

# National Mission for Clean Ganga - NMCG

**Format for submission of Monthly Progress Report (MPR) in the NGT Matter O.A.**

**No. 673 of 2018 (in compliance to NGT order dated 24.09.2020)**

**NGT has disposed-off the said matter vide its Order dated 22<sup>nd</sup> February 2021**

## State of GOA

### Overall status of the State:

**I. Total Population: Urban Population & Rural Population separately.**

Urban Population:- 9,37,788 and Rural Population:- 5,20,757. (*Census 2011*)

**II. Estimated Sewage Generation (MLD): 112.53 MLD (Urban area only)**

### **III. Details of Sewage Treatment Plant:**

- Existing no. of STPs and Treatment Capacity (in MLD): **09 STPs' with 78.35 MLD capacity**
- Capacity Utilization of existing STPs: **29.84 MLD.**
- MLD of sewage being treated through Alternate technology: In state of Goa where sewer network is not available, Septic-tank- Soak-pit arrangement is adopted. Many Hotels and residential buildings (*with 50 rooms / flats & above*) have their own Treatment Plant (*as mandated under the TCP Act 2010*). Sulabh toilets (PWD) are provided for group of houses/community and Bio-toilets have been provided under Open Defecation Free (ODF) policy in the State.
- Gap in Treatment Capacity in MLD: **Negligible.**
- No. of Operational STPs': **09 nos.**
- No. of Complying STPs': **09 nos.**
- 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.  | Shirvodem, Navelim. | 20 - MLD              | <b>06.52 - MLD</b>      | Operational               | Complied-with            |
| 2.  | Vasco               | 20 – MLD              | <b>04.50 - MLD</b>      | Operational               | Complied-with            |
| 3.  | Durbhat             | 01 – MLD              | 0.40 – MLD              | Operational               | Complied-with            |
| 4.  | Goa Medical College | 1.35 MLD              | 0.50 – MLD              | Operational               | Complied-with            |

|              |                       |                  |                                                                    |             |               |
|--------------|-----------------------|------------------|--------------------------------------------------------------------|-------------|---------------|
|              | (GMC)                 |                  |                                                                    |             |               |
| 5.           | Sancoale              | 01 – MLD         | 1.00 – MLD                                                         | Operational | Complied-with |
| 6.           | Sanquelim             | 0.8 – MLD        | 0.15 – MLD                                                         | Operational | Complied-with |
| 7.           | Tonca,<br>Panaji      | 12.5 – MLD       | <b>08.90 – MLD</b>                                                 | Operational | Complied-with |
| 8.           | Tonca,<br>Panaji      | 15 – MLD         | <b>06.37 – MLD</b>                                                 | Operational | Complied-with |
| 9.           | Shirvodem-<br>Navelim | 6.7 – MLD        | <b>01.50 – MLD</b>                                                 | Operational | Complied-with |
| <b>Total</b> |                       | <b>78.35 MLD</b> | <b>29.84 MLD</b> Last-month, capacity being utilised was 38.27 MLD |             |               |

### 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   | Kavlem, Ponda | 15 –MLD                      | <b>99% (+1% change since last-month)</b> of civil works STP completed and Electrical / Mechanical works <b>99% (+1% since last-month)</b> completed. Around <b>98% (no change since last-month)</b> of the sewer-network is completed. | House Sewer-connection works are Tendered and road-crossing work in in-progress. | <b>December 2022</b> |
| 2   | Colva         | 7.5 – MLD                    | <b>91% (+1% change since last-month)</b> of sewer-network is completed. STP trial-run completed and awaiting for the completion of work of effluent disposal line which is in-progress <b>(5.3 kms. Completed).</b>                    | -----                                                                            |                      |
| 3   | Patto, Panaji | 02 – MLD                     | <b>96% (no change since last-month)</b> completed physical progress.                                                                                                                                                                   | 100% completed                                                                   | <b>December 2022</b> |
| 4   | Mapusa        | 5.4 – MLD                    | <b>98% (no change since last-month)</b> progress. STP is                                                                                                                                                                               | House Sewer-connection works in Mapusa are                                       | <b>March 2023</b>    |

|   |      |           |                                                                                                                         |                                                                                |                  |
|---|------|-----------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------|
|   |      |           | Mapusa is completed. <b>An electrical connection is yet to be done. Land acquisition in-process from the Collector.</b> | tendered and Road-crossing yet to commence (awaiting road-cutting permission). | <b>Completed</b> |
| 5 | Baga | 5.6 – MLD | 100% completed during last-month only.                                                                                  | Baga House-sewer connections work is in progress.                              |                  |

#### **Details of proposed STPs in the State**

| 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.  | Undir, Bandora | 15 – MLD                            | STP work could not be started due to local issues. <b>Around 65% (no change since last-month)</b> of the sewer-network is completed. | 16-months time-period required from start of work. |
| 2.  | Curti, Ponda   | 08- MLD                             | STP work could not be started due to local issues. <b>Around 92% (no change since last-month)</b> of the sewer-network is completed. |                                                    |
| 3.  | Porvorim       | 20 – MLD                            | STP work could not be started due to local issues. <b>Around 80% (no change since last-month)</b> of the sewer-network is completed. |                                                    |

\* Above data does not include any packaged treatment plants /sulabh-toilets and Bio-toilets

#### **IV. Details of Industrial Pollution:**

- **No. of industries in the State: 8,611**
- No. of water polluting industries in the State: *Nil*
- **Quantity of effluent generated from the industries in MLD:**
- **Quantity of Hazardous Sludge generated from the Industries in TPD:**
- **Number of industrial units having ETPs: 209**
- Number of industrial units connected to CETP: *State does not have any CETP*
- **Number and total capacity of ETPs (details of existing/ under construction / proposed)**
- **Compliance status of the ETPs: 207**
- Number and total capacity of CETPs (details of existing/ under construction / proposed) : *State does not have any CETP*
- Status of compliance and operation of the CETPs : *Not Applicable in view of above.*

| Town           | No. of industries | Industrial discharge | Status of ETPs | Status of CETPs<br>(existing, under construction & proposed) |
|----------------|-------------------|----------------------|----------------|--------------------------------------------------------------|
| Not Applicable |                   |                      |                |                                                              |

#### V. Solid Waste Management:

- **Total number of Urban Local Bodies and their Population:** *As referred in MPR for the month ending September 2022.*
- Current Municipal Solid Waste Generation: **766 tons per day (TPD)** – *as per the waste characterization report, 2018. Solid waste treatment plant with 250 tons per day capacity is fully operational at Saligao which caters to the waste being generated from coastal-stretch of North Goa district among other selective areas.*
- Number, installed capacity and utilization of existing MSW processing facilities in TPD (bifurcated by type of processing e.g.- Waste to Energy (Tonnage and Power Output), Compost Plants (Windrow, Vermi, decentralized pit composting), biomethanation, MRF etc., (related to 'centralised' solid waste sorting, baling and onward processing facilities operated by the Goa Waste Management Corporation (GWMC) **Refer Annexure – A.** Status from Urban Local Bodies (ULBs') is referred at Annexure E while, status from village panchayats is referred at Annexure F.
- Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%): **Refer Annexure – B** (related to setting-up of common waste-treatment facilities including Hazardous / Biomedical / Construction and Debris / E-waste facilities).
- No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction): State has proposed 500-TPD capacity C & D waste processing plant at Cudchirem in Bicholim, North Goa district.
- Total no. of wards, no. of wards having door-to-door collection service, no. of wards practicing segregation at source (village Panchayat-level): *As referred in Annexure F.*
- Details of MSW treatment facilities proposed and under construction (no., capacity, and technology): **Refer Annexure – B.**
- No. and area (in acres) of uncontrolled garbage dumpsites and Sanitary Landfills.: **N.A.**
- No. and area (in acres) of legacy waste within 1-km buffer of both sides of the rivers: **Nil.**
- No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers: Nil.

#### Status of ULB wise Management of Solid Waste

| ULB | Total MSW generation in TPD | Total MSW being processed in TPD | Existing MSW facilities | Utilization Capacity of the existing MSW facilities | Proposed MSW Facilities & Completion Timeline |
|-----|-----------------------------|----------------------------------|-------------------------|-----------------------------------------------------|-----------------------------------------------|
|-----|-----------------------------|----------------------------------|-------------------------|-----------------------------------------------------|-----------------------------------------------|

**VI. Bio-medical Waste Management:** *As per Annual report*

- Total Bio-medical generation: 2,992 kgs. per day (*bio-medical waste*) / 17,179 kgs. per day (*sanitary waste*).
- No. of Hospitals and Health Care Facilities: **Refer Annexure – C.**
- Status of Treatment Facility / CBMWTF: **Common Biomedical waste treatment facility is operational at Kundaim.**

**VII. Hazardous Waste Management:**

- Total Hazardous Waste generation:
  - (a) Incinerable waste : 39,379.80 TPA
  - (b) Land-fillable waste : 3,385.21 TPA
  - (c) Recyclable waste : 33,095.57 TPA
  - Total : 77,056.58 TPA.
- No. of Industries generating Hazardous waste : **1,628 nos.**
- Treatment Capacity of all TSDFs : **16,846 metric tons per year.**
- Avg. Quantity of Hazardous waste reaching the TSDFs and Treated: **Currently, majority of the HW-generated is disposed through Inter-State movement by recycling / utilization / disposal at common secured landfill site / common incinerator / co-processing to neighbouring States under valid agreement. Landfilable waste (about 250 MT) is being disposed-off (since March 2021) through a secured landfill site set-up in common HW facility at Pissurlem.**
- Details of on-going or proposed TSDF : **The State has set-up Common Hazardous Waste Treatment Facility at Pissurlem Industrial Estate and phase-I is operational. While, Phase-II is 92% completed.**

**VIII. Plastic Waste Management:**

- Total Plastic Waste generation: **80.66 Tons per day (TPD)** – *as per the waste characterization report, 2018.*
- Treatment/ Measures adopted for reduction or management of plastic waste: **Establishment of Common Material Recovery facility (MRF) as well as Baling facilities at Verna / Cacora and Bicholim (03 nos.).**

- IX. Details of Alternate Treatment Technology being adopted by the State/UT: **The State has set-up Plastic-to-Fuel plant at Pernem Municipal Council (North Goa). However, currently, it is not-working and under repairs.**
- X. Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment: **There is no industrial discharge within any of the polluted river-stretches.**
- XI. Details of Nodal Officer appointed by Chief Secretary in the State/UT: **Secretary, Environment is a Nodal Officer to be assisted by Director, Department of Environment & Climate Change (DoE & CC), Goa.**
- XII. Details of meetings carried under the Chairmanship Chief of Secretary in the State/UT: **The State, in compliance to the NGT Order in a matter of 606 of 2018 (SWM-related matters & Ors.), has constituted the State Level Committee (SLC) under the Chairmanship of Chief Secretary who takes the review on regular-basis.** Last such review (*i.e.* 23<sup>rd</sup> SLC-Goa meeting) was taken in the month of April 2022. As per the latest NGT Order dated 31<sup>st</sup> May 2022, the State of Goa, through the Chief Secretary, has to appear before the NGT, Principal Bench through VC on 02<sup>nd</sup> March 2023. **24<sup>th</sup> SLC-Goa meeting is scheduled on 8<sup>th</sup> November 2022.**
- XIII. Latest water quality of polluted river, its tributaries of polluted river; **refer Annexure – D.**
- XIV. Ground water regulation: (a) Ground Water Act, 2002 is enacted in the State of Goa, (b) Ground water extraction is being monitored, (c) It is mandatory to register all the ground water structures in the State, (d) Commercial ground water extraction is levied with water tax, (e) Goa is declared as ‘Safe zone’ under the Ground water development by the Central Ground Water Board (CGWB), (f) guidelines issued by the Central Ground Water Board (CGWB) is implements. **Compliance – 100%, Target – Target – achieved.**
- XV. Good irrigation practices being adopted by the State: Water User Associations (WUAs’) are formed to economise the use of water. - Expected level of compliance: 80%, **Actual compliance: 65% (No change since September 2021).**
- XVI. Rain Water Harvesting: Industries, through the Department of Industries, Trade & Commerce (DITC) are being encouraged to adopt to rainwater harvesting. Due to excessive rainfall (*i.e.* 160 inches per year) shortage of land and groundwater being in ample quantity. Not many takers. In addition, the Town and Country Planning (TCP) Department has made roof-top rainwater harvesting mandatory for multi-dwelling units as well as residential-cum-commercial complexes. - Expected level of compliance: 50%, **Actual compliance: 20% (no change since January 2021).**
- XVII. Demarcation of Floodplain and removal of illegal encroachments - Expected level of compliance: 100%, **Actual compliance: 100%, Target: Achieved (Demarcation completed).**

**XVIII. Maintaining minimum e-flow of river:** Rivers are perennial. **There is no issue of e-flow in major rivers.**

**XIX. Plantation activities along the rivers:** *No change since last-month.*

**XX. Development of Biodiversity Park:** *No change since last-month.*

**XXI. Reuse of Treated Water:** *No change since last-month.*

**XXII. Model River being adopted by the State & Action Proposed for achieving the bathing quality standards:** River Sal and River Valvonti. Polluting drains joining the river have been identified, treated / filtered. De-weeding and desilting is being proposed including aeration of the stored water. Expected level of compliance 100 %. **Actual Compliance by Water Resources Department (WRD) - 100%. Target – achieved.**

**XXIII. Status of Preparation of Action Plan:** All the action plans prepared for eleven polluted river-stretches have been approved by CPCB (*i.e. in case of priority criteria – III : 01 stretch – Sal river*) and RRC-Goa (*i.e. in case of priority criteria IV & V : remaining 10-stretches*). Accordingly, Action Plan Strategies (APSs’), *referred in these action plans*, are being regularly reviewed by the Secretary, Environment in the capacity as Chairman, RRC-Goa.

**Further, the Action plans to address the coastal and marine pollution have already been submitted to the CPCB, New Delhi in September 2021** in respect of six coastal-rivers and have been reviewed by the RRC-Goa and accordingly the compliance to CPCB’s comments, *received thereafter*, are being addressed by stakeholder departments-concerned. The Goa-PCB has already communicated to the CPCB with a request to ‘De-list’ 05 river-stretches out of 11 river-stretches based on the compliance to Bathing water quality standards from a period from May 2019 to April 2021. Subsequently, the CPCB, based on water-quality (*i.e. Biochemical Oxygen Demand – BOD*), of rivers for years 2019 and 2021, has compiled / revised the polluted river stretches in August 2022. Accordingly, it has been reported that State of Goa has reduced number of such stretches (*i.e. 06 nos.*) as compared to 11 nos. which were based on data compiled during 2016 – 17. The said draft-report is being perused and verified as per the CPCB’s request prior to finalise the same. **Goa State Pollution Control Board (GSPCB) has responded to the CPCB informing about the mismatch in the water-quality data in the revised six polluted river-stretches (refer Annexure G).** Chairman, RRC-Goa has reviewed the progress on 9<sup>th</sup> September 2022 (*i.e. 30<sup>th</sup> RRC-Goa meeting*) and has scheduled to review further on 11<sup>th</sup> November 2022.

**XXIV. Regulation of Mining Activities in the State/UT:** It is being monitored as per Hon’ble Supreme Court Directives through the Department of Mines and Geology (DMG).

**XXV. Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring:** Ground water and river waters are monitored under Goa Ground Water Act, 2002 and Goa Irrigation Act, 1973 respectively by Ground Water and Canal Officers

respectively. : Expected level of compliance: 100%, **Actual compliance: 100%**, Target – achieved.

## **Annexure A**

### **Solid waste sorting, baling and onward processing facilities operated by the Goa Waste Management Corporation (GWMC).**

#### **1. MRF facilities**

- i. Verna MRF facility: **~8 TPD** (*dry waste*)
- ii. Cacora MRF facility: **~8 TPD** (*dry waste*)
- iii. Bicholim MRF facility: **~8TPD** (*dry waste*)

- 2. Integrated Solid Waste Management Facility (SWMF)** of 150 tons per day (TPD) at Saligao has been enhanced from existing 150-TPD to 250-TPD (+20%).

## Annexure B

| Sr. No.                                | Project                                                        | Details                                                               |                | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Timeline                                                                                                                                                                                                      |
|----------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                      | Integrated Solid Waste Management Facility – Cacora            | Capacity:                                                             | 100 TPD (+25%) | <ul style="list-style-type: none"><li>Installation of machinery and equipments is completed.</li><li>Current completion status is 100 % of project (+3% <i>change since last-month</i>).</li><li>Trial Operations for dry waste line commenced on 10<sup>th</sup> May and for wet waste line commenced on 21<sup>st</sup> May.</li><li>Plant currently under trail operations.</li></ul>                                                                        | Plant under trial-operations.                                                                                                                                                                                 |
| Catering to :                          |                                                                | Sanguem, Dharbandora, Quepem & Canacona Talukas                       |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                               |
| Cost of the Project                    |                                                                | 173.98 Cr                                                             |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                               |
| 2                                      | Integrated Solid Waste Management Facility- Bainguinim         | Capacity :                                                            | 250 TPD (+20%) | <ul style="list-style-type: none"><li>Revised RFQ approved and floated on 13/09/2022 &amp; tentative opening date is on 10/11/2022.</li><li>A Civil Appeal No. 4983 of 2021 with interlocutory application no. 105533 of 2021 (application for stay) has been instituted in Hon’ble Supreme Court of India by Bainguinim Citizen Forum V/s GWMC &amp; others. Hearing was on 17/11/2021 &amp; 21/04/2022 and case has been admitted in Supreme Court.</li></ul> | Proposed timeline to be decided post verdict of Hon’ble Supreme Court case.                                                                                                                                   |
| Catering to:                           |                                                                | Tiswadi & Ponda Talukas                                               |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                               |
| 3                                      | Solid Waste Management Facility – Verna (250 TPD + 20%)        | Capacity                                                              | 250 TPD (+20%) | <ul style="list-style-type: none"><li>Awaiting environmental clearance (EC).</li><li>Agreement has been signed between GWMC and IVL Swedish Research Institute, Sweden to carry out prefeasibility study for setting up of Waste to Energy Facility. (No Change since last month).</li></ul>                                                                                                                                                                    | Upon grant of Environmental Clearance (EC), GWMC shall float tender for SWMF 250 TPD.                                                                                                                         |
| Catering to Mormugao & Salcete Talukas |                                                                |                                                                       |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                               |
| 4                                      | Construction & Demolition Waste Management Facility – Bicholim | Capacity: 500 TPD<br><br>Land:44,478 sqm<br>Catering to: State of Goa |                | <ul style="list-style-type: none"><li>Regarding tender for fencing and security-cabin at Bicholim, the tender has been finalized and work order will be issued post demarcation. (No Change since last month)</li></ul>                                                                                                                                                                                                                                         | GWMC was to float tender for setting up C & D Waste Management Facility by December-2021 but due to delay in site clearance from Revenue Department and construction work towards the same has not commenced. |

|   |                                                                                             |          |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                               |
|---|---------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 5 | <b>Common Hazardous Waste Treatment Storage and Disposal Facility (CHWTSD)</b>              | Capacity | 25,000 TPA Secured Landfill (SLF) & 1.5 ton/hr incinerators | <ul style="list-style-type: none"> <li>Phase 1: Completed</li> <li><b>Phase 2: 95% completed (+ 3% change since last month) and in meantime the operator has made alternate arrangements for storage and disposal of Phase 2 incinerable waste through their sister concern at Ranjangaon-Maharashtra.</b></li> <li>Work towards Boiler, Incineration, administration block (Phase II) was to be completed by August 2022 has been delayed. <b>Phase-2 completion is revised to December 2022.</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>TSDf commissioned on March 2021.</p> <p><b>Phase – 2 is revised till December 2022.</b></p>                                                |
| 6 | <b>Design-Build and Operate an E-Waste Management (Collection, Storage and Dismantling)</b> | Capacity | <b>15 - TPD</b>                                             | <ul style="list-style-type: none"> <li>Work Order is issued to the contractor dated 27/08/2021.</li> <li>Since 27/08/2021, the operator has started collection of e-waste from ULBs/RLBs and the same is disposed scientifically to authorized recyclers.</li> <li>GWMC has executed Deed of Lease Agreement with Goa Industrial Development Corporation (GIDC) on 17-12-2021. Registration of the same with Sub-registrar Office, Sattari was completed on 8<sup>th</sup> March 2022.</li> <li>NoC from Industries Department to Sublease the land to the selected concessionaire has been received.</li> <li>Agreement to sublet the plot no. 6/3 at Pissurlem Industrial Estate for EWMF has been executed between GWMC and the concessionaire Cam Industrial Services on 20/07/2022. Handing / Taking over if the plot is executed on 27/07/2022. <b>GIDC has sub-leased the plot to CAM Industrial Services. Awaiting construction licence from GIDC.</b></li> </ul> | <p>Collection of e-waste has started from 27/08/2021.</p> <p><b>Dismantling facility will be completed and commissioned by April 2023</b></p> |

## **Annexure C**

### **Total Number of Hospitals & healthcare facilities:**

- The State of Goa has 50 public healthcare facilities (*excluding veterinary & dispensaries*) with a total bed capacity of 3159.
- Total number of non-bedded facilities under public healthcare systems are 14 dispensaries.
- Goa has 102 facilities under the category of private healthcare with a total bed capacity of 2443.
- The total beds currently available under both public and private sector are 5602.
- Goa has one dental college under public healthcare and 251 dental clinics across the state under private health care system.
- The state also has 5 veterinary hospitals and 25 clinics under public facilities and 27 pet clinics under the category of private facilities.
- Apart from bedded facilities in private sector the state also has approximately 482 non bedded facilities (excluding dental clinics) that cater to consultations, observation, diagnostics and select treatment.

## Annexure D

### **DATA of 11 Polluted River Stretches for Major Rivers of October 2022**

#### **1.RIVER CHAPORA NEAR ALORNA FORT, PERNEM**

| Sr. No. | Parameters                     | Oct-22 | Limit for class C rivers as per CPCB classification based on designated best use of rivers |
|---------|--------------------------------|--------|--------------------------------------------------------------------------------------------|
| 1       | pH                             | 6.81   | 6.0-9.0                                                                                    |
| 2       | Dissolved Oxygen (mg/l)        | 7.8    | 4 mg/l or more                                                                             |
| 3       | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                             |
| 4       | Total Coliform (MPN/100ml)     | 3300   | 5000 or less MPN/100ml                                                                     |
| 5       | Fecal Streptococci (MPN/100ml) | 220    | -                                                                                          |

**Remarks: All parameters are within permissible limit for the month of October 22.**

#### **RIVER CHAPORA NEAR SIOLIM BRIDGE**

| Sr.No. | Parameters                     | Oct-22 | Limit for SW II rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|------------------------------------------------------------------------------------------|
| 1      | pH                             | 8.02   | 6.5-8.5                                                                                  |
| 2      | Turbidity(NTU)                 | 3.17   | 30 NTU                                                                                   |
| 3      | Dissolved Oxygen (mg/l)        | 7.0    | 4 mg/l or more                                                                           |
| 4      | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                           |
| 5      | Fecal Coliform (MPN/100ml)     | 1300   | 100 or less MPN/100ml                                                                    |
| 6      | Fecal Streptococci (MPN/100ml) | 330    | -                                                                                        |

**Remarks: Fecal Coliform is exceeding the permissible limit for the month of October 22**

#### **2.RIVER TIRACOL AT KERI, PERNEM**

| Sr.No. | Parameters                     | Oct-22 | Limit for SW II rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|------------------------------------------------------------------------------------------|
| 1      | pH                             | 7.78   | 6.5-8.5                                                                                  |
| 2      | Turbidity(NTU)                 | 6.58   | 30 NTU                                                                                   |
| 3      | Dissolved Oxygen (mg/l)        | 7.1    | 4 mg/l or more                                                                           |
| 4      | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                           |
| 5      | Fecal Coliform (MPN/100ml)     | 700    | 100 or less MPN/100ml                                                                    |
| 6      | Fecal Streptococci (MPN/100ml) | 140    | -                                                                                        |

**Remarks:Fecal Coliform is exceeding the permissible limit for the month of October 22**

#### **3.RIVER SINQUERIM, CANDOLIM SIDE**

| Sr.No. | Parameters                     | Oct-22 | Limit for SW II rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|------------------------------------------------------------------------------------------|
| 1      | pH                             | 7.73   | 6.5-8.5                                                                                  |
| 2      | Turbidity(NTU)                 | 3.83   | 30 NTU                                                                                   |
| 3      | Dissolved Oxygen (mg/l)        | 5.1    | 4 mg/l or more                                                                           |
| 4      | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                           |
| 5      | Fecal Coliform (MPN/100ml)     | 700    | 100 or less MPN/100ml                                                                    |
| 6      | Fecal Streptococci (MPN/100ml) | 110    | -                                                                                        |

**Remarks: Fecal Coliform is exceeding the permissible limit for the month of October 22**

| <b>RIVER SINQUERIM, NEAR GANPATI TEMPLE</b>                                                   |                                |        |                                                                                            |
|-----------------------------------------------------------------------------------------------|--------------------------------|--------|--------------------------------------------------------------------------------------------|
| Sr.No.                                                                                        | Parameters                     | Oct-22 | Limit for SW II rivers as per CPCB classification based on designated best use of rivers   |
| 1                                                                                             | pH                             | 8.16   | 6.5-8.5                                                                                    |
| 2                                                                                             | Turbidity(NTU)                 | 3.44   | 30 NTU                                                                                     |
| 3                                                                                             | Dissolved Oxygen (mg/l)        | 5.5    | 4 mg/l or more                                                                             |
| 4                                                                                             | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                             |
| 5                                                                                             | Fecal Coliform (MPN/100ml)     | 1300   | 100 or less MPN/100ml                                                                      |
| 6                                                                                             | Fecal Streptococci (MPN/100ml) | 130    | -                                                                                          |
| <b>Remarks: Fecal Coliform is exceeding the permissible limit for the month of October 22</b> |                                |        |                                                                                            |
|                                                                                               |                                |        |                                                                                            |
| <b>4.RIVER ZUARI AT MADKAI JETTY</b>                                                          |                                |        |                                                                                            |
| Sr.No.                                                                                        | Parameters                     | Oct-22 | Limit for SW II rivers as per CPCB classification based on designated best use of rivers   |
| 1                                                                                             | pH                             | 7.71   | 6.5-8.5                                                                                    |
| 2                                                                                             | Turbidity(NTU)                 | 5.75   | 30 NTU                                                                                     |
| 3                                                                                             | Dissolved Oxygen (mg/l)        | 5.2    | 4 mg/l or more                                                                             |
| 4                                                                                             | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                             |
| 5                                                                                             | Fecal Coliform (MPN/100ml)     | 1700   | 100 or less MPN/100ml                                                                      |
| 6                                                                                             | Fecal Streptococci (MPN/100ml) | 340    | -                                                                                          |
| <b>Remarks: Fecal Coliform is exceeding the permissible limit for the month of October 22</b> |                                |        |                                                                                            |
|                                                                                               |                                |        |                                                                                            |
| <b>RIVER ZUARI AT BORIM BRIDGE</b>                                                            |                                |        |                                                                                            |
| Sr.No.                                                                                        | Parameters                     | Oct-22 | Limit for SW II rivers as per CPCB classification based on designated best use of rivers   |
| 1                                                                                             | pH                             | 6.80   | 6.5-8.5                                                                                    |
| 2                                                                                             | Turbidity(NTU)                 | 25.30  | 30 NTU                                                                                     |
| 3                                                                                             | Dissolved Oxygen (mg/l)        | 5.4    | 4 mg/l or more                                                                             |
| 4                                                                                             | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                             |
| 5                                                                                             | Fecal Coliform (MPN/100ml)     | 1100   | 100 or less MPN/100ml                                                                      |
| 6                                                                                             | Fecal Streptococci (MPN/100ml) | 170    | -                                                                                          |
| <b>Remarks: Fecal Coliform is exceeding the permissible limit for the month of October 22</b> |                                |        |                                                                                            |
|                                                                                               |                                |        |                                                                                            |
| <b>5.RIVER ASSANORA AT ASSANORA</b>                                                           |                                |        |                                                                                            |
| Sr.No.                                                                                        | Parameters                     | Oct-22 | Limit for class C rivers as per CPCB classification based on designated best use of rivers |
| 1                                                                                             | pH                             | 6.43   | 6.0-9.0                                                                                    |
| 2                                                                                             | Dissolved Oxygen (mg/l)        | 6.8    | 4 mg/l or more                                                                             |
| 3                                                                                             | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                             |
| 4                                                                                             | Total Coliform (MPN/100ml)     | 940    | 5000 or less MPN/100ml                                                                     |
| 5                                                                                             | Fecal Streptococci (MPN/100ml) | 70     | -                                                                                          |
| <b>Remarks: All parameters are within permissible limit for the month of October 22.</b>      |                                |        |                                                                                            |
|                                                                                               |                                |        |                                                                                            |
| <b>6.RIVER VALVANTI AT SANQUELIM</b>                                                          |                                |        |                                                                                            |

| Sr.No. | Parameters                     | Oct-22 | Limit for class C rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|--------------------------------------------------------------------------------------------|
| 1      | pH                             | 6.67   | 6.0-9.0                                                                                    |
| 2      | Dissolved Oxygen (mg/l)        | 7.9    | 4 mg/l or more                                                                             |
| 3      | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                             |
| 4      | Total Coliform (MPN/100ml)     | 2800   | 5000 or less MPN/100ml                                                                     |
| 5      | Fecal Streptococci (MPN/100ml) | 240    | -                                                                                          |

**Remarks: All parameters are within permissible limit for the month of October 22.**

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#### 7.RIVER KHANDEPAR, OPA, PONDA

| Sr.No. | Parameters                     | Oct-22 | Limit for class C rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|--------------------------------------------------------------------------------------------|
| 1      | pH                             | 6.70   | 6.0-9.0                                                                                    |
| 2      | Dissolved Oxygen (mg/l)        | 7.2    | 4 mg/l or more                                                                             |
| 3      | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                             |
| 4      | Total Coliform (MPN/100ml)     | 2200   | 5000 or less MPN/100ml                                                                     |
| 5      | Fecal Streptococci (MPN/100ml) | 140    | -                                                                                          |

**Remarks: All parameters are within permissible limits for the month of October 22.**

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#### RIVER KHANDEPAR, CODLI

| Sr.No. | Parameters                     | Oct-22 | Limit for class C rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|--------------------------------------------------------------------------------------------|
| 1      | pH                             | 6.5    | 6.0-9.0                                                                                    |
| 2      | Dissolved Oxygen (mg/l)        | 7.5    | 4 mg/l or more                                                                             |
| 3      | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                             |
| 4      | Total Coliform (MPN/100ml)     | 1300   | 5000 or less MPN/100ml                                                                     |
| 5      | Fecal Streptococci (MPN/100ml) | 110    | -                                                                                          |

**Remarks: All parameters are within permissible limits for the month of October 22.**

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#### 8.RIVER BICHOLIM BARAZAN NAGAR, BICHOLIM

| Sr.No. | Parameters                     | Oct-22 | Limit for class C rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|--------------------------------------------------------------------------------------------|
| 1      | pH                             |        | 6.0-9.0                                                                                    |
| 2      | Dissolved Oxygen (mg/l)        |        | 4 mg/l or more                                                                             |
| 3      | BOD (mg/l)                     |        | 3 mg/l or less                                                                             |
| 4      | Total Coliform (MPN/100ml)     |        | 5000 or less MPN/100ml                                                                     |
| 5      | Fecal Streptococci (MPN/100ml) |        | -                                                                                          |

**Remarks:**

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#### 9.RIVER MANDОВI AT TONCA MARCELA

| Sr.No. | Parameters              | Oct-22 | Limit for class SW II rivers as per CPCB classification based on designated best use of rivers |
|--------|-------------------------|--------|------------------------------------------------------------------------------------------------|
| 1      | pH                      | 7.20   | 6.5-8.5                                                                                        |
| 2      | Turbidity(NTU)          | 8.33   | 30 NTU                                                                                         |
| 3      | Dissolved Oxygen (mg/l) | 6.6    | 4 mg/l or more                                                                                 |
| 4      | BOD (mg/l)              | BDL    | 3 mg/l or less                                                                                 |

|   |                                |      |                       |
|---|--------------------------------|------|-----------------------|
| 5 | Fecal Coliform (MPN/100ml)     | 1100 | 100 or less MPN/100ml |
| 6 | Fecal Streptococci (MPN/100ml) | 170  | -                     |

**Remarks: Fecal Coliform is exceeding the permissible limit for the month of October 22**

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#### 10.RIVER TALPONA AT CANACONA

| Sr.No. | Parameters                     | Oct-22 | Limit for class C rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|--------------------------------------------------------------------------------------------|
| 1      | pH                             |        | 6.0-9.0                                                                                    |
| 2      | Dissolved Oxygen (mg/l)        |        | 4 mg/l or more                                                                             |
| 3      | BOD (mg/l)                     |        | 3 mg/l or less                                                                             |
| 4      | Total Coliform (MPN/100ml)     |        | 5000 or less MPN/100ml                                                                     |
| 5      | Fecal Streptococci (MPN/100ml) |        | -                                                                                          |

**Remarks:**

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#### 11.RIVER SAL AT KHAREBAND,MARGAO

| Sr.No. | Parameters                     | Oct-22 | Limit for class SW II rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|------------------------------------------------------------------------------------------------|
| 1      | pH                             | 6.60   | 6.5-8.5                                                                                        |
| 2      | Turbidity(NTU)                 | 18.06  | 30 NTU                                                                                         |
| 3      | Dissolved Oxygen (mg/l)        | 2.2    | 4 mg/l or more                                                                                 |
| 4      | BOD (mg/l)                     | 6.0    | 3 mg/l or less                                                                                 |
| 5      | Fecal Coliform (MPN/100ml)     | 3300   | 100 or less MPN/100ml                                                                          |
| 6      | Fecal Streptococci (MPN/100ml) | 940    | -                                                                                              |

**Remarks: Dissolved Oxygen is below , Fecal Coliform and Biochemical Oxygen Demand is exceeding the permissible limit for the month of October 22**

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#### RIVER SAL AT MOBOR

| Sr.No. | Parameters                     | Oct-22 | Limit for class SW II rivers as per CPCB classification based on designated best use of rivers |
|--------|--------------------------------|--------|------------------------------------------------------------------------------------------------|
| 1      | pH                             | 7.17   | 6.5-8.5                                                                                        |
| 2      | Turbidity(NTU)                 | 18.5   | 30 NTU                                                                                         |
| 3      | Dissolved Oxygen (mg/l)        | 6.2    | 4 mg/l or more                                                                                 |
| 4      | BOD (mg/l)                     | BDL    | 3 mg/l or less                                                                                 |
| 5      | Fecal Coliform (MPN/100ml)     | 1400   | 100 or less MPN/100ml                                                                          |
| 6      | Fecal Streptococci (MPN/100ml) | 130    |                                                                                                |

**Remarks: Fecal Coliform is exceeding the permissible limit for the month of October 22**

|                              |  |  |
|------------------------------|--|--|
| NOTE:                        |  |  |
| 1)BDL- Below Detection Limit |  |  |

## Annexure E – Status of compliance to Solid Waste Management (SWM) Rules by Urban Local Bodies (ULBs’)

| S.N. |       | Questions                                                              | Remarks         |                                                               |  |
|------|-------|------------------------------------------------------------------------|-----------------|---------------------------------------------------------------|--|
| 1    |       | Numbers of ULBs                                                        | 14              |                                                               |  |
| 2    |       | Over all waste management status in States/Uts                         |                 |                                                               |  |
| a    |       | Quantity of MSW generated (TPD)                                        | 204.87          |                                                               |  |
| b    |       | Quantity of MSW collected (TPD)                                        | 204.87          |                                                               |  |
| c    |       | Quantity of MSW segregated & transported (TPD)                         | 204.87          |                                                               |  |
| d    |       | Quantity of MSW processed (TPD)                                        | 204.87          |                                                               |  |
| e    |       | Quantity of MSW disposed in secured land fill site (TPD)               | NIL             |                                                               |  |
| f    |       | Gap in Solid Waste Management Uts (TPD) [1(a)-I(d)-1(e)]               | NIL             |                                                               |  |
| g    |       | Solid Waste Management Plan                                            |                 |                                                               |  |
| 3    |       | <b>Waste Collection</b>                                                | <b>Existing</b> | <b>Target</b>                                                 |  |
| a    |       | ULBs in which waste door-to-door collection is implemented (No.)       | 14              | 14                                                            |  |
| b    |       | ULBs in which segregation of waste is implemented (No.)                | 14              | 14                                                            |  |
| c    |       | ULBs in which transportation of segregation waste is implemented (No.) | 14              | 14                                                            |  |
| 4    |       | <b>Waste Processing</b>                                                |                 |                                                               |  |
| a    |       | <u>Material Recovery Facilities</u>                                    |                 |                                                               |  |
|      | (i)   | Total Capacity (TPD)                                                   | 93.71           | Only upgradation of MRF to increase in waste ene mentioned at |  |
|      | (ii)  | Number                                                                 | 16              |                                                               |  |
|      | (iii) | Number of ULBs Covered                                                 | 14              |                                                               |  |
| b    |       | <u>Recycling</u>                                                       |                 |                                                               |  |
|      | (i)   | Total Capacity (TPD)                                                   | 13.435          | NIL                                                           |  |

|   |       |                               |                                                                                                                                                |                                         |  |
|---|-------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--|
|   | (ii)  | Number                        | NA (The ULBs do not have recycling facilities however the recyclable fraction collected in most ULBs is channelized/sold to recycling vendors) | NIL                                     |  |
|   | (iii) | Number of ULBs Covered        | 11                                                                                                                                             | NIL                                     |  |
| c |       | <u>Composting</u>             |                                                                                                                                                |                                         |  |
|   | (i)   | Total Capacity (TPD)          | 97.85                                                                                                                                          | NIL                                     |  |
|   | (ii)  | Number                        | 91 locations (including decentralized)                                                                                                         | NIL                                     |  |
|   | (iii) | Number of ULBs Covered        | 14                                                                                                                                             | NIL                                     |  |
| d |       | <u>Biomethanation</u>         |                                                                                                                                                |                                         |  |
|   | (i)   | Total Capacity (TPD)          | 27.275                                                                                                                                         | The work under progress as mentioned at |  |
|   | (ii)  | Number                        | 24                                                                                                                                             |                                         |  |
|   | (iii) | Number of ULBs Covered        | 10                                                                                                                                             |                                         |  |
| e |       | <u>RDF</u>                    |                                                                                                                                                |                                         |  |
|   | (i)   | Total Capacity (TPD)          | 47.305                                                                                                                                         | NIL                                     |  |
|   | (ii)  | Number                        | NA (The RDF is transported to cement factories)                                                                                                | NIL                                     |  |
|   | (iii) | Number of ULBs Covered        | 12                                                                                                                                             | NIL                                     |  |
| f |       | <u>Waste to Energy Plants</u> |                                                                                                                                                |                                         |  |
|   | (i)   | Total Capacity (TPD)          | NIL                                                                                                                                            | NIL                                     |  |
|   | (ii)  | Number                        | NIL                                                                                                                                            | NIL                                     |  |
|   | (iii) | Number of ULBs Covered        | NIL                                                                                                                                            | NIL                                     |  |
| 4 |       | <b>Waste Disposal</b>         |                                                                                                                                                |                                         |  |
| a |       | <u>Landfill</u>               |                                                                                                                                                |                                         |  |
|   | (i)   | Total Capacity (TPD)          | 32,800 Tonnes                                                                                                                                  | NIL                                     |  |

|   |       |                                                                                                                                              |                                                                                                                    |     |  |
|---|-------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----|--|
|   | (ii)  | Number                                                                                                                                       | 4 (Not in use)                                                                                                     | NIL |  |
|   | (iii) | Number of ULBs Covered                                                                                                                       | 4                                                                                                                  | NIL |  |
| 5 |       | <b>LegacyWaste Management</b>                                                                                                                |                                                                                                                    |     |  |
| a |       | Number of Dumpsites (NO.)                                                                                                                    | Status may be obtained from GWMC                                                                                   |     |  |
| b |       | Quantity of Waste dumped at Dumpsites (Tons)                                                                                                 |                                                                                                                    |     |  |
| c |       | Number of dumpsites cleared (No.)                                                                                                            |                                                                                                                    |     |  |
| d |       | Number of dumpsites in which biomining has commenced (No.)                                                                                   |                                                                                                                    |     |  |
| e |       | Time frame for clearing all dumpsites                                                                                                        |                                                                                                                    |     |  |
| 6 |       | <b>Other Information</b>                                                                                                                     |                                                                                                                    |     |  |
| a |       | Information regarding development of model towns/cities/villages                                                                             | Annexure "C" as furnished in the previous quarter ending March 2021                                                |     |  |
| b |       | Creation of Environmental cell                                                                                                               | All the 14 ULBs have formed Environmental squads to impose fines                                                   |     |  |
| c |       | Standardization of rates for procurement of services/ equipment ( to do away with the tendering process) required for solid waste management | Most of the ULBs have stated that they are following Govt Schedule of rates for procurement of services/equipments |     |  |

|                                        |
|----------------------------------------|
| <b>Improvements Since Last Hearing</b> |
|----------------------------------------|

|   |  | Item                            | Present Satus                     | Status at the time of last hearing | WH<br>dir<br>timeli<br>been a<br>n |
|---|--|---------------------------------|-----------------------------------|------------------------------------|------------------------------------|
| 1 |  | Door - to - door collection (%) | 99%                               | Not available                      | Yes,<br>c                          |
| 2 |  | Source segregation of waste (%) | 97%                               | Not available                      |                                    |
| 3 |  | Waste Processing (TPD)          | 88%                               | Not available                      |                                    |
| 4 |  | Dumpsites capped (No.)          | NA                                | Not available                      |                                    |
| 5 |  | Dumpsites Bio-remediated (No.)  | Under Process carried out by GWMC | Not available                      | Under<br>(Statu<br>obtain<br>GV    |

### **Annexure F – Status of compliance to Solid Waste Management (SWM) Rules by Village Panchayats**

| Sr.No. | Questions                                                             |                                   |  |
|--------|-----------------------------------------------------------------------|-----------------------------------|--|
| 1      | Number of RLBs                                                        | 191                               |  |
| 2      | Over all waste management status in Status /UTs                       |                                   |  |
| a      | Quantity of MSW generated (TPD)                                       | 171.62828                         |  |
| b      | Quantity of MSW collected (TPD)                                       | 167.03818                         |  |
| c      | Quantity of MSW segregated & transported (TPD)                        | 165.04318                         |  |
| d      | Quantity of MSW processed (TPD)                                       | 165.04318                         |  |
| e      | Quantity of MSW disposed in secured land fill site (TPD)              | 1.773                             |  |
| f      | Gap in Solid Waste Management UTs (TPD) [1(a)-1(d)-1(e)]              | 4.8121                            |  |
| g      | Solid Waste Management Plan                                           | Plan & implementing is in process |  |
| 3      | Waste Collection                                                      |                                   |  |
| a      | RLBs in which door-to-door collection is implementation (No.)         | 191                               |  |
| b      | RLBs in which segregation of waste is implementation (No.)            | 191                               |  |
| c      | RLBs in which transportation of segregated waste is implemented (No.) | 191                               |  |
| 4      | Waste Processing                                                      |                                   |  |
| a      | <u>Material Recovery facilities</u>                                   |                                   |  |
|        | (i) Total Capacity (TPD)                                              | 233.9362143                       |  |
|        | (ii) Number of RLBs                                                   | 125                               |  |
|        | (iii) Number of RLBs covered                                          | 121                               |  |
| b      | <u>Recycling</u>                                                      |                                   |  |

|   |       |                          |      |  |
|---|-------|--------------------------|------|--|
|   | (i)   | Total Capacity (TPD)     | NA   |  |
|   | (ii)  | Number                   | NA   |  |
|   | (iii) | Number of RLBs covered   | NA   |  |
| c |       | <b><u>Composting</u></b> |      |  |
|   | (i)   | Total Capacity (TPD)     | 23.8 |  |
|   | (ii)  | Number                   | 43   |  |
|   | (iii) | Number of RLBs covered   | 42   |  |

|   |  |                                                          | Bardez                            | Pernem                            | Bicholim                          | Sa                  |
|---|--|----------------------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------|
| 1 |  | Number of RLBs                                           | 33                                | 20                                | 18                                |                     |
| 2 |  | Over all waste management status in Status /UTs          |                                   |                                   |                                   |                     |
| a |  | Quantity of MSW generated (TPD)                          | 109.35                            | 4.859                             | 0.743                             | 0                   |
| b |  | Quantity of MSW collected (TPD)                          | 105.545                           | 4.859                             | 0.743                             | 0                   |
| c |  | Quantity of MSW segregated & transported (TPD)           | 103.55                            | 4.859                             | 0.743                             | 0                   |
| d |  | Quantity of MSW processed (TPD)                          | 103.55                            | 4.859                             | 0.743                             | 0                   |
| e |  | Quantity of MSW disposed in secured land fill site (TPD) | 1.773                             | 0                                 | 0                                 |                     |
| f |  | Gap in Solid Waste Management UTs (TPD) [1(a)-1(d)-1(e)] | 4.027                             | 0                                 | 0                                 |                     |
| g |  | Solid Waste Management Plan                              | Plan & implementing is in process | Plan & implementing is in process | Plan & implementing is in process | P<br>imple<br>is in |
| 3 |  | Waste Collection                                         |                                   |                                   |                                   |                     |

|          |       |                                                                       |    |    |    |  |
|----------|-------|-----------------------------------------------------------------------|----|----|----|--|
| a        |       | RLBs in which door-to-door collection is implementation (No.)         | 33 | 20 | 18 |  |
| b        |       | RLBs in which segregation of waste is implementation (No.)            | 33 | 20 | 18 |  |
| c        |       | RLBs in which transportation of segregated waste is implemented (No.) | 33 | 20 | 18 |  |
| <b>4</b> |       | <b>Waste Processing</b>                                               |    |    |    |  |
| a        |       | <b><u>Material Recovery facilities</u></b>                            |    |    |    |  |
|          | (i)   | Total Capacity (TPD)                                                  | 93 | 25 | 1  |  |
|          | (ii)  | Number of RLBs                                                        | 33 | 8  | 2  |  |
|          | (iii) | Number of RLBs covered                                                | 31 | 8  | 2  |  |
| b        |       | <b><u>Recycling</u></b>                                               |    |    |    |  |
|          | (i)   | Total Capacity (TPD)                                                  | NA | NA | NA |  |
|          | (ii)  | Number                                                                | NA | NA | NA |  |
|          | (iii) | Number of RLBs covered                                                | NA | NA | NA |  |
| c        |       | <b><u>Composting</u></b>                                              |    |    |    |  |
|          | (i)   | Total Capacity (TPD)                                                  | 0  | 0  | 0  |  |
|          | (ii)  | Number                                                                | 0  | 0  | 0  |  |
|          | (iii) | Number of RLBs covered                                                | 0  | 0  | 0  |  |

## Annexure F Remediation of Legacy waste-dumps

(as per the submission made by Goa Waste Management Corporation – GWMC)

**Update of the Remediation of Legacy Waste Dumpsites in the State of Goa as on 04/11/2022**

| Sr. No. | Name of the Local Body            | Location of dump                                                   | Volume remediated till date | Qty of RDF Disposed(m3) | Qty of Inert/Compost Disposed(m3) | Status of Work                                                            |
|---------|-----------------------------------|--------------------------------------------------------------------|-----------------------------|-------------------------|-----------------------------------|---------------------------------------------------------------------------|
| 1       | Corporation of the City of Panaji | Campal- Attachment Point No. 290                                   | 5,305.00                    | 3168.00                 | 2070.00                           | Completed                                                                 |
| 2       | Corporation of the City of Panaji | Behind SBI, EDC, Patto-attachment Point No. 287                    | 2,606.00                    | 308.00                  | 2239.00                           | Completed                                                                 |
| 3       | Corporation of the City of Panaji | Near Divja Circle, Panaji- Attachment Point No. 288                | 569.00                      | 89.00                   | 424.00                            | Completed                                                                 |
| 4       | Margao Municipal Council          | Sonsoddo dump site, Margao                                         | 1,25,483.00                 | 27856.00                | 68580.00                          | Work in progress, Remediation work expected to be completed by March 2023 |
| 5       | Mormugao Municipal Council        | Headland Sada dump site, Mormugao                                  | 96,530.00                   | 29756.00                | 47213.00                          | Remediation Completed, RDF disposal in progress                           |
| 6       | Mapusa Municipal Council          | Assagao Dump site,                                                 | 1,55,333.00                 | 42449.00                | 15395.00                          | Remediation Completed                                                     |
|         | Council                           | Mapusa                                                             |                             |                         |                                   |                                                                           |
| 7       | Cuncolim Municipal Council        | Dumpsite at Cuncolim IDC                                           | 4834.00                     | -                       | -                                 | Remediation Completed, RDF disposal in progress                           |
| 8       | Canacona Municipal Council        | Dumpsite at Garbage Treatment Plant at DumaneShristhal             | 500.00                      | -                       | -                                 | Work in progress, Remediation work expected to be completed by March 2023 |
| 9       | Corporation of the City of Panaji | Curca- Attachment Point No. 289                                    | -                           | -                       | -                                 | To be commenced, Remediation work expected to be completed by March 2023  |
| 10      | Bicholim Municipal Council        | Adjacent to the garbage Treatment Plant, Lakherem in Sy. No.109/0. | 1000.00                     | -                       | -                                 | Work in progress, Remediation work expected to be completed by            |

|    |                                                                                |                                                                            |             |             |             |                                                                                          |
|----|--------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------|-------------|-------------|------------------------------------------------------------------------------------------|
|    |                                                                                |                                                                            |             |             |             | March 2023                                                                               |
| 11 | Pernem Municipal Council                                                       | At garbage Treatment Plant of Pernem Municipal Council                     | -           | -           | -           | Commenced, Remediation work expected to be completed by March 2023                       |
| 12 | Goa Medical College & Hospital Campus waste (Shifted due to upcoming O2 plant) | Shifted & treated at PattoPanjim Dumpsite                                  | ~100m3      | NA          | NA          | Completed                                                                                |
| 13 | Village Panchayat Chicalim                                                     | Near VP Chicalim MRF shed (Shifted at Assagao dump Mapusa for remediation) | -           | -           | -           | Commenced, Work in progress. Remediation work expected to be completed by December 2022. |
|    |                                                                                | Total                                                                      | 3,92,260.00 | 1,03,626.00 | 1,35,921.00 |                                                                                          |

NOTE: Disposal time for RDF is up to January 2025. Remediation time is up to March 2023.

**Annexure G**  
**GSPCB reply to Draft water-quality report on polluted river-stretches compiled by  
thaw CPCB in August 2022**

**Email**

**Goa PCB**

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**Reg. Draft Report on "Polluted River Stretches for Restoration of Water  
Quality", 2022 - Reminder seeking comments**

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**From :** Goa PCB <mail.gspcb@gov.in>

Thu, Oct 06, 2022 11:31 AM

**Subject :** Reg. Draft Report on "Polluted River Stretches for  
Restoration of Water Quality", 2022 - Reminder  
seeking comments

 PRINTED

 3 attachments

**To :** taskteam cpcb <taskteam.cpcb@gmail.com>

**Cc :** J Chandra Babu <jcb.cpcb@nic.in>, Mantu Kumar  
Choudhury <mkc.cpcb@gov.in>, CPCB Regional  
Directorate Bengaluru <zobangalore.cpcb@nic.in>

Sir/Madam,

Please find enclosed documents.



**Verification of the water-quality data w.r.t. Biochemical Oxygen Demand (BOD) – max. value recorded during 2019 / 2021 as referred in CPCB's Draft report (August 2022) to the data recorded / maintained by the Goa-PCB**

|  |                                                   | Max. BOD in mg/l recorded in<br>2019 / 2021<br>(CPCB's prescribed limit – 3 mg/ml) |                                                           |                                                       |                                                                                                                                                        |
|--|---------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | STATION                                           | As per Board<br>Record                                                             | As referred in<br>CPCB'S draft<br>report – August<br>2022 | Priority-class, as<br>referred in the<br>CPCB's draft | Goa-PCB's Remarks for<br>consideration and<br>correction in the CPCB's<br>draft compilation – August<br>2022                                           |
|  | Kalna river<br>(along Chandel)                    | 4                                                                                  | 4                                                         | V                                                     | No change                                                                                                                                              |
|  | Khandepar river<br>(at U/S of Opa water<br>works) | 2.8<br>(complies with<br>prescribed norms)                                         | 4.2                                                       | V                                                     | As the reported value<br>(i.e. – 2.8) is as within the<br>CPCB's prescribed limit, <b>this<br/>stretch needs to be delisted.</b>                       |
|  | Mandovi river<br>(along Amona )                   | 3.7                                                                                | 3.7                                                       | V                                                     | No change                                                                                                                                              |
|  | Mapusa river<br>(along Karaswada)                 | 5.0                                                                                | 5.0                                                       | V                                                     | No change                                                                                                                                              |
|  | Sal river<br>(Khanebad to Assolna)                | 6.0                                                                                | 6.0                                                       | V                                                     | No change                                                                                                                                              |
|  | Zuari river<br>(Panchwadi to Madkai)              | 5.0                                                                                | 6.4                                                       | IV                                                    | As the reported value (i.e. –<br>5.0) falls within priority<br>criteria – V, <b>this stretch<br/>needs to recategorised as<br/>Priority class – V.</b> |

\* Priority IV – monitoring locations having BOD between 6.0 – 10.0 mg / L  
Priority V - monitoring locations having BOD between 3.0 – 6.0 mg / L