2.
(ii)	Status of STPs. I & D and sewerage networks, Details of Existing infrastructure, Gap Analysis, Proposed along with completion timeline	Information given in Annexure-3
(iii)	Status of CETPs, Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status	There is no CETP in the State. Industries have installed captive ETPs for treatment of Industrial Effluent. Detail status of management of Industrial Effluent is given in Anexure-4.
(iv)	Status of Solid Waste Management and Details of of Processing facilities and Existing infrastructure, Gap analysis, Proposed alongwith completion timeline	Information given in Annexure-5.
(v)	Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	Latest water quality status during March-2020 and April-2020 are given in Annexure-6 (a) and 6 (b) respectively.
(vi)	Preventing dumping of waste and scientific waste management including bio-medical wastes, plastic wastes and decentralizing waste processing, including waste generated from hotels, ashrams, etc.	Bio-medical wastes generating from the health care establishments are being managed either through common biomedical waste treatment and Disposal (CBWTDF) facilities or by deep-

		burial practice. Bar-code System has been implemented in the following four Common Facilities (CBWTDF) : 1) M/s. Sani Clean Pvt. Ltd., Khurda, 2) M/s Mediaid Marketing Services, Bhubaneswar at SCB Medical College and Hospital, Cuttack 3) M/s Mediaid Marketing Services, Bhubaneswar at Rourkela Govt. Hospital, Rourkela 4) M/s. Bio-Tech Solutions, at VSS Medical College and Hospital Burla, Sambalpur.
(vii)	Ground Water Regulation	Information given in Annexure-7 (a) and 7(b).
(viii)	Adopting Good Irrigation practices	
(ix)	Protection and Management of Flood Protection Zones (FPZ)	
(x)	Rain water harvesting	
(xi)	Maintaining minimum environmental flow in river	
(xii)	Plantation on both sides of the river	
(xiii)	Setting up of biodiversity parks on flood plains by removing encroachment	

Annexure-I

List of Polluted River Stretches as identified by CPCB and their priority Category (during 2017)

Polluted River Stretches identified by CPCB		Priority Category of Polluted River stretch
1.	Gangua River (Along Bhubaneswar)	Priority-I
2.	Guradih nallah (Rourkela)	Priority-III
3	Kathajodi (Cuttack to Urali)	Priority-III
4	Nandira Jhor (D/s of Talcher)	Priority-III
5	Daya (Bhubaneswar to Bargarh)	Priority-IV
6	Kuakhai (Along Bhubaneswar)	Priority-IV
7	Banguru nallah (along Talcher, Rengali)	Priority-V
8	Bheden (along Bheden)	Priority-V
9	Brahmani (Rourkela to Biritol)	Priority-V
10	Budhabalanga (Mahulia to Baripada)	Priority-V
11	Kusumi (along Talcher)	Priority-V
12	Mahanadi (Sambalpur to Paradeep)	Priority-V
13	Mangala (Along Puri)	Priority-V
14	Nagavali (Jaykaypur to Rayagada)	Priority-V
15	Luna (along Bijipur)	Priority-V
16	Ratnachira (Along Bhubaneswar, Puri)	Priority-V
17	Rushikulya (Pratappur to Ganjam)	Priority-V
18	Sabulia (Jagannathpatna, Rambha)	Priority-V
19	Serua (Khandaeta to Sankhatrasa)	Priority-V

Details of drains contributing to polluted river stretches (River stretch-wise)

Sl. No.	Name of the Polluted River Stretch	Drain	Type Domestic/ Industrial/ Mixed	Quantity (MLD)	BOD*(mg/L)	FC* (MPN/ 100 mL)
1.	Gangua River (Along Bhubaneswar)	10 Nos.	**Domestic**			
			Drain Name			
			Patia	17.00	160	-
			Sainik School	1.55	127	-
			OAP area	3.55	120	-
			Vani Vihar	16.40	100	-
			Laxmisagar area	4.45	120	-
			Baragada Area	3.45	140	-
			Kedargouri	5.45	140	-
			Airport area	14.30	24	-
			Ghatikia	28.8	60	-
			Nicco Park	12.3	100	-
2.	Guradih nallah (Rourkela)	1 No.	**Industrial**	-	-	-
3	Kathajodi (Cuttack to Urali)	3 Nos.	**Domestic**			
			Outlet of STP at CDA-Bidanasi area	-	5.02	29692
			Wastewater discharge to Kathajodi river through sluice gate at Khannagar	-	42.9	160000
			Outlet of STP at Mattagajpur discharge to Kathajodi river *	-	11.4	160000
4	Nandira Jhor (D/s of Talcher)	1 No.	Kisindajhor, a natural storm water drain carrying treated industrial discharge	-	1.1	1569

Sl. No.	Name of the Polluted River Stretch	Drain	Type Domestic/ Industrial/ Mixed	Quantity (MLD)	BOD*(mg/L)	FC* (MPN/ 100 mL)
5	Daya (Bhubaneswar to Bargarh)	1 No.	Gangua nallah , a natural storm water drain, carrying domestic wastewater	-	10.4	160000
6	Kuakhai (Along Bhubaneswar)	-	No drain	-	-	-
7	Banguru nallah (along Talcher, Rengali)	-	No drain	-	-	-
8	Bheden (along Bheden)		Kharkhari nallah, a natural storm water drain, carrying treated industrial and domestic wastewater	-	-	-
9	Brahmani (Rourkela to Biritol)	-	Guradih nallah, a natural storm water drain, carrying treated industrial and domestic wastewater	-	5.4	64117
10	Budhabalanga (Mahulia to Baripada)	2 Nos.	Sarali Nallah and Jarli nallah, two natural storm water drains carrying domestic wastewater	-	-	-
11	Kusumi (along Talcher)	-	No drain	-	-	-
12	Mahanadi (Sambalpur to Paradeep)	**Sambalpur** : Domestic wastewater of Sambalpur Municipal Corporation flows through four natural streams such as Tangana nallah, Dhobijhore, Haradajhor and Malatijhor which ultimately discharge into Mahanadi river **Sonepur :** One major drain carrying domestic wastewater of the town				

		Cuttack : One major drain carrying domestic wastewater of a part of Cuttack city **Paradeep :** One major drain carrying domestic wastewater of the town through Atharabanki creek				
13	Mangala (Along Puri)				15.9	15025
14	Nagavali (Jaykaypur to Rayagada)	-	Treated wastewater of STP and ETP at Jaykaypur, Rayagada			
15	Luna (along Bijipur)	-	No drain	-	-	-
16	Ratnachira (Along Bhubaneswar, Puri)	-	No drain	-	-	-
17	Rushikulya (Pratappur to Ganjam)	-	No drain	-	-	-
18	Sabulia (Jagannathpatna, Rambha)	-	No drain	-	-	-
19	Serua (Khandaeta to Sankhatrasa)	As in Sl. No. 3				

* Average data for 2019

Annexure-3

Orissa water supply & sewerage board

(A Govt. of Odisha Undertaking)
Satyanagar, Bhubaneswar–751007 Phone: (0674)2571341 /2571185 Fax:2571348,
Mail- msowssb@gmail.com & msowssb@outlook.com

No. 1991 (WR) /dt. 1.5.2020
W-18/15(2).

To

The Member Secretary,
SPCB, Bhubaneswar.

Sub: Submission of Monthly Progress Report (April 2020) for compliance of direction of the Honble' NGT passed in OA No.673/2018 vide order dated 6.12.2019.

Ref: Letter No. 2120 dated 24.02.2020 addressed to H&UD Department.

Sir,

With reference to the subject cited above, the monthly progress report (April 2020) relating to compliance of direction of Hon'ble NGT passed in OA No.673/ 2018 vide order dated 6.12.2019 relating to OWSSB is furnished herewith in the prescribed format for information and necessary action.

Encl: as above.

Yours faithfully,
30/4/20
EIC-cum-Member Secretary.

Memo No. 1992 /OWSSB Date. 1.5.2020

Copy with copy of enclosure forwarded to the Additional Secretary to Govt & Additional Mission Director, SBM (U), H&UD Department for information and necessary action with reference to letter No. 7349 dated 16.3.2020.

30/4/20
EIC-cum-Member Secretary

FORMAT FOR SUBMISSION OF MONTHLY PROGRESS REPORT BY OWSSB (HONBLE NGT IN THE MATTER OF OA. 673/2018 DATED 6.12.2019) ENDING MARCH 2020

<table>
<tr><th>Sl.</th><th>Activity to be monitored</th><th>Timeline</th><th>Progress/ compliance/ status</th></tr>
<tr><td>1.</td><td>Ensure 100% treatment of sewage at least in situ remediation</td><td>31.03.2020</td><td>It is targeted to ensure treatment of total 367 mld sewage generated in 6 ULBs of the State by Dec'2020.

Quantity of sewage treated in ULBs as on March 2020
i. Puri - 14 mld
ii. Cuttack- 40 mld
iii. Talcher - 2 mld
Total - 56 mld</td></tr>
<tr><td></td><td>Commencement of setting up of STPs connecting all the drains and other sources of generation of sewage to the STPs must be ensured</td><td>31.03.2020</td><td>3 STP have been constructed for treating drain water of following towns.
i. Cuttack : 33 MLD STP at Matgajpur
ii. Puri : 5 MLD STP at Bankimuhan
iii. Talcher : 2 MLD STP at Mandapal

No other STP are now under construction for treating of drain water.</td></tr>
<tr><td>2.</td><td>Timeline for completing all steps of action plans including completion of setting up STPs & their commissioning.</td><td>31.03.2020</td><td>
<table>
<tr><td colspan="2">Bhubaneswar Sewerage District-I</td></tr>
<tr><td>Sewerage Treatment Plant (STP) – 1 No (56 mld)</td><td>46% Completed.</td></tr>
<tr><td colspan="2">Bhubaneswar Sewerage District-II</td></tr>
<tr><td>Sewerage Treatment Plant (STP) – 1 No (28 mld)</td><td>23% Completed.</td></tr>
<tr><td colspan="2">Bhubaneswar Sewerage District-III</td></tr>
<tr><td>Sewerage Treatment Plant (STP) – 1 No (43.5 mld)</td><td>58% Completed.</td></tr>
<tr><td colspan="2">Bhubaneswar Sewerage District-IV</td></tr>
<tr><td>Sewerage Treatment Plant (STP) – 1 No (8.5 mld)</td><td>29% Completed.</td></tr>
<tr><td colspan="2">Rourkela City</td></tr>
<tr><td>Sewerage Treatment Plant (STP) – 1 No (40 MLD)</td><td>92% Completed.</td></tr>
<tr><td colspan="2">Sambalpur City</td></tr>
<tr><td>Sewerage Treatment Plant (STP) – 1 No (40 mld)</td><td>91% Completed.</td></tr>
</table>
</td></tr>
<tr><td>6.1</td><td>Progress report may be comprised of details along with completion timeline on</td><td>Dec. 2021</td><td>Polluting sources i.e. drains contributing to river pollution have been identified and detail information is being compiled.</td></tr>
</table>

	i. Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in situ treatment. ii. Status of STP (I&D) and Sewerage network.: Details of existing infrastructure, gap analysis, proposed along with completion timeline.	Dec.2021	At present proven technology is not available for in situ treatment of waste water in drain.

Sewage Project Under ULBs	Progress as on April 2020.
Bhubaneswar Sewerage District-I	
Sewer network	11.9/25.52 km (47% completed)
Sewerage Treatment Plant (STP) – 1 No (56 mld)	46% Completed.
Sewage Pumping Station	3/5 (21%) civil work completed.
Bhubaneswar Sewerage District-II	
Sewer network	9.62/27.18 km (35% completed)
Sewerage Treatment Plant (STP) – 1 No (28 mld)	23% Completed.
Sewage Pumping Station	11/14 Nos (26% completed.
Bhubaneswar Sewerage District-III	
Sewer network	18.40/97.11 km (19% completed)
Sewerage Treatment Plant (STP) – 1 No (43.5 mld)	58% Completed.
Sewage Pumping Station	5/9 Nos (39% completed.
Bhubaneswar Sewerage District-IV	
Sewer network	10.50/14.23 km (71% completed)
Sewerage Treatment Plant (STP) – 1 No (8.5 mld)	29% Completed.
Sewage Pumping Station	¾ Nos (37% completed.
Bhubaneswar SD-VI	162.57/254 kms (64.04%) completed.
Sewer network for Cuttack Sewerage District-I, II& III	299.18/ 382 km (78.30% completed)
Sewer network of 3 STP in Bhubaneswar &	76.40% compeled.

		Dec.2021	Cuttack	
			Rourkela City	
			Sewer network	150.99 km (80% completed)
			Sewerage Treatment Plant (STP) – 1 No (40 MLD)	92% Completed.
			Sewage Pumping Station	4/6 Nos (65% completed.
			Sambalpur City	
			Sewer network	88.17 km (35% completed)
			Sewerage Treatment Plant (STP) – 1 No (40 mld)	91% Completed.
			Sewage Pumping Station	5/8 Nos (37% completed.

Status on implementation of Action Plans for Restoration of identified Polluted River Stretches for ensuring compliance to Hon'ble NGT orders dated 20.09.2018, 19.12.2018 and 08.04.2019.

B. Industrial Effluent Management (under 17 Cat. of Industries in Head Office, Consent Administration)	
Identification of non-complying as well as illegal units	Nil
Closure Direction for non-complying and illegal units	Nil
Upgradation of existing captive ETPs or construction of new ETPs by individual industries.	**5 Nos.** 1) Rourkela Steel Plant, Rourkela has installed new ETP of capacity 1100m3 for recirculation of Lagoon effluent in Hot Strip mill. 2) NeelachalIspat Nigam Ltd, Jajpur – has modified it's BOD plant. 3) Emami Paper Mills Ltd., Balasore has upgraded ETP. 4) Grasim Industries Ltd., Ganjam has upgraded ETP. 5) Vedanta Ltd., (Smelter and CPP) Jharsuguda installed new ETP of 50m^3/hr in the smelter plant.
Up-gradation of existing CETPs with state of Art technologies	No CETP in the State of Odisha
Commissioning of new CETPs with State of Art technologies	NA
Interception and diversion of industrial effluent from drains carrying industrial effluents.	Nil
Installation of OCEMS by industries and connectivity of all OCEMS with SPCB/ PCC and CPCB server.	Out of 22 nos. of industries 21 nos. of industries have installed CEQMS and connected to server of SPCB and CPCB. Only M/s. NSPCL, NTPC SAIL Power Corporation Ltd., Rourkela has not installed CEQMS as it has adopted recirculation of cooling tower blow down water of power plant in ash slurry making.
Utilization of treated effluent and reduction of water consumption by the industries.	**3 Nos.** 1) M/s. Jindal Stainless Ltd., Kalinganagar Jajpur - installed 50m3/hr RO plant at CPP to completely reuse the cooling blow down water. 2) M/s. Rourkela Steel Plant, Rourkela – recycledit's effluent from lagoon by treating in ETP and reused in Hot Strip Mill (1100m3/hr) out of 1975m3/hr. 3) M/s. NeelachalIspat Nigam Ltd., Jajpur – utilized 150m3/hr blow down effluent in pig casting and slag granulation.
Adoption of zero liquid discharge by the industries as per Direction of CPCB.	Out of 22 nos. of industries 12 nos. of industries have already adopted ZLD. 3 nos. of industries have been directed to adopt ZLD. Other 7 nos. of industries discharging to river and sea after meeting prescribed standard. Detailed list enclosed as per Annexure-a.
Notification of PETP standards.	--
Awareness of training for the concerned authorities of O &M of ETPs/ CETPs	--

NB :**Total 22 nos. of industries identified existing in the polluted river stretches of Odisha (list enclosed).**

Annexure -a

Sl. No.	Name of the industry	Treatment facility provided	Recipient water bodies	Connectivity of CEQMS to SPCB/ CPCB server	Remarks
1)	M/s. Bhusan Power & Steel Ltd., At- Thelkoloi, Po - Lapanga, Rengali, Dist - Sambalpur-768212	ETP	Bheden River	4 nos. of CEQMS	The unit has been directed to adopt ZLD by 31.03.2020
2)	M/s. NeelachalIspat Nigam Ltd., Kalinga Nagar Industrial Complex, Po - Duburi, Dist - Jajpur-755026	ETP for BOD plant	Ganda Nallah / lead to Brahmani	2 nos. of CEQMS	The unit has been directed to adopt ZLD by 31.12.2019
3)	M/s Tata Steel Limited, Kalinga Nagar Industrial Complex, Duburi - 755 026, Dist. - Jajpur	ETP	Ganda Nallah/ lead to Brahmani	3 nos. of CEQMS	The unit has adopted ZLD.
4)	M/s. Jindal Steel and Power Ltd., Chhendipada Road, (SH-63), At/Po - Jindal Nagar, Dist - Angul - 759111	ETP	Kurudibahali nallah	3 nos. of CEQMS	The unit has adopted ZLD.
5)	Jindal Stainless Limited (JSL), Kalinganagar Industrial Complex, Village Jakhpura	ETP	Ganda Nallah/ lead to Brahmani	1 no. of CEQMS	The unit has adopted ZLD.
6)	M/s.Rourkela Steel Plant, At- Rourkela Steel Plant, Dist - Sundargarh	ETP	Guradhi Nallah / Brahmani river	7 nos. of CEQMS	The unit recycled it's effluent from lagoon by treating in ETP and reused in Hot Strip Mill (1100m3/hr) out of 1975m3/hr and directed to adopt ZLD by Dec, 2020
7)	M/s. Tata Steel BSL Ltd., At: Narendrapur PO: Kusupanga Via: Meramandali Dist.: Dhenkanal Pin.759121, Odisha	ETP	Effluent discharged to Kisinda nallah	6 nos. of CEQMS	The unit has adopted ZLD.
8)	M/s. NTPC -SAIL Power Company Pvt. Ltd., (CPP-II), Administrative Building, RSP Complex, Rourkela, Dist - Sundargarh	ETP	Guradhi Nallah / Brahmani River	--	The unit has adopted ZLD.

Sl. No.	Name of the industry	Treatment facility provided	Recipient water bodies	Connectivity of CEQMS to SPCB/ CPCB server	Remarks
9)	M/s. OCL India Ltd. (Dalmia Cement Bharat Limited), At. Rajgangpur, Dist. Sundergarh, Odisha	ETP	LiploiNalla / Sankha River / River Brahmani	1 no.	Adopted ZLD
10)	Suidihi Distillery Ltd., LathikathaSundargarh	ETP	River Brahmani	1 no. (Web Cam)	Adopted ZLD
11)	M/s. Talcher Super Thermal Power Station, NTPC, At- Kaniha, Po - Deepsikha, Dist - Angul	ETP	River Brahmani	1 no.	Adopted ZLD
12)	M/s. J.K. Paper Ltd., Jaykaypur, Dist - Rayagada	ETP	River Nagavali	1 no.	The unit has been permitted to discharge 34000KLD of treated Industrial effluent to River Nagavali
13)	M/s Grasim Industries Ltd, (formerly known as Jayshree Chemicals Ltd), At/PO-Jayshree-761 025, Dist-Ganjam	ETP	River Rushikulya	1 no.	Adopted ZLD
14)	M/s. NALCO Ltd., (Smelter Unit) Nalco Nagar, Dist - Angul - 759145	ETP	KisindaJhor	1 No.	The unit has been permitted to discharge 2640KLD of treated Industrial effluent to Kisindajhor only during rainy session
15)	M/s Talcher Thermal Power Stations (TTPS), AT/PO- Talcher Thermal,Dist:Angul-759101.	ETP	Nandira River	1 No.	Adopted ZLD
16)	M/s. Vedanta Ltd., (Smelter & CPP) At/Po - Bhurkhamunda, Dist - Jharsuguda - 768202	ETP	River Bheden	3 Nos.	The unit has been permitted to discharge 50m3/hr of treated Industrial effluent to Bheden River only during rainy season

Sl. No.	Name of the industry	Treatment facility provided	Recipient water bodies	Connectivity of CEQMS to SPCB/ CPCB server	Remarks
17)	M/s. Vedanta Ltd., (IPP, Smelter and CPP), At - Bhurkamunda, Po- Sirpura, Dist - Jharsuguda-768202	ETP	River Bheden	1 No.	Adopted ZLD
18)	M/s. COSBOARD Industries Ltd., Jagatpur Industrial Estate, Phase-II, Jagatpur, Dist - Cuttack - 754021	ETP	River Mahanadi	1 no. of CEQMS	The unit has been permitted to discharge 1000 KLD of treated Industrial effluent to River Mahanadi.
19)	M/s. Paradeep Phosphate Ltd, PO- PPL, Township, Paradeep, Dist – Jagatsinghpur-754145	ETP	To Atharbanki Creek	3 nos. of CEQMS	The unit has been permitted to discharge 887 KLD of treated Industrial effluent to Atharbanki Creek only during monsoon.
20)	M/s. Indian Farmers and Fertilizer Co. Operative Ltd., (IFFCO), At- Musadhia, Po - Paradeep, Dist - Jagatsinghpur	ETP	River Mahanadi	1 no. of CEQMS	The unit has been permitted to discharge 7200KLD of treated Industrial effluent to Mahanadi River
21)	M/s. Paradeep Refinery Project, IOCL, At- Paradeep, Po- Jhimani, Via – Kujang, Dist – Jagatsinghpur – 754141	ETP	Deep Sea (bay of Bengal near Paradeep)	1 no.	The unit has been permitted to discharge 8400 KLD of treated Industrial effluent to Deep Sea at distance of 3 km from LTL
22)	M/s. Essar Power (Orissa) Limited, At-Udayabata, PO-Paradeep, Dist- Jagatsinghpur, Odisha	ETP	River Mahanadi	1 no.	Adopted ZLD

Annexure-5

Management of Municipal Solid Waste in Urban Local Bodies situated along the Polluted River Stretches

Polluted River Stretches identified by CPCB		Name of Urban Local Body	MSW generation (TPD)	Disposal Practice	Waste Management Process
1	Gangua River (Along Bhubaneswar)	Bhubaneswar Municipal Corporation	520.34	Open Dumping	Biomanure (MCC)
2	Daya (Bhubaneswar to Bargarh)				
3	Kuakhai (Along Bhubaneswar)				
4	Guradih nallah (Rourkela)	Rourkela Municipal Corporation	120.0	Open Dumping	Partial Processing (MCC)
5	Brahmani (Rourkela to Biritol)				
6	Kathajodi (Cuttack to Urali)	Cuttack Municipal Corporation	366.0	Open Dumping	Biomanure (MCC)
7	Serua (Khandaeta to Sankhatrasa)				
8	Nandira Jhor (D/s of Talcher)	Talcher Municipality	18.0	Open Dumping	Partial Processing (MCC)
9	Banguru nallah (along Talcher, Rengali)				
10	Bheden (along Bheden)	Jharsuguda Municipality	29.0	Open Dumping	No Processing
11	Budhabalanga (Mahulia to Baripada)	Baripada Municipality	50.0	Open Dumping	No Processing
12	Kusumi (along Tangi)	No large ULB	-	-	-
13	Mahanadi (Sambalpur to Paradeep)	Sambalpur Municipal Corporation	100.0	Open Dumping	Partial Processing (MCC)
		Sonepur Municipality	3.5	Open Dumping	No Processing
		Paradeep Municipality	57.45	Open Dumping	Biomanure (MCC)
14	Mangala (Along Puri)	Puri Municipality	120.0	Open Dumping	Partial Processing (Vermicompost)
15	Nagavali (Jaykaypur to Rayagada)	Rayagada Municipality	27.0	Open Dumping	No Processing
16	Luna (along Bijipur)	No large ULB	-	-	-
17	Ratnachira	No large ULB	-	-	-

18	Rushikulya (Pratappur to Ganjam)	Berhampur Municipal Corporation	143.0	Open Dumping	Partial Composting (MCC)
		Aska NAC	9.0	Open Dumping	Biomanure (MCC)
		Chhatrapur Municipality	8.6	Open Dumping	Biomanure (MCC)
19	Sabulia (Jagannathpatna, Rambha)	No large ULB	-	-	-

6.1 (v) Latest Water quality of polluted river, its tributaries, drains and ground water quality in the catchment of Polluted river stretches during March, 2020

Rivers

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Gangua	1	D/s Bhubaneswar **(Priority-I)**	Near Rajdhani Engg. College	4.2	92000	110	Not conforming
			Palasuni	6.5	160000	130	
			Samantarapur	9.2	160000	240	
			Vadimula	4.5	14000	49	
Daya	2	Bhubaneswar to Bargarh **(Priority-IV)**	Bhubaneswar D/s at Kanti	3.4	22000	33	Not conforming
			Bhubaneswar FD/s at Manitri	2.6	17000	79	
			Kanas	2.3	790	13	
Kuakhai	3	Urali to Bhubaneswar **(Priority-IV)**	Bhubaneswar FU/s (at Mancheswar)	0.7	330	11	Conforming
			Bhubaneswar U/s (at Hansapal)	0.7	1700	27	
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Ground Water quality ofBhubaneswarcity along Kuakhai River, Daya River and Gangua nallah

Station Name	Month	pH	BOD, mg/L	Nitrate-mg/L	TC, MPN/ 100 mL	FC, MPN/ 100 mL
Khandagiri Area	April, 2019	6.2	0.3	0.500	1.8	1.8
	October, 2019	6.7	0.9	1.583	1.8	1.8
Old town-Samantarapur Area	April, 2019	6.7	0.4	0.571	23	1.8
	October, 2019	7.8	1	4.006	23	23
Kalpana-Laxmisagar Area,	April, 2019	6.3	0.3	0.492	23	2
	October, 2019	5.9	0.2	50.414	1.8	1.8
Chandrasekharpur	April, 2019	7.1	0.3	0.549	1.8	1.8
	October, 2019	No sample collected				
Capital Hospital Area,	April, 2019	6.0	0.6	0.589	1.8	1.8
	October, 2019	No sample collected				
Secretariate-Govenor House-Old bus stand Area,	April, 2019	6.4	0.2	0.957	540	130
	October, 2019	7.4	0.7	22.513	130	33
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

Details of wastewater drain characteristics in Bhubaneswar falling on Gangua nalla

Drain No.	Drain Name	Length in Km	Drainage area in sq. Km.	Average Discharge (MLD)	Average BOD (mg/l)
1	Patia	4.32	16.93	17.00	160
2	Sainik School	1.13	1.44	1.55	127
3	OAP area	2.42	3.31	3.55	120
4	VaniVihar	5.63	13.67	16.40	100
5	Laxmisagar area	3.13	3.66	4.45	120
6	Baragada Area	2.16	2.89	3.45	140
7	Kedargouri	4.34	9.46	5.45	140
8	Airport area	4.33	12.99	14.30	24
9	Ghatikia	4.24	12.55	28.8	60
10	Nicco Park	5.48	10.28	12.3	100
	Total	37.18	103.23		

Rivers

March, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Kathajodi	4	Cuttack to Urali **(Priority-III)**	Cuttack D/s	1.1	3300	17	Not-Conforming
			Mattagajpur	2.8	2200	22	
Serua	5	Khandaeta to Sankhatrasa **(Priority-V)**	Sankhatrasa	2.3	780	11	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Ground Water quality of Cuttack city along Mahanadi river, Kathajodi River and Serua river

Stn Name	Month	pH	BOD, mg/L	Nitrate-mg/L	TC, MPN/ 100 mL	FC, MPN/ 100 mL
Jagatpur	April, 2019	7.5	0.1	9.694	2	1.8
	October, 2019	6.1	0.2	32.281	1.8	1.8
Mangalabag	April, 2019	8.2	0.4	3.149	1.8	1.8
	October, 2019	6.5	0.1	42.010	1.8	1.8
Madhupatna-Kalyan Nagar Area	April, 2019	7.9	0.4	0.926	1.8	1.8
	October, 2019	6.5	0.2	0.809	1.8	1.8
Badambadi Area	April, 2019	8.4	0.9	3.795	1.8	1.8
	October, 2019	6.7	0.4	6.470	1.8	1.8
Bidanasi-Tulsipur Area,	April, 2019	8.0	0.2	1.085	1.8	1.8
	October, 2019	6.5	0.2	7.351	5	5
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

Characteristic of Drains falling on Kathajodi river (March, 2020)

Sl. No.	Station Name	Parameters					
		pH	BOD, mg/l	COD, mg/l	TSS, mg/l	TC	FC
						MPN/100ml	
1	**Outlet of STP, Cuttack at CDA-Bidanasi area (36 MLD)**	6.8	4.6	22.4	2.0	3300	1300
2	Wastewater discharge to Kathajodi river through sluice gate at Khannagar	6.7	76.0	214.9	54.0	160000	160000

3	Outlet of STP at Mattagajpur discharge to Kathajodi river	Not monitored

Rivers

March , 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Guradih nallah	6	Along Rourkela **(Priority-III)**	Rourkela (before confluence with Brahmani river)	5.2	35000	17	• Not Conforming
Brahmani	7	Rourkela to Biritola **(Priority-V)**	Panposh D/s at Deogaon	4.1	7900	17	• Not Conforming
			Rourkela D/s at Jalda	3.8	3300	13	
			Rourkela FD/s at Attaghat	2.6	170	13	
			Rourkela FD/s at Biritola	2.8	790	4.5	
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

No Ground water quality monitoring in Rourkela city by State Pollution Control Board, Odisha

Rivers

March, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Nandira jhor	8	D/s Talcher **(Priority-III)**	Nandira D/s at Dasnali	1.7	1300	n.a.	Conforming
Banguru nallah	9	Along Talcher Rengali **(Priority-V)**	Along Talcher	1.1	1300	13	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

n.a. – Not analysed

Ground Water quality of Talcher city along in the catchment of Nandira jhor and Banguru nallah

Stn Name	Month	pH	BOD, mg/l	Nitrate-mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml
Talcher Town	April, 2019	7.6	0.4	11.285	1.8	1.8
	October, 2019	7.7	0.5	1.332	1.8	1.8
Meramundali area	April, 2019	7.2	1.0	1.605	1.8	1.8
	October, 2019	8	0.2	3.934	1.8	1.8
Talcher Thermal area	April, 2019	7.3	0.6	0.876	1.8	1.8
	October, 2019	7.9	0.5	1.520	920	130
Banarpal	April, 2019	7.5	0.4	2.201	1.8	1.8
	October, 2019	7.6	0.3	1.611	13	1.8
Kulad	April, 2019	7.7	0.8	23.130	4.5	1.8
	October, 2019	8.3	0.4	2.353	1.8	1.8
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

Rivers

March, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Mahanadi	10	Sambalpur to Paradeep **(Priority-V)**	Sambalpur D/s	1.7	170	<1.8	Conforming
			Sambalpur FD/s at Shankarmath	1.1	680	11	
			Sambalpur FFD/s at Huma	0.9	200	<1.8	
			Sonepur U/s	0.5	1.8	11	
			Sonepur D/s	0.6	78	11	
			Tikarpada	0.4	78	21	
			Narasinghpur	0.4	78	13	
			Munduli	0.3	68	12	
			Cuttack U/s	0.5	1100	33	
			Cuttack D/s	0.9	1300	46	
			Cuttack FD/s	0.8	1700	49	
			Paradeep U/s	1.3	490	14	
			Paradeep D/s	2.4	1.8	2	
Bheden	11	Along Bheden **(Priority-V)**	Bheden	1.1	130	n.a.	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

n.a. – Not analysed

Water quality of Tributaries of Mahanadi River

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Ib River			Sundargarh	0.6	1100	n.a.	Conforming
			Jharsuguda	0.8	1100	n.a.	
			Brajarajnagar U/s	0.8	1700	n.a.	
			Brajarajnagar D/s	0.9	2200	n.a.	
Ong River			Dharuakhaman	0.7	240	n.a.	Conforming
Tel River			Monmunda	0.5	220	n.a.	Conforming

Ground Water quality

Stn Name	Month	pH	BOD, mg/l	Nitrate-mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml
Sambalpur town Along Mahanadi River						
Near Panthanivas	April, 2019	8.1	0.8	18.875	1.8	1.8
	October, 2019	6.6	0.5	6.743	220	7
Near Railway station	April, 2019	7.6	0.6	28.175	1.8	1.8
	October, 2019	7	0.1	30.457	1.8	1.8
Near VSS Medical College, Burla	April, 2019	8.1	0.9	1.072	1.8	1.8
	October, 2019	7.5	0.1	1.350	20	1.8
Paradeep town Along Mahanadi River						
Badapadia market complex	April, 2019	8.2	0.8	42.718	1.8	1.8
	October, 2019	7.3	1.1	47.965	1.8	1.8
Musadiha	April, 2019	8.4	0.3	6.857	23	1.8
	October, 2019	7.6	1.5	8.415	1.8	1.8
Jharsuguda town in the catchment of Bheden river and Ib river						
Burkhamunda	April, 2019	7.1	0.2	1.909	1.8	1.8
	October, 2019	7.4	0.2	21.184	49	17
Badamal Industrial Estate	April, 2019	6.8	0.9	2.840	1.8	1.8
	October, 2019	7.2	0.4	13.128	1.8	1.8
Budhipadar	April, 2019	6.4	0.6	3.356	1.8	1.8
	October, 2019	6.6	0.4	2.213	1.8	1.8
Brajarajnagar Mining belt	April, 2019	5.8	0.9	1.873	1.8	1.8
	October, 2019	7.3	0.3	30.457	1.8	1.8
Rampur area (Water tank)	April, 2019	6.8	0.5	0.827	23	1.8
	October, 2019	6.6	0.1	1.627	13	1.8
Ib thermal power station	April, 2019	6.9	0.4	0.766	1.8	1.8
	October, 2019	6.6	0.4	2.143	1.8	1.8
Belpahar area	April, 2019	6.8	0.3	0.705	1.8	1.8
	October, 2019	6.9	0.2	2.659	1.8	1.8
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

Rivers

March, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Mangala	12	Along Puri **(Priority-V)**	Mangala D/s at Golasahi	3.9	4900	17	Not Conforming
Nuna	13	Along Bijipur, Puri **(Priority-V)**	Bijipur	0.8	490	22	Conforming
Ratnachira	14	Along Sakhigopal, Puri **(Priority-V)**	Kumardihi	1.3	1100	49	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Ground Water quality of Puri town along Mangala river

Stn Name	Month	pH	BOD, mg/l	Nitrate-mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml
Hospital-Bus stand-Mausima temple area	April, 2019	8.1	0.2	1.182	1.8	1.8
	October, 2019	7.9	0.2	28.937	240	13
Near Jagannath Temple,	April, 2019	7.8	0.3	3.742	1.8	1.8
	October, 2019	8.1	0.4	1.167	1.8	1.8
Near Sea Beach	April, 2019	8.2	0.3	0.602	23	1.8
	October, 2019	8.2	0.5	1.210	79	8
Baliapanda	April, 2019	7.9	0.6	0.492	1.8	1.8
	October, 2019	8.1	0.1	1.374	11	1.8
Drinking water Specification (IS : 10500:2012)Desirable limit		6.5-8.5	-	45	Absent	Absent

Characteristic of Drain falling on Mangala river (March, 2020)

Sl. No.	Station Name	Parameters					
		pH	BOD, mg/l	COD, mg/l	TSS, mg/l	TC	FC
						MPN/100ml	
1	**Outlet of STP, Puri at Mangalaghat 15 MLD)**	7.8	19.0	68.8	19.0	160000	92000

Rivers

March , 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Nagavali	15	Jaykaypur to Rayagada **(Priority-V)**	Jayakaypur D/s	1.1	790	12	Conforming
			Rayagada D/s	0.9	1100	<1.8	
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

No Ground water quality monitoring in Rayagada town by State Pollution Control Board, Odisha

Rivers

March, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Budhabalanga	16	Mahulia to Baripada **(Priority-V)**	Baripada D/s	1.4	1400	n.a.	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

No Ground water quality monitoring in Baripada town by State Pollution Control Board, Odisha

Rivers

March, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Kusumi	17	Along Angul Talcher **(Priority-V)** (To be corrected as along Tangi)	Along Tangi	0.5	780	33	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

No Ground water quality monitoring in Tangi town by State Pollution Control Board, Odisha

Rivers

March, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Rushikulya	18	Pratappur to Ganjam **(Priority-V)**	Madhopur	1.1	2400	<1.8	Conforming
			Potagarh	0.8	2100	4	
Sabulia	19	Along Jagannathpatna, Rambha **(Priority-V)**	Jagannathpatna, Rambha	1.4	680	22	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Ground Water quality of Berhampur town in the catchment of Rushikulya river

Stn Name	Month	pH	BOD, mg/l	Nitrate-mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml
Near MKCG Medical College	April, 2019	7.8	0.2	0.620	1600	540
	October, 2019	8.2	0.2	2.195	23	1.8
Bus stand	April, 2019	7.4	0.3	0.924	1.8	1.8
	October, 2019	8	0.5	3.166	79	13
Badabazar	April, 2019	6.8	0.6	43.378	1.8	1.8
	October, 2019	7.6	0.6	20.239	1.8	1.8
Railway station	April, 2019	7.6	0.3	25.683	23	1.8
	October, 2019	7.8	0.2	23.650	13	1.8
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

6.1 (v) Latest Water quality of polluted river, its tributaries, drains and ground water quality in the catchment of Polluted river stretches during April, 2020

Rivers

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Gangua	1	D/s Bhubaneswar **(Priority-I)**	Near Rajdhani Engg. College	3.3	54000	110	Not conforming
			Palasuni	3.8	35000	130	
			Samantarapur	6.4	160000	170	
			Vadimula	3.4	4900	33	
Daya	2	Bhubaneswar to Bargarh **(Priority-IV)**	Bhubaneswar D/s at Kanti	2.2	17000	22	Not conforming
			Bhubaneswar FD/s at Manitri	1.7	4900	13	
			Kanas	0.6	490	4	
Kuakhai	3	Urali to Bhubaneswar **(Priority-IV)**	Bhubaneswar FU/s (at Mancheswar)	0.2	220	4	Conforming
			Bhubaneswar U/s (at Hansapal)	0.2	1300	11	
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Ground Water quality of Bhubaneswar city along Kuakhai River, Daya River and Gangua nallah

Station Name	Month	pH	BOD, mg/L	Nitrate-mg/L	TC, MPN/ 100 mL	FC, MPN/ 100 mL
Khandagiri Area	April, 2019	6.2	0.3	0.500	1.8	1.8
	October, 2019	6.7	0.9	1.583	1.8	1.8
Old town-Samantarapur Area	April, 2019	6.7	0.4	0.571	23	1.8
	October, 2019	7.8	1	4.006	23	23
Kalpana-Laxmisagar Area,	April, 2019	6.3	0.3	0.492	23	2
	October, 2019	5.9	0.2	50.414	1.8	1.8
Chandrasekharpur	April, 2019	7.1	0.3	0.549	1.8	1.8
	October, 2019	No sample collected				
Capital Hospital Area,	April, 2019	6.0	0.6	0.589	1.8	1.8
	October, 2019	No sample collected				
Secretariate-Govenor House-Old bus stand Area,	April, 2019	6.4	0.2	0.957	540	130
	October, 2019	7.4	0.7	22.513	130	33
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

Details of wastewater drain characteristics in Bhubaneswar falling on Gangua nalla

Drain No.	Drain Name	Length in Km	Drainage area in sq. Km.	Average Discharge (MLD)	Average BOD (mg/l)
1	Patia	4.32	16.93	17.00	160
2	Sainik School	1.13	1.44	1.55	127
3	OAP area	2.42	3.31	3.55	120
4	VaniVihar	5.63	13.67	16.40	100
5	Laxmisagar area	3.13	3.66	4.45	120
6	Baragada Area	2.16	2.89	3.45	140
7	Kedargouri	4.34	9.46	5.45	140
8	Airport area	4.33	12.99	14.30	24
9	Ghatikia	4.24	12.55	28.8	60
10	Nicco Park	5.48	10.28	12.3	100
	Total	37.18	103.23		

Rivers

April, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Kathajodi	4	Cuttack to Urali **(Priority-III)**	Cuttack D/s	0.4	2400	13	Conforming
			Mattagajpur	0.6	1300	13	
Serua	5	Khandaeta to Sankhatrasa **(Priority-V)**	Sankhatrasa	0.7	130	7.8	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Ground Water quality of Cuttack city along Mahanadi river, Kathajodi River and Serua river

Stn Name	Month	pH	BOD, mg/L	Nitrate-mg/L	TC, MPN/ 100 mL	FC, MPN/ 100 mL
Jagatpur	April, 2019	7.5	0.1	9.694	2	1.8
	October, 2019	6.1	0.2	32.281	1.8	1.8
Mangalabag	April, 2019	8.2	0.4	3.149	1.8	1.8
	October, 2019	6.5	0.1	42.010	1.8	1.8
Madhupatna-Kalyan Nagar Area	April, 2019	7.9	0.4	0.926	1.8	1.8
	October, 2019	6.5	0.2	0.809	1.8	1.8
Badambadi Area	April, 2019	8.4	0.9	3.795	1.8	1.8
	October, 2019	6.7	0.4	6.470	1.8	1.8
Bidanasi-Tulsipur Area,	April, 2019	8.0	0.2	1.085	1.8	1.8
	October, 2019	6.5	0.2	7.351	5	5
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

Characteristic of Drains falling on Kathajodi river (April, 2020)

Sl. No.	Station Name	Parameters					
		pH	BOD, mg/l	COD, mg/l	TSS, mg/l	TC	FC
						MPN/100ml	
1	**Outlet of STP, Cuttack at CDA-Bidanasi area (36 MLD)**	7.3	4.0	10.4	8.0	110	20
2	Wastewater discharge to Kathajodi river through sluice gate at Khannagar	7.0	75.0	104.5	55.0	160000	160000
3	Outlet of STP at Mattagajpur discharge to Kathajodi river	Not monitored					

Rivers

April, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Guradih nallah	6	Along Rourkela **(Priority-III)**	Rourkela (before confluence with Brahmani river)	2.9	4900	<1.8	• Not Conforming
Brahmani	7	Rourkela to Biritola **(Priority-V)**	Panposh D/s at Deogaon	2.8	2200	17	• Conforming
			Rourkela D/s at Jalda	2.1	1700	7.8	
			Rourkela FD/s at Attaghat	1.5	78	4	
			Rourkela FD/s at Biritola	0.6	78	4	
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

No Ground water quality monitoring in Rourkela city by State Pollution Control Board, Odisha

Rivers

April, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Nandira jhor	8	D/s Talcher **(Priority-III)**	Nandira D/s at Dasnali	0.9	1300	<1.8	Conforming
Banguru nallah	9	Along Talcher Rengali **(Priority-V)**	Along Talcher	0.8	170	<1.8	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Ground Water quality of Talcher city along in the catchment of Nandira jhor and Banguru nallah

Stn Name	Month	pH	BOD, mg/l	Nitrate-mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml
Talcher Town	April, 2019	7.6	0.4	11.285	1.8	1.8
	October, 2019	7.7	0.5	1.332	1.8	1.8
Meramundali area	April, 2019	7.2	1.0	1.605	1.8	1.8
	October, 2019	8	0.2	3.934	1.8	1.8
Talcher Thermal area	April, 2019	7.3	0.6	0.876	1.8	1.8
	October, 2019	7.9	0.5	1.520	920	130
Banarpal	April, 2019	7.5	0.4	2.201	1.8	1.8
	October, 2019	7.6	0.3	1.611	13	1.8
Kulad	April, 2019	7.7	0.8	23.130	4.5	1.8
	October, 2019	8.3	0.4	2.353	1.8	1.8
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

Rivers

April, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Mahanadi	10	Sambalpur to Paradeep **(Priority-V)**	Sambalpur D/s	1.4	130	<1.8	Conforming
			Sambalpur FD/s at Shankarmath	0.8	170	2	
			Sambalpur FFD/s at Huma	0.5	130	<1.8	
			Sonepur U/s	0.4	1.8	2	
			Sonepur D/s	0.6	20	4.5	
			Tikarpada	0.2	20	<1.8	
			Narasinghpur	0.2	45	11	
			Munduli	0.2	20	<1.8	
			Cuttack U/s	0.2	130	<1.8	
			Cuttack D/s	0.5	220	2	
			Cuttack FD/s	0.3	170	4.5	
			Paradeep U/s	0.2	<1.8	2	
			Paradeep D/s	0.5	<1.8	<1.8	
Bheden	11	Along Bheden **(Priority-V)**	Bheden	0.4	7.8	2	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Water quality of Tributaries of Mahanadi River

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Ib River			Sundargarh	0.2	170	n.a.	Conforming
			Jharsuguda	0.4	68	n.a.	
			Brajarajnagar U/s	0.4	330	n.a.	
			Brajarajnagar D/s	0.5	490	n.a.	
Ong River			Dharuakhaman	0.3	45	n.a.	Conforming
Tel River			Monmunda	0.2	20	n.a.	Conforming

Ground Water quality

Stn Name	Month	pH	BOD, mg/l	Nitrate-mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml
Sambalpur town Along Mahanadi River						
Near Panthanivas	April, 2019	8.1	0.8	18.875	1.8	1.8
	October, 2019	6.6	0.5	6.743	220	7
Near Railway station	April, 2019	7.6	0.6	28.175	1.8	1.8
	October, 2019	7	0.1	30.457	1.8	1.8
Near VSS Medical College, Burla	April, 2019	8.1	0.9	1.072	1.8	1.8
	October, 2019	7.5	0.1	1.350	20	1.8
Paradeep town Along Mahanadi River						
Badapadia market complex	April, 2019	8.2	0.8	42.718	1.8	1.8
	October, 2019	7.3	1.1	47.965	1.8	1.8
Musadiha	April, 2019	8.4	0.3	6.857	23	1.8
	October, 2019	7.6	1.5	8.415	1.8	1.8
Jharsuguda town in the catchment of Bheden river and Ib river						
Burkhamunda	April, 2019	7.1	0.2	1.909	1.8	1.8
	October, 2019	7.4	0.2	21.184	49	17
Badamal Industrial Estate	April, 2019	6.8	0.9	2.840	1.8	1.8
	October, 2019	7.2	0.4	13.128	1.8	1.8
Budhipadar	April, 2019	6.4	0.6	3.356	1.8	1.8
	October, 2019	6.6	0.4	2.213	1.8	1.8
Brajarajnagar Mining belt	April, 2019	5.8	0.9	1.873	1.8	1.8
	October, 2019	7.3	0.3	30.457	1.8	1.8
Rampur area (Water tank)	April, 2019	6.8	0.5	0.827	23	1.8
	October, 2019	6.6	0.1	1.627	13	1.8
Ib thermal power station	April, 2019	6.9	0.4	0.766	1.8	1.8
	October, 2019	6.6	0.4	2.143	1.8	1.8
Belpahar area	April, 2019	6.8	0.3	0.705	1.8	1.8
	October, 2019	6.9	0.2	2.659	1.8	1.8
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

Rivers

April, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Mangala	12	Along Puri **(Priority-V)**	Mangala D/s at Golasahi	1.6	490	11	Conforming
Nuna	13	Along Bijipur, Puri **(Priority-V)**	Bijipur	0.2	110	7.8	Conforming
Ratnachira	14	Along Sakhigopal, Puri **(Priority-V)**	Kumardihi	0.5	790	13	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Ground Water quality of Puri town along Mangala river

Stn Name	Month	pH	BOD, mg/l	Nitrate-mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml
Hospital-Bus stand-Mausima temple area	April, 2019	8.1	0.2	1.182	1.8	1.8
	October, 2019	7.9	0.2	28.937	240	13
Near Jagannath Temple,	April, 2019	7.8	0.3	3.742	1.8	1.8
	October, 2019	8.1	0.4	1.167	1.8	1.8
Near Sea Beach	April, 2019	8.2	0.3	0.602	23	1.8
	October, 2019	8.2	0.5	1.210	79	8
Baliapanda	April, 2019	7.9	0.6	0.492	1.8	1.8
	October, 2019	8.1	0.1	1.374	11	1.8
Drinking water Specification (IS : 10500:2012)Desirable limit		6.5-8.5	-	45	Absent	Absent

Characteristic of Drain falling on Mangala river (April, 2020)

Sl. No.	Station Name	Parameters					
		pH	BOD, mg/l	COD, mg/l	TSS, mg/l	TC	FC
						MPN/100ml	
1	**Outlet of STP, Puri at Mangalaghat 15 MLD)**	6.8	12.8	37.3	21.0	3500	1300

Rivers

April, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Nagavali	15	Jaykaypur to Rayagada **(Priority-V)**	Jayakaypur D/s	0.9	330	4.5	Conforming
			Rayagada D/s	0.5	130	<1.8	
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

No Ground water quality monitoring in Rayagada town by State Pollution Control Board, Odisha

Rivers

April , 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Budhabalanga	16	Mahulia to Baripada **(Priority-V)**	Baripada D/s	1.1	1400	33	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

No Ground water quality monitoring in Baripada town by State Pollution Control Board, Odisha

Rivers

April, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Kusumi	17	Along Angul Talcher **(Priority-V)** (To be corrected as along Tangi)	Along Tangi	0.2	400	33	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

No Ground water quality monitoring in Tangi town by State Pollution Control Board, Odisha

Rivers

April, 2020

River	Sl. No.	Polluted River stretch with Priority Category	Monitoring station	BOD (mg/L)	Fecal coliform (FC) (MPN/100 mL)	Fecal Streptococci (FS) (MPN/ 100 mL)	Remark
Rushikulya	18	Pratappur to Ganjam **(Priority-V)**	Madhopur	0.2	130	<1.8	Conforming
			Potagarh	0.1	1100	<1.8	
Sabulia	19	Along Jagannathpatna, Rambha **(Priority-V)**	Jagannathpatna, Rambha	0.3	330	<1.8	Conforming
Water quality criteria for Bathing water (GSR 742 (A) Dated 25.12.2000				3.0	500 (Desirable) 2500 (permissible)	100 (Desirable) 500 (Maximum Permissible)	-

Ground Water quality of Berhampur town in the catchment of Rushikulya river

Stn Name	Month	pH	BOD, mg/l	Nitrate-mg/l	TC, MPN/ 100 ml	FC, MPN/ 100 ml
Near MKCG Medical College	April, 2019	7.8	0.2	0.620	1600	540
	October, 2019	8.2	0.2	2.195	23	1.8
Bus stand	April, 2019	7.4	0.3	0.924	1.8	1.8
	October, 2019	8	0.5	3.166	79	13
Badabazar	April, 2019	6.8	0.6	43.378	1.8	1.8
	October, 2019	7.6	0.6	20.239	1.8	1.8
Railway station	April, 2019	7.6	0.3	25.683	23	1.8
	October, 2019	7.8	0.2	23.650	13	1.8
Drinking water Specification (IS : 10500:2012) Desirable limit		6.5-8.5	-	45	Absent	Absent

MEASURES TAKEN FOR COMPLIANCE TO HON'BLE NGT DIRECTION FOR CONTROL OF RIVER POLLUTION (NGT ORDER NO.606/2018)

5. Measures taken for

A. Control of Illegal Groundwater Abstraction - Yes

1. So far no such cases of illegal groundwater abstraction are noticed.
2. Govt. of Odisha has formulated an act for regulation of groundwater namely "The Odisha Groundwater (Regulation, Development and Management) Act, 2011"
3. Central Groundwater Directorate and District Level Evaluation Committee strictly control the groundwater abstraction by the industries.
4. Chief Engineer and Director, Groundwater Development, Bhubaneswar monitors the fluctuation of the groundwater level in all 30 districts in 10 years interval.

B. River Catchment/ Basin Management - Yes

Inflow from the catchment and outflow from the river of the basins are managed effectively by the Chief Engineer and Basin Managers for 11 Nos. of river basins of Odisha.

C. Flood Plain Zone Protection - Yes

Out of 9 Nos. of polluted river stretches, in Gangua Nalla (Priority No-I), a proposal for construction of a cross regulator at the off taking point of Gangua Nalla has been approved in 128th TAC of DOWR to divert the flood discharge of Chandaka Catchment to Kuakhia river (Approximately 30% of flood water) through Budhi Nalla in order to save the flooding of storm water in Bhubaneswar city. This is one of the flood plain zone protection in Odisha in Gangua Nalla.

D. E-Flow maintenance & Watershed Management - Yes

E-flow is maintained.

E. Groundwater recharge/ Rain water harvesting - Yes

Rain water harvesting

2018-19 Rooftop Rainwater Harvesting Structures (RRHS)

	Govt	Private	
	358 nos.	9438 nos.	(in 11 towns of 9 districts)
2019-20	Nil	Nil	
2020-21	250 Nos	4800 Nos	A provision of Rs. 40 crores has been kept for construction of RRHS.

Groundwater recharge

i) Through Wells	2019-20	nil
	2020-21	234 nos. in 46 blocks of 20 districts
ii)Through Check dams	upto 03/2019	14588 nos. in 30 districts
	2019-20	343 nos. in 30 districts
	2020-21	A provision of Rs. 67 crores has been kept for construction of check dams in 30 districts.

F. Setting up of Biodiversity Parks, Greenery/

Plantation along the banks of river stretch. - Yes

1094699 nos. of sapling and seedling have been planted during monsoon 2018 along the bank of the rivers, dam sites, barrage sites and canal sites, out of which 329962 nos. of plants are alive (30.14% - Survival Status)

G. Removal of encroachments -

No cases of encroachment have been noticed so far.

Biswaha 13/3/2020

Chief Engineer,
Basin Planning & Climate Change

Annexure-7(b)

6 (vii)-(xiii) . Measure taken By Water Resource Department and Panchayati Raj and Drinking Water Department

a. Name of the polluted River Stretch : - Gangua Nallah (Along Bhubaneswar)

Key Components of Proposed Action Plan for restoration of identified polluted river stretch in the state	Proposed Achievable Target	Proposed Time Targets for Compliance	Present Status or pendency in terms of %	Remarks
1	2	3	4	5
Adoption of good irrigation practice	Rotational water supply in Daya West Branch Canal system recharges the ground water as river or drain	In every year, during Kharif crop (1st July to 15th Nov and Rabi crop (1st week of January to 15th of May)	Rotational water supply is maintained in Kharif and Rabi crop	
Flood Plain Zone Protection and its management	Proposal for construction of a cross regulator at the off taking point Gangua Nallah to divert the entire flood discharge of Chandaka catchment to Kuakhai river through Budu nallah in high flood situation	128th TAC of DoWR has approved the construction of cross regulator		
Rainwater harvesting / Groundwater recharge aspects	Construction of Rooftop Rainwater Harvesting Struture (RRHS) in Govt. and Private building in towns of Odisha Construction of Chek Dam	2014-15 to 2018-19 2019-20	RRHS of 131 nos. in Govt. buildings and 4942 nos. in private buildings completed in Bhubaneswar 513 nos. of Check Dams completed up to Dec-2019 in Khordha district	Bhubaneswar town

1	2	3	4	5
Maintaining E-flows and watershed management	It is a storm water drain. The minimum flow in Gangua nallah in non-monsoon is maintained by inletting water from river Mahanadi through Daya West Branch Canal.	In 2019 - 60 cusecs released. In 2020 - water initially released for 30 cusecs and will be raised to 60 cusecs and will continue upto May 2020	BOD recorded as 25.5 mg/Ltr on 12.02.2020 has been reduced to 4.7 mg/Ltr on 30.3.2019	
Setting up bio-diversity parks				
Removal of encroachments to maintain natural flow in drains				
Greenery or plantation on both sides of the river	4900 seeding has been sown along the drainage canals by Khurdha Drainage Division during monsoon of 2018	During Monsoon 2018	1979 nos. of plants are alive	
Capping of contaminated Groundwater Sources, Hand Pump, Tube Wells and alternate Water Supply Arrangement for drinking purpose in GW affected areas	Fluoride removal plants and iron removal plants are installed in the hand pumps and tube wells where the ground water is affected with fluoride or iron. Spot source where nitrate is detected in the water those tube wells are immediately closed and the hand pump is removed from that place.	Ongoing process		

2. Name of the polluted River Stretch : - Daya (Bhubaneswar to Baragada)

Key Components of Proposed Action Plan for restoration of identified polluted river stretch in the state	Proposed Achievable Target	Proposed Time Targets for Compliance	Present Status or pendency in terms of %	Remarks
1	2	3	4	5
Adoption of good irrigation practice	Rotational water supply in Puri Main Canal system recharges the ground water as river or drain	In every year, during Kharif crop (1st July to 15th Nov and Rabi crop (1st week of January to 15th of May)	Rotational water supply is maintained in Kharif and Rabi crop	
Flood Plain Zone Protection and its management				
Rainwater harvesting / Groundwater recharge aspects	Construction of Rooftop Rainwater Harvesting Struture (RRHS) in Govt. and Private building in towns of Odisha Construction of Chek Dam	2014-15 to 2018-19 2019-20	RRHS of 131 nos. in Govt. buildings and 4942 nos. in private buildings completed in Bhubaneswar 513 nos. of Check Dams completed up to Dec-2019 in Khordha district	Bhubaneswar town
Maintaining E-flows and watershed management	E-flows maintained	During lean period from Nov to May	Maintained	
Setting up bio-diversity parks				

Removal of encroachments to maintain natural flow in drains				
Greenery or plantation on both sides of the river	11865 seeding has been sown along the canal colony office premises by Prachi Division during monsoon of 2018	During Monsoon 2018		By Prachi Division, Bhubaneswar
Capping of contaminated Groundwater Sources, Hand Pump, Tube Wells and alternate Water Supply Arrangement for drinking purpose in GW affected areas	Fluoride removal plants and iron removal plants are installed in the hand pumps and tube wells where the ground water is affected with fluoride or iron. Spot source where nitrate is detected in the water those tube wells are immediately closed and the hand pump is removed from that place.	Ongoing process		

3. Name of the polluted River Stretch : - Brahmani (Rourkela to Biritola)

Key Components of Proposed Action Plan for restoration of identified polluted river stretch in the state	Proposed Achievable Target	Proposed Time Targets for Compliance	Present Status or pendency in terms of %	Remarks
1	2	3	4	5
Adoption of good irrigation practice				
Flood Plain Zone Protection and its management				
Rainwater harvesting / Groundwater recharge aspects	Construction of Rooftop Rainwater Harvesting Struture (RRHS) in Govt. and Private building in towns of Odisha Construction of Chek Dam	2014-15 to 2018-19 2019-20	RRHS of 07 nos. in Govt. buildings and 76 nos. in private buildings completed. 720 nos. of Check Dams completed up to Dec-2019 in Sundergarh district	Rourkela town
Maintaining E-flows and watershed management	E-flows maintained	During lean period from Nov to May	Maintained	
Setting up bio-diversity parks				
Removal of encroachments to maintain natural flow in drains				

Greenery or plantation on both sides of the river	27373 nos. of sapling & seeding have been sown along the canal by Sundergarh Irrigation Division & 17944 nos. of sapling & seeding have been sown along the canal by Rukura canal Division during monsoon of 2018	Monsoon 2018		By Sundergarh Irrigation Division &Rukura canal Division, Rourkela
Capping of contaminated Groundwater Sources, Hand Pump, Tube Wells and alternate Water Supply Arrangement for drinking purpose in GW affected areas	Fluoride removal plants and iron removal plants are installed in the hand pumps and tube wells where the ground water is affected with fluoride or iron. Spot source where nitrate is detected in the water those tube wells are immediately closed and the hand pump is removed from that place.	Ongoing process		

4. Name of the polluted River Stretch : - Guradih Nallah (Rourkela)

Key Components of Proposed Action Plan for restoration of identified polluted river stretch in the state	Proposed Achievable Target	Proposed Time Targets for Compliance	Present Status or pendency in terms of %	Remarks
2	3	4	5	6
Adoption of good irrigation practice				
Flood Plain Zone Protection and its management				
Rainwater harvesting / Groundwater recharge aspects	Construction of Rooftop Rainwater Harvesting Struture (RRHS) in Govt. and Private building in towns of Odisha Construction of Chek Dam	2014-15 to 2018-19 2019-20	RRHS of 07 nos. in Govt. buildings and 76 nos. in private buildings completed. 720 nos. of Check Dams completed up to Dec-2019 in Sundergarh district	Rourkela town
Maintaining E-flows and watershed management	E-flows maintained	During lean period from Nov to May	Maintained	
Setting up bio-diversity parks				
Removal of encroachments to maintain natural flow in drains				

Greenery or plantation on both sides of the river	27373 nos. of sapling & seeding have been sown along the canal by Sundergarh Irrigation Division & C98	Monsoon 2018		By Sundergarh Irrigation Division &Rukura canal Division, Rourkela
Capping of contaminated Groundwater Sources, Hand Pump, Tube Wells and alternate Water Supply Arrangement for drinking purpose in GW affected areas	Fluoride removal plants and iron removal plants are installed in the hand pumps and tube wells where the ground water is affected with fluoride or iron. Spot source where nitrate is detected in the water those tube wells are immediately closed and the hand pump is removed from that place.	Ongoing process		

5. Name of the polluted River Stretch : - Mangala (Along Puri)

Key Components of Proposed Action Plan for restoration of identified polluted river stretch in the state	Proposed Achievable Target	Proposed Time Targets for Compliance	Present Status or pendency in terms of %	Remarks
1	2	3	4	5
Adoption of good irrigation practice				
Flood Plain Zone Protection and its management				
Rainwater harvesting / Groundwater recharge aspects	Construction of Rooftop Rainwater Harvesting Structure (RRHS) in Govt. and Private building in towns of Odisha Construction of Chek Dam	2014-15 to 2018-19 2019-20	RRHS of 34 nos. in Govt. buildings and 529 nos. in private buildings completed 115 nos. of Check Dams completed up to Dec-2019 in Puri district	Puri town
Maintaining E-flows and watershed management	E-flows maintained	During lean period from Nov to May	Maintained	
Setting up bio-diversity parks				
Removal of encroachments to maintain natural flow in drains				

Greenery or plantation on both sides of the river	1700 nos. of sapling has been sown along the canal colony office premises by Puri Irrigation Division during monsoon of 2018	Monsoon 2018		By Puri Irrigation Division, Puri
Capping of contaminated Groundwater Sources, Hand Pump, Tube Wells and alternate Water Supply Arrangement for drinking purpose in GW affected areas	Fluoride removal plants and iron removal plants are installed in the hand pumps and tube wells where the ground water is affected with fluoride or iron. Spot source where nitrate is detected in the water those tube wells are immediately closed and the hand pump is removed from that place. In case of salinity affected areas, mega pipe water projects are being taken up with surface water source	Ongoing process		

6. Name of the polluted River Stretch : - Nagavali (Jakaypur to Rayagada)

Key Components of Proposed Action Plan for restoration of identified polluted river stretch in the state	Proposed Achievable Target	Proposed Time Targets for Compliance	Present Status or pendency in terms of %	Remarks
1	2	3	4	5
Adoption of good irrigation practice				
Flood Plain Zone Protection and its management				
Rainwater harvesting / Groundwater recharge aspects	Construction of Chek Dam	2019-20	801 nos. of Check Dams completed up to Dec-2019 in Rayagada district	Puri town
Maintaining E-flows and watershed management	E-flows maintained	During lean period from Nov to May	Maintained	
Setting up bio-diversity parks				
Removal of encroachments to maintain natural flow in drains				
Greenery or plantation on both sides of the river	1700 nos. of sapling has been sown along the canal colony office premises by Puri Irrigation Division during monsoon of 2018	Monsoon 2018		By Puri Irrigation Division, Puri

Capping of contaminated Groundwater Sources, Hand Pump, Tube Wells and alternate Water Supply Arrangement for drinking purpose in GW affected areas	Fluoride removal plants and iron removal plants are installed in the hand pumps and tube wells where the ground water is affected with fluoride or iron. Spot source where nitrate is detected in the water those tube wells are immediately closed and the hand pump is removed from that place.			

7. Name of the polluted River Stretch : - Kathajodi(Cuttack to Urali)

Key Components of Proposed Action Plan for restoration of identified polluted river stretch in the state	Proposed Achievable Target	Proposed Time Targets for Compliance	Present Status or pendency in terms of %	Remarks
1	2	3	4	5
Adoption of good irrigation practice	No irrigation water recharges river Kathajodi (from Cuttack to Urali)			
Flood Plain Zone Protection and its management				
Rainwater harvesting / Groundwater recharge aspects	Construction of Rooftop Rainwater Harvesting Struture (RRHS) in Govt. and Private building in towns of Odisha Construction of Chek Dam	2014-15 to 2018-19 2019-20	RRHS of 07 nos. in Govt. buildings and 123 nos. in private buildings completed. 659 nos. of Check Dams completed up to Dec-2019 in Cuttack district	Puri town

Maintaining E-flows and watershed management	E-flows maintained	During lean period from Nov to May	Maintained	
Setting up bio-diversity parks				
Removal of encroachments to maintain natural flow in drains				
Greenery or plantation on both sides of the river	3250 nos. of sapling has been sown along the canal colony office premises by Mahanadi South Division-I & 10610 nos. of sapling has been sown along the canal colony, office premises by Mahanadi Barrage Division, Cuttack during monsoon of 2018	Monsoon 2018		By Mahanadi South Division-I & by Mahanadi Barrage Division, Cuttack
Capping of contaminated Groundwater Sources, Hand Pump, Tube Wells and alternate Water Supply Arrangement for drinking purpose in GW affected areas	Fluoride removal plants and iron removal plants are installed in the hand pumps and tube wells where the ground water is affected with fluoride or iron. Spot source where nitrate is detected in the water those tube wells are immediately closed and the hand pump is removed from that place.			

8. Name of the polluted River Stretch : - Serua (Khandaeta to Sankhatrasa) River

Key Components of Proposed Action Plan for restoration of identified polluted river stretch in the state	Proposed Achievable Target	Proposed Time Targets for Compliance	Present Status or pendency in terms of %	Remarks
1	2	3	4	5
Adoption of good irrigation practice	Rotational water supply in Kakatpur Branch Canal system recharges the ground water as river or drain	In every year, during Kharif crop (1st July to 15th Nov and Rabi crop (1st week of January to 15th of May)	Rotational water supply is maintained in Kharif and Rabi crop	
Flood Plain Zone Protection and its management				

Rainwater harvesting / Groundwater recharge aspects	Construction of Rooftop Rainwater Harvesting Struture (RRHS) in Govt. and Private building in towns of Odisha Construction of Chek Dam	2014-15 to 2018-19 2019-20	RRHS of 07 nos. in Govt. buildings and 123 nos. in private buildings completed. 659 nos. of Check Dams completed up to Dec-2019 in Cuttack district	Cuttack town
Maintaining E-flows and watershed management	E-flows maintained	During lean period from Nov to May	Maintained	
Setting up bio-diversity parks				
Removal of encroachments to maintain natural flow in drains				
Greenery or plantation on both sides of the river	3250 nos. of sapling has been sown along the canal colony, office premises by Mahanadi South Division-I & 4260 nos. of sapling and seeding have been sown along the canal colony, office premises by Jagatsinghpur Irrigation Division, Jagatsinghpur during monsoon of 2018	Monsoon 2018		By Mahanadi South Division-I & by Jagatsinghpur Irrigation Division, Jagatsinghpur

Capping of contaminated Groundwater Sources, Hand Pump, Tube Wells and alternate Water Supply Arrangement for drinking purpose in GW affected areas	Fluoride removal plants and iron removal plants are installed in the hand pumps and tube wells where the ground water is affected with fluoride or iron. Spot source where nitrate is detected in the water those tube wells are immediately closed and the hand pump is removed from that place.			

9. Name of the polluted River Stretch : - Ratnachira (Along Bhubaneswar)

Key Components of Proposed Action Plan for restoration of identified polluted river stretch in the state	Proposed Achievable Target	Proposed Time Targets for Compliance	Present Status or pendency in terms of %	Remarks
1	2	3	4	5
Adoption of good irrigation practice	Rotational water supply in Daya West Branch Canal system recharges the ground water as river or drain	In every year, during Kharif crop (1st July to 15th Nov and Rabi crop (1st week of January to 15th of May)	Rotational water supply is maintained in Kharif and Rabi crop	
Flood Plain Zone Protection and its management	Proposal for construction of a cross regulator at the off taking point Gangua Nallah to divert the entire flood discharge of Chandaka catchment to Kuakhai river through Budu nallah in high flood situation	128th TAC of DoWR has approved the construction of cross regulator		
Rainwater harvesting / Groundwater recharge aspects	Construction of Rooftop Rainwater Harvesting Struture (RRHS) in Govt. and Private building in towns of Odisha Construction of Chek Dam	2014-15 to 2018-19 2019-20	RRHS of 34 nos. in Govt. buildings and 529 nos. in private buildings completed 513 nos. of Check Dams completed up to Dec-2019 in Khordha district	Puri town

Maintaining E-flows and watershed management	E-flows maintained	During lean period from Nov to May	Maintained	
Setting up bio-diversity parks				
Removal of encroachments to maintain natural flow in drains				
Greenery or plantation on both sides of the river	1700 sapling has been sown along the canal colony, office premises by Puri Irrigation Division during monsoon of 2018	Monsoon 2018		Puri Irrigation Division, Puri
Capping of contaminated Groundwater Sources, Hand Pump, Tube Wells and alternate Water Supply Arrangement for drinking purpose in GW affected areas	Fluoride removal plants and iron removal plants are installed in the hand pumps and tube wells where the ground water is affected with fluoride or iron. Spot source where nitrate is detected in the water those tube wells are immediately closed and the hand pump is removed from that place.			
