

Monthly Progress Report for the month of March, 2021 in the matter of Hon'ble NGT OA No. 673 of 2018 order Dated 24/09/2020 for the State of Chhattisgarh

Overall status of the State

- I. Total Population :** Urban Population – 59,37,237
Rural Population – 1,96,07,961 (as per 2011 census)
- II. Estimated Sewage Generation (MLD) :** 48.5 MLD (For Bilaspur only as the sewerage system exists in Bilaspur only.)

III. Details of Sewage Treatment Plant

- **Existing no. of STPs and Treatment Capacity (in MLD) :** 03 STPs with total treatment capacity of 73.1 MLD
- **Capacity Utilization of existing STPs :** 6.1 MLD
- **MLD of sewage being treated through Alternate technology :** 1.22 MLD of septage from all the 166 ULBs is being treated through FSTPs (Low-cost gravity based Phytorid technology) and co-treatment with STPs. The details pertaining utilization of FSTP's and STP (cotreatment) in treatment of Septage generated is attached as **Annexure – 1**.
- **Gap in Treatment Capacity in MLD :** NIL
- **No. of Operational STPs :** 03
- **No. of Complying STPs :** 03
- **No. of Non-complying STPs :** NIL

Details of each existing STP in the State

No.	Location	Existing STP Capacity	Capacity Being Utilized	Operational Status of STP	Compliance Status of STP
1	Chilhathi (Bilaspur)	17 MLD	2.5 MLD	Operational	Complied
2	Domuhani (Bilaspur)	54 MLD	2 MLD	Operational	Complied
3	Mini Mata Chowk (Kawardha)	2.1 MLD	1.6 MLD	Operational	Complied

Details of under construction STPs in the State

No.	Location	Capacity of the plant in MLD	Physical Progress in %	Status of I&D or House sewer connections	Completion Timeline
1	Bhatagaon (Raipur)	06 MLD	84% completed	46% construction work of diversion	30.06.2021
2	Chandandih (Raipur)	75 MLD	66% completed		

3	Kara (Raipur)	35 MLD	66% completed	weir has been completed.
4	Nimora (Raipur)	90 MLD	66% completed	
5	Bade Atarmoda (Raigarh)	25 MLD	75% completed	16% construction work of diversion weir has been completed.
6	Banjipali (Raigarh)	07 MLD	59% completed	

Details of proposed STPs in the State

Sr.No.	Location	Capacity of the STP proposed in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Likely Date of Completion
1	Kanker	7.8 MLD	Work to be awarded	30.06.2023 (i.e. 3 years after approval of DPR from state finance department)
2	Dhamtari	19.6MLD	Under Tendering	
3	Simga	2.8 MLD	Under Tendering	
4	Nawapara	7.5 MLD	Work Awarded	
5	Rajim	2.8 MLD	Work Awarded	
6	Korba	35 MLD	<p>➤ A meeting has been conducted under the Chairmanship of Additional Chief Secretary, Govt. of Chhattisgarh on 12/01/2021. In this meeting, it has requested to M/s NTPC Korba to follow the tariff policy published in the Gazette of India and enter into an agreement with Municipal Corporation Korba, so the Hon'ble NGT order may be complied.</p> <p>➤ In this context, a</p>	31.03.2024 (i.e. 3 years after approval of DPR by NTPC Authority)

			letter has been sent to Ministry of Power, Govt. of India & Ministry of Jal Shakti, Govt. of India for their intervention on this matter and kindly direct M/s NTPC Korba to take immediate action, so the direction of Hon'ble N.G.T. can be complied with.	
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IV. Details of Industrial Pollution

- **No. of industries in the State : 6475**
- **No. of water polluting industries in the State : 1010**
- **No. of water polluting industries in the polluted river stretches : 178**
- **Quantity of effluent generated from the industries in polluted river stretches in MLD : 132.42 MLD**
- **Quantity of ETP Sludge generated from the Industries in TPD : 138.5 kg per tonnes of production in plant where ETP has been provided**
- **Number of industrial units having ETPs : 909**
- **Number of industrial units connected to CETP : There is no CETP is in the state of Chhattisgarh. All the water polluting industries have their own ETPs.**
- **Compliance status of the ETPs : All the ETPs which are operational are complying with the effluent standards.**
- **Number and total capacity of CETPs (details of existing/ under construction / proposed) : Presently there is no CETP is under construction.**
- **Status of compliance and operation of the CETPs : Not Applicable**

Town	No. of industries	Industrial discharge	Status of ETPs	Status of CETPs (existing, under construction & proposed)
NA	NA	NA	NA	NA

- Details regarding management of effluent generated from the industries situated in the polluted river stretches:

Sl. No.	Name of the River Stretch	No. of Water Polluting Industries	Generated Effluent (in MLD)		Processed / Treated Effluent (in MLD)	Gap
			Industrial	Domestic		
1.	River Hasdeo (Korba to	09	36.67	35.17	71.84	Nil

	Urga)					
2.	River Kharoon (Bhatagaon to Bendri)	26	0.09	0.03	0.12	Nil
3.	River Mahanadi (Sihawa to Arrang)	131	0.96	0.53	1.49	Nil
4.	River Seonath (Simga to Bemta)	There is no water polluting industries in this stretch				
5.	River Kelo (Raigarh to Kanaktora)	12	52.37	6.60	58.97	Nil

V. Solid Waste Management

- **Total number of Urban Local Bodies and their Population :** There are total 166 Urban Local Bodies with a population of 59,37,237 as per census 2011.
- **Current municipal solid waste generation :** 1650 TPD of solid waste is generated and treated daily.
- **Number, installed capacity and utilization of existing MSW processing facilities in TPD (bifurcated by type of processing eg- Waste to Energy (Tonnage and Power Output), Compost Plants (Windrow, Vermi, decentralized pit composting), bimethanation, MRF etc :** In 164 ULBs (356 MRFs, 164 decentralized composting unit) and in Raipur & Bilaspur ULBs (2 Integrated Solid Waste Management facility) are operational. Under Mission Clean City (MCC), 164 ULBs in the State are collecting segregated waste separately and transport the same on daily basis in compartmentalized tricycles and mini tippers. The dry fraction is being segregated at SLRM centres into various usable fractions and sold to waste recyclers. The wet fraction is being converted in compost.
- **Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%) :** The MSW treatment facilities are designed considering future population growth of the ULBs and there is no gap in municipal solid waste management in the ULBs.
- **No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction) :** As per the short-term plan, C&D waste management facilities have been established in the existing SLRM centres of all 166 ULBs of Chhattisgarh and approx. 210 ton per day (TPD) is processed.
- **Status of Construction and Demolition Waste Management in the polluted river stretches :**

Sl. No.	Name of the River Stretch	C&D Waste Generated	Collected/ Primary Processed	Gap
1.	River Hasdeo (Korba to Urga)	9.8 TPD	9.8 TPD	Nil
2.	River Kharoon (Bhatagaon to Bendri)	77.5 TPD	77.5 TPD	Nil
3.	River Mahanadi (Sihawa to Arrang)	2 TPD	2 TPD	Nil
4.	River Seonath (Singa to Bemta)	0.3 TPD	0.3 TPD	Nil
5.	River Kelo (Raigarh to Kanaktora)	8.7 TPD	8.7 TPD	Nil

- **Total no. of wards, no. of wards having door to door collection service, no. of wards practicing segregation at source :** There are 3217 wards with 100% door to door collection services and 100 % source segregation.
- **Details of MSW treatment facilities proposed and under construction (no., capacity, and technology) :** MSW treatment facilities are constructed and operational in all the ULBs and there is no such MSW treatment facilities proposed or under construction at present.
- **No. and area (in acres) of uncontrolled garbage dumpsites and Sanitary Landfills : NIL**
(As Mission Clean City (MCC) model is implemented in all the ULBs of the state)
- **No. and area (in acres) of legacy waste within 1km buffer of both sides of the rivers :**

Sr. No.	River Name	ULB	No. of Legacy waste dump site	Area of Legacy Waste
1	Kharun	Raipur	1	28.85 Acre
2	Kelo	Raigarh	1	06.65 Acre
3	Hasdeo	Korba	1	10.20 Acre

- **No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers:** 63 drains are falling into the 5 river stretches from 8 ULBs and a total of 94 screens are installed covering all the 5 rivers to prevent falling of solid waste into them.

Status of ULB wise Management of Solid Waste

ULB	Total MSW generation in TPD	Total MSW being processed in TPD	Existing MSW Facilities (No.s)	Utilization Capacity of the existing MSW facilities	Proposed MSW Facilities & Completion Timeline
Raipur	500 TPD	500 TPD	1	550 TPD	-
Dhamtari	22.82 TPD	22.82 TPD	11	29.5 TPD	

Raigarh	41.6 TPD	41.6 TPD	11	44.5 TPD
Korba	100 TPD	100 TPD	27	121.5 TPD
Kanker	5.75 TPD	5.75 TPD	4	16.5 TPD
Nawapara	6.17 TPD	6.17 TPD	4	16.5 TPD
Rajim	4.82 TPD	4.82 TPD	2	9.5 TPD
Simga	3.09 TPD	3.09 TPD	2	9.5 TPD

VI. Bio-medical Waste Management

- **Total Bio-medical generation:** 19.83 Tonnes per day
- **No. of Hospitals and Health Care Facilities :** Government HCFs – 1020
Private HCFs – 3562
- **Status of Treatment Facility/ CBMWTFs :** Out of 19.83 TPD of Bio-Medical Wastes, about 9.75 TPD wastes is being disposed off in the CBWTF operating in the State. Remaining wastes i.e. 10.08 TPD is disposed off in the premises of HCFs only.

04 new CBWTFs are to be established in the State. After their installation and commissioning all the Bio-Medical Wastes generated in the State is expected to be disposed off fully in the CBWTF itself only.

Ambikapur and Bastar : Environmental Clearance and Consent to Establish issued for CBWTFs facility at Kondagaon, Bastar Division. Facility is under construction. For CBWTFs facility at Ambikapur, TOR for conduction of EIA study was issued on 11/09/2019 and public hearing has been conducted on 24/11/2020. After receipt of application for environmental clearance and Consent to Establish, the same shall be issued. Earlier expected date of completion was December 2020. Due to COVID-19 Pandemic, delay has been occurred. CECB has requested Hon'ble NGT, Principal Bench, New Delhi for the grant of extension of timelines as per above vide letter dated 10/12/2020. Expected date of completion: June 2022.

Raigarh and Korba : For CBWTFs facility at Korba and Raigarh, TORs for conduction of EIA study were issued on 27/08/2020 and 30/09/2020 respectively. After receipt of application for environmental clearance and Consent to Establish, the same shall be issued. Due to COVID-19 Pandemic, delay has been occurred. CECB has requested Hon'ble NGT, Principal Bench, New Delhi for the grant of extension of timelines as per above vide letter dated 10/12/2020. Expected date of completion: June 2022.

VII. Hazardous Waste Management

- **Total Hazardous Waste generation per year :** 172437.78 Metric Tonnes
- **No. of Industries generating Hazardous waste :** 413
- **Treatment Capacity of all TSDFs :** NIL
- **Avg. Quantity of Hazardous waste reaching the TSDFs and Treated :** NIL
- **Details of on-going or proposed TSDF :** Owing to the continuous follow up and pursuance of CECB, the setting-up of Common Hazardous Waste TSDF has been initiated by Chhattisgarh State Industrial Development Corporation

(CSIDC) under the guidance of Department of Commerce and Industry, Govt. of Chhattisgarh. As per the information received from CSIDC the expected timelines are as follows:

- Execution of the Agreement between the operator (M/s Ramky Enviro Engineers) and CSIDC by 15/12/2020.
- Incorporation of the JV Company by 30/12/2020.
- Execution of the Concession Agreement by 11/01/2021.
- Handling over of the possession of the land to JV by 18/01/2021.

The JV will establish TSDF facility within 15 months from the date of handling over the possession of land.

VIII. Plastic Waste Management

- **Total Plastic Waste generation:** 130 TPD (Plastic waste is being treated in all the 166 ULBs of Chhattisgarh).
- **Treatment/ Measures adopted for reduction or management of plastic waste :** Recyclable plastic waste is being sold to authorized recycles and the non-recyclable plastic waste is being sent to Cement industries for coprocessing in Cement Kiln.

- IX. Details of Alternate Treatment Technology being adopted by the State/UT :** FSTP based on Low-cost gravity based Phytorid technology are operational in all ULBs for treatment of Septage generated in the ULBs. All the cities under polluted river stretches are under the 100% septage management scheme. Hence no future plans for Sewage network and house connections.

FSTP DETAILS

ULB	FSTP Location with Model	Current FSTP Capacity (KLD)
Raipur	Co-treatment with NRDA STP	276
Dhamtari	Danitola Trenching Ground Dhamtari	08
Raigarh	Low-Cost gravity Phytorid treatment plant at Transport Nagar, Raigarh	80
Korba	Co-treatment with Balco STP and 08 KLD Low-Cost gravity Phytorid treatment plant.	115
Kanker	Low-Cost gravity Phytorid treatment plant at Albelapara, Kanker	08
Navapara	Low-Cost gravity Phytorid treatment plant near Tarrigram, Gobra Navapara	05
Rajim	Low-Cost gravity Phytorid treatment plant at Ward No. 01, Rajim	03
Simga	Low-Cost gravity Phytorid treatment plant at Ward No. 10, Ekta Nagar, Simga	05

- X. Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment:** All the polluting sources under the ULB limits have been identified and installation of floating racks/screens to prevent solid waste from falling into the rivers has been done.

Progress by UAD			
ULB Name	No. of Drains	No. of Drains having screens	No of screens Installed
Raipur	6	6	29
Dhamtari	4	4	7
Raigarh	12	4	4
Korba	19	19	35
Kanker	7	7	7
Nawapara	7	7	7
Rajim	4	4	4
Simga	4	4	4
TOTAL	63	55	97

XI. Details of Nodal Officer appointed by Chief Secretary in the State/UT:

- The following Secretaries are responsible for the compliance of order dated 06/12/2019 in the matter of Hon'ble NGT 673/2018.
 1. Secretary, Agriculture Department
 2. Secretary, Urban Administration and Development
 3. Secretary, Department of Forest
 4. Secretary, Department of Water Resource
 5. Secretary, Department of Housing and Environment
 6. Secretary, Department of Home (Transport)
 7. Member Secretary, Chhattisgarh Environment Conservation Board.
- Also, Chief Secretary has formed Implementation Cell in their office vide order dated 25/05/2019 for implementation of orders and action plans prepared.

XII. Details of meetings carried under the Chairmanship Chief of Secretary in the State/UT: Chief Secretary takes review meeting of the secretaries of the concerned department from time to time. Last meeting under the Chairmanship of Chief Secretary, Government of Chhattisgarh has been held on 08/12/2020.

XIII. Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river :
Attached as Annexure – 2.

XIV. Ground water regulation: State Government has adopted a unique scheme Narwa, Garuwa, Ghuruwa and Badi in which under the Narwa component Water Resource Department has proposed various structures on small and big nallahs of all the 146 blocks of the state for recharging ground water.

XV. Good irrigation practices being adopted by the State:

- Water Resource Department is encouraging practices for optimum utilization of irrigation water and adopting micro irrigation schemes which results in more crop per drop as per available resources.
- An action plan has been prepared with the help of Agricultural Scientists. The use of water per hectare will be reduced by installation of drip in 1606 hectare area and sprinkler in 3800 hectare area in selected river stretches. Presently, 66.30 hectare area is covered by drip and 257.21 hectare area is covered by sprinkler system for different crops.

XVI. Rainwater Harvesting:

- Installation of rain water harvesting structure is under progress. Status of installation is as follows:-
- **By industries:** CECB has imposed condition regarding rain water harvesting by industries within their premises and the same is being followed by the concerned industries. Regular monitoring is being carried out for verification of the same. As per information available with CECB rain water harvesting system has been installed 425 large/medium industries and 1420 small scale industries. In addition, it has been decided to keep space (5% of total areas / minimum 05 plots) for rain water harvesting in future industrial areas.
- **Progress by UAD:**

Progress by UAD				
ULB Name	Target	Completed	In progress	Timeline
Raipur	9586	4734	4852	Dec-21
Dhamtari	1140	1053	87	Dec-21
Raigarh	579	579	0	–
Korba	1535	926	609	Dec-21
Kanker	108	108	0	–
Nawapara	104	87	17	Dec-21
Rajim	148	126	22	Dec-21
Simga	162	88	74	Dec-21
TOTAL	13362	7701	5661	

XVII. Demarcation of Floodplain and removal of illegal encroachments:

Progress by UAD		
ULB Name	Encroachment identified	Encroachment removed

Raipur	Nil	Nil
Dhamtari	Nil	Nil
Raigarh	14	11
Korba	8	8
Kanker	1	1
Nawapara	Nil	Nil
Rajim	Nil	Nil
Simga	4	4
TOTAL	27	24

XVIII. Maintaining minimum e-flow of river : There is no mandatory law specifying the level of e-flow to be maintained in the river. Water resource department is maintaining e-flow depending on the availability of water in the structure and conditional requirement. Also Water Resource Department had prepared standard operating procedures (SOP) for the five rivers Seonath, Mahanadi, Kharun, Kelo and Hasdeo for maintaining e-flow in the rivers and the same is being followed.

XIX. Plantation activities along the rivers : The present status of plantation is as follows :-

Hasdeo: 6.50 hectare (7150 no. of plants) has been covered with plantation in Korba to Uрга river Stretch of Hasdeo.

Kharun: 141.160 hectare (248602 no. of plants) has been covered with plantation in Kharun river stretches.

Mahanadi: 13 hectare (14300 no. of plants) has been covered with plantation in Sihawa to Aarang river stretch.

Kelo: 8.50 hectare (16388 no. of plants) has been covered with plantation in Raigarh to Kankatora river Stretch.

Seonath: Area not available for plantation between Bemta to Simga river stretch of Seonath.

Progress by UAD		
ULB Name	Identified area (Flood zone) along the rivers	Plantation activities done by ULBs
Raipur	10	Nil All the flood zones are in low lying places
Dhamtari	Nil	Nil
Raigarh	1	7500
Korba	4	3150
Kanker	5	250
Nawapara	6	1065
Rajim	2	320
Simga	2	250
TOTAL	30	12535

- XX. Development of biodiversity park on flood plains by removing encroachments :** Status of Identification and removal of encroachment from banks of the river is given above. After removal of all encroachments the plantation shall be done along the banks of the river.
- XXI. Reuse of Treated Water :** All the proposed STPs in the 5 polluted river stretches are under construction & tender phase. Treated waste water will be utilized after the completion of construction works of STPs.
- XXII. Model River being adopted by the State & Action Proposed for achieving the bathing quality standards:** State government has prepared action plan for 05 identified polluted river stretches of Chhattisgarh State. Actions as per the action plan are being implemented to achieve the bathing quality standards for the polluted river Stretches.
- XXIII. Status of Preparation of Action Plan by the 13 Coastal States :** Not applicable for the State of Chhattisgarh.
- XXIV. Regulation of Mining Activities in the State/UT :** At present Double carbon printed copies of the Transit Passes are checked by the field staff and members of Flying Squad. In cases where the Transit Passes are tempered in anyways viz, cutting or overwriting, the vehicles are seized for Illegal Mining/Transportation. However, the State would like to submit that for effective monitoring of Sand Mines, amply equipped Modernized Check Posts and Departmental Monitoring Units with new Departmental Officers/Inspectors and new Departmental technical staff at all levels is needed. As per MMDR, 1957 Act 21, cases of Illegal Mining and Transportation are registered.
- XXV. Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring :** Urban local bodies are regularly registering cases and imposing fines/penalties against identified polluters and law violators for disposal of waste in rivers as well as in municipal drains.

Details of case registered, and amount of fines/penalties collected are as follows: -

Progress by UAD		
ULB Name	No. of Cases registered	Amount of fine collected (INR)
Raipur	1131	3,51,390.00
Dhamtari	292	78,600.00
Raigarh	3586	7,65,600.00
Korba	225	2,84,030.00
Kanker	351	92,960.00
Nawapara	86	83,120.00
Rajim	47	15,600.00
Simga	6	1,400.00
TOTAL	5724	16,72,700.00

Latest water quality of polluted river stretches

Polluted River Stretch (Range in the Year 2020)

➤ **River Hasdeo (Korba to Uрга) – P – IV**

Monitoring Parameter	Minimum	Maximum
pH	7.12	7.23
BOD (mg/l)	0.4	1.4
Dissolved Oxygen (mg/l)	6.2	7.4
Coliform (MPN/100ml)	4.0	70.0

➤ **River Kharoon (Bhatagaon to Bendri) – P – IV**

Monitoring Parameter	Minimum	Maximum
pH	7.32	7.62
BOD (mg/l)	1.9	2.7
Dissolved Oxygen (mg/l)	6.4	7.1
Coliform (MPN/100ml)	7.0	84.0

➤ **River Mahanadi (Sihawa to Arrang) – P – IV**

Monitoring Parameter	Minimum	Maximum
pH	7.3	7.67
BOD (mg/l)	1.0	7.0
Dissolved Oxygen (mg/l)	6.2	7.4
Coliform (MPN/100ml)	2.0	94.0

➤ **River Seonath (Bemta to Simga) – P – IV**

Monitoring Parameter	Minimum	Maximum
pH	7.42	7.68
BOD (mg/l)	2.8	7.0
Dissolved Oxygen (mg/l)	6.4	7.2
Coliform (MPN/100ml)	2.0	94.0

➤ **River Kelo (Raigarh to Kanaktora) – P – V**

Monitoring Parameter	Minimum	Maximum
pH	7.0	7.9
BOD (mg/l)	1.2	4.6
Dissolved Oxygen (mg/l)	6.2	7.4
Coliform (MPN/100ml)	17.0	84.0

Indian Standard 2296 :

- BOD (3 days 27 degree celsius) – 03 Milligram per liter
- Dissolved Oxygen – 04 Milligram per liter
- Coliform (MPN/100ml) – 500