

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 22nd 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: **29.15 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	08 - MLD	Operational	Complied-with
2.	Vasco	20 – MLD	06 – MLD	Operational	Complied-with
3.	Durbhat	01 – MLD	0.4 – MLD	Operational	Complied-with
4.	Goa	1.35 MLD	0.5 – MLD	Operational	Complied-with

	Medical College (GMC)				
5.	Sancoale	01 – MLD	01 – MLD	Operational	Complied-with
6.	Sanquelim	0.8 – MLD	0.15 – MLD	Operational	Complied-with
7.	Tonca, Panaji	12.5 – MLD	10 – MLD	Operational	Complied-with
8.	Tonca, Panaji	15 – MLD	02 – MLD	Operational	Complied-with
9.	Shirvodem-Navelim	6.7 – MLD	1.1 – MLD	Operational	Complied-with
Total		78.35 MLD	28.85 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	95% of civil works STP completed and Electrical / Mechanical works will be started after monsoons. Around 88% of the sewer-network is completed.	House connection will start 03-months before completion date.	December 2021
2	Colva	7.5 – MLD	77% of sewer-network is completed. STP is ready for trial-run.	House connections will start 03-months before completion date.	
3	Patto, Panaji	02 – MLD	66% completed physical progress.	100% completed	
4	Mapusa	5.4 – MLD	87% progress	House connections will start 03-months before completion date.	
5	Baga	5.6 – MLD	94% progress	House connections will star 03-months before completion date.	

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. Around 65% 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. Around 92% of the sewer-network is completed.	
3.	Porvorim	20 – MLD	STP work could not be started due to local issues. Around 80% 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 (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 December 2020.*
- Current Municipal Solid Waste Generation: **766 tons per day (TPD)** – *as per the waste characterization report, 2018.*

- 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), bimethanation, MRF etc., Refer Annexure - A.*
- Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%): **Refer Annexure – B.**
- 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: As referred in MPR for the month ending November 2020.
- 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
As referred in MPR for the month ending-November 2020.					

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: **Refer Annexure – B.**

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 neighboring States under valid agreement.**
- Details of on-going or proposed TSDF : **The State has initiated the process to set-up Common Hazardous Waste Treatment Facility at Pissurlem Industrial Estate.**

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 Material Recovery facility (MRF) as well as Baling facilities (03 nos.).**

IX. Details of Alternate Treatment Technology being adopted by the State/UT: **The State has proposed to set-up Plastic-to-Fuel plant at Pernem Municipal Council (North Goa) on a trial-basis.**

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.**

XIII. Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment 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. Expected level of compliance – 100%, **Actual compliance – 85%** (*no change since January 2021*), **Target – March 2021.**
- 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%** (*+5% increase since January 2021*), **Target: May 2021.**
- XVI.** Rain Water Harvesting: Although the State receives abundant rainfall to the tune of about 160-inches per year, 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. Department of Industries, Trade and Commerce (DITC) is encouraging the industries to adopt rainwater harvesting initiatives. - Expected level of compliance: 50%, **Actual compliance: 20%** (*no change since January 2021*), **Target: March 2021.**
- XVII.** Demarcation of Floodplain and removal of illegal encroachments: **70%** - Expected level of compliance: 100%, **Actual compliance: 90%**, (*no change since January 2021*), **Target: March 2021.**
- 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:** Major stretches of lower-reaches of major rivers (*i.e. downstream regions*) are flanked by mangroves while, along upper-reached (*i.e. upstream regions*), there is either coconut plantation or no space for any plantation.
- XX.** Development of Biodiversity Park: As referred in MPR for the month ending October 2020.
- XXI. Reuse of Treated Water:** Although there is no agricultural demand, part utilization has been proposed for (i) release of STP-treated water at Colva into Sal-river so as to maintain the flow, (ii) flushing of St. Inez creek, (ii) municipal gardening, (iii) social forestry, (iv) private-plantation, (v) dust-suppression measures and every attempt is being made to utilize the STP-treated waters.
- 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 are being identified treated / filtered. De-weeding and desilting is being proposed including aeration of the stored water. Expected level of compliance 100 %. **Actual Compliance - 40 %** (*No change since November 2020*). **Target – May 2021.**

XXIII. Status of Preparation of Action Plan: Central Pollution Control Board (CPCB) has approved the Action plans prepared for Sal river (*priority criteria- III*) as well as Mandovi and Talpona rivers (*both falling under priority criteria – IV*). In the remaining eight polluted river-stretches (*all falling under priority criteria – V*) proposed Action Plan Strategies (APSs) have been approved during the 25th RRC-Goa meeting held on 05th January 2021 under the Chairmanship of Secretary, Environment.

Further, Out of these 11 action plans prepared for polluted river-stretches, **six polluted river-stretches are coastal rivers** namely – (i) Mandovi, (ii) Zuari, (iii) Talpona, (iv) Chapora, (v) Terecol and (vi) Sal and include all aspects of the coastal / marine pollution with technological-interventions to be executed / implemented by stakeholder departments concerned and incorporates budget-estimates as well as defined timelines for its completion.

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: 80%** (*No change since January 2021*), **Target: May 2021.**

Annexure A

Number, installed capacity and utilization of existing GWMC MSW processing facilities in TPD:

1. MRF facilities

- i. Verna MRF facility: ~**8 TPD** (dry waste)
- ii. Cacora MRF facility: ~**5 TPD** (dry waste)
- iii. Bicholim MRF facility: ~**8TPD** (dry waste)

2. Integrated Solid Waste Management Facility (SWMF) of 150 tons per day (TPD) and currently is in process of enhancing from existing 150-TPD to 250-TPD (+20%). **Presently, 27% work has been completed** (*net change of +2% from previous month – January 2021*).

Annexure B

Sr. No.	Project	Details		Status	Timeline
1	Enhancement of Integrated Solid Waste Management Facility – Saligao	Capacity : Catering to : Cost of the Project	250 TPD (+20%) Bardez, Pernem, Bicholim & Sattari Talukas 103.87 Cr	<p>Part enhancement of Integrated Solid Waste Management Facility (SWMF) from 100 tons per day (TPD) to 150 tons TPD is completed and currently is in process of enhancing from existing 150-TPD to 250-TPD (+20%).</p> <ul style="list-style-type: none"> • Works commenced on 29th August 2020 • RCC wall work of digester 1 completed and RCC wall work of digester 2 is in progress • Wet waste shed, ETP, dewatering shed, solar drying shed - plinth work completed. First floor level work in progress. • Current completion status is 27% (net change of +2% from previous month – January 2021). 	December 2021
2	Integrated Solid Waste Management Facility – Cacora	Capacity : Catering to : Cost of the Project	100 TPD (+25%) Sanguem, Dharbandora, Quepem & Canacona Talukas 173.98 Cr	<ul style="list-style-type: none"> • Foundation / footing-work is in progress. • Foundation works of MSRC shed, digester tank, STP, gas engine building and solar shed foundation works are in progress. • Current completion status is 15% (net change of +3% from previous month – January 2021). 	December 2021
3	Integrated Solid Waste Management Facility- Bainguinim	Capacity : Catering to:	250 TPD (+20%) Tiswadi & Ponda Talukas	<ul style="list-style-type: none"> • Environmental Clearance (EC) has been granted. • RFQ has been floated on 21/09/2020 after approval by TASC. • RFQ bid was to be opened on 15th February 2021. 	Proposed timeline for completion is October 2022.

4	Solid Waste Management Facility –Verna (250 TPD + 20%)	Capacity	250 TPD (+20%)	<p>Work Order issued to L1 bidder - M/s Sadekar Enviro Engineers Pvt. Ltd., on 16/11/2020.</p> <ul style="list-style-type: none"> • Preliminary site visit by EIA Consultant was carried out on 15/12/2020 • Letter made to Goa SEAC for revised TOR for change in scope of work, considering additional study for setup of 250 TPD Waste to Energy at the same site and revised ToRs’ were issued on 03/03/2021. • Currently, baseline environment study is in progress. • Rapid-EIA studies shall be for one-season. Work has been commenced by the consultant – M/s Sadekar Enviro Engineers Pvt. Ltd., 01/01/2021. Time frame for completion of Rapid-EIA study is 06-months. Upon grant of environmental clearance (EC), GWMC shall float tender for 250-TPD +20% solid waste management facilities. • Pre-feasibility study shall also be conducted for setting up of 250-TPA capacity waste-to-energy plant by IVL Swedish Environmental Research, Sweden. Based on the pre-feasibility study report, a tender /EoI will be floated for setting up of 250-TPD waste-to-energy plant. 	Upon grant of EC, GWMC shall float tender for SWMF 250 TPD.
5	Construction & Demolition Waste Management Facility – Bicholim	Capacity: 500 TPD	Land:44,478 sqm Catering to: State of Goa	<ul style="list-style-type: none"> • GWMC has taken the possession of revenue, land under survey no 146/2,3,4,6 and 148/2,6,7 at Curchirem Village in Bicholim taluka. • Whereas it has been observed that there are names in Form I & XIV of the aforementioned survey number under another rights column as lessee. Hence, the matter was placed before Collector North to grant the land free from all encumbrances. • Further matter regarding demarcation of this land is going on before the Dy. Collector Bicholim. Subsequently, 5 hearings have been conducted and out of 27 opponents only 2 opponents have been objected • Furthermore, a GWMC official has also inspected the site on 15/07/2020 and it has been observed that the illegal extraction of the stones from quarries/pits is still happening on the site. A copy of inspection report and FIR filed in the Bicholim Police Station based on the complaint made by the Mamlatdar of Bicholim Taluka. has been submitted to concerned departments to take necessary action as per law. • Meantime, GWMC has requested the District Magistrate, North Goa Collectorate to hand over the said land to GWMC without any encumbrances after following due procedure prescribed under law, the said matter has been forwarded to the Deputy Collector/SDO Bicholim for necessary action. The last hearing was held on 08th January 2021. GWMC consultant M/s SINTEF, Scientific Research Organization from 	The consultant shall submit DPR by mid-February 2021 and GWMC shall float tender for setting up C & D Waste Management Facility by May 2021 and construction work towards the same shall commence by January 2022 and to be completed in 18 months i.e. November 2023 after getting the land without any encumbrances

				<p>Norway is assisting GWMC in development & implementation of new technologies in C&D Waste Management.</p> <ul style="list-style-type: none"> • GWMC received objection from VP Ona-Maulinguem, Bicholim for setting up garbage/MSW facility. Hence letter has been sent on 12/10/2020 to the VP informing that the plant is not for garbage/MSW and instead for C&D facility. • Demarcation Order has been passed on 29th January 2021 by Dy. Collector & SDM (Bicholim). The demarcation order has been forwarded to ISL, Bicholim for inspection and demarcation. • Final Draft-copy of the DPR has been submitted by M/s SINTEF on 04-02-2021 which will be put-up for approval in subsequent Board of Directors meeting. • Tender for construction of barbed-wire fencing, compound gate and temporary site-office at site is in-progress. • The next hearing has been scheduled on 05-04-2021 against deletion of 'Other lessees'. 	including trial operation.
6	Common Bio-Medical Waste Treatment Management facility (CBMWTF)	Capacity	200 kgs. Per. hour incinerators.	<ul style="list-style-type: none"> • Columns have been erected. • Masonry work for walls have been completed. • Excavation work for phase two is in process. • Commissioning of machinery is in-process and Autoclave machine is proposed to be commissioned by March 2021. • Currently 30% of project is completed 	December 2021
7	Common Hazardous Waste Treatment Storage and Disposal Facility (CHWTSD)	Capacity	25,000 TPA Secured Landfill (SLF) & 1.5 ton/hr incinerators	<ul style="list-style-type: none"> • The erection of Pre-Engineered Building (PEB) structure of storage shed-2 has been commenced • The construction of wheel washing bay has been completed • Laying of liners of the 1st SFL has commenced. (80% completed) <p>Phase - 1 is 85% complete (to be completed by 15-03-2021) Phase - 2 is 40% complete</p>	<p>Landfill will be commissioned by March 2021.</p> <p>Project will be completed by December 2021</p>

8	Design-Build and Operate an E-Waste Management (Collection, Storage and Dismantling)	Capacity	15 - TPD	<ul style="list-style-type: none"> • Tender for selection of service provider for Design-Build and Operate an E-Waste Management (Collection, Storage and Dismantling) for the State of Goa was floated on 06/07/2020. • Technical bid was opened on 30th November 2020. • Technical presentation before the TEC of technical proposal held on 27th January-2021. • Financial bid is scheduled to be opened on 11th March 2021. 	March 2022
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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

Water-quality data of 11 Polluted river-stretches : January 2021 – February 2021

1.RIVER CHAPORA NEAR ALORNA FORT, PERNEM

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	7.06	6.71	6.0-9.0
2	Dissolved Oxygen mg/l	7.0	6.1	4 mg/l or more
3	BOD mg/l	BDL	BDL	3 mg/l or less
4	Total Coliform MPN/100ml	1700	790	5000 or less MPN/100ml

Remarks: All parameters are within permissible limits.

RIVER CHAPORA NEAR SIOLIM BRIDGE

Sr.No.	Parameters	Jan-21	Feb-21	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.62	7.86	6.5-8.5
2	Turbidity (NTU)	2.49	2.36	30 NTU
3	Dissolved Oxygen mg/l	7.2	6.6	4 mg/l or more
4	BOD mg/l	BDL	BDL	3 mg/l or less
5	Fecal Coliform MPN/100ml	330	490	100 or less MPN/100ml

Remarks: Fecal Coliform is exceeding the permissible limit for the month of Jan and Feb 21.

2.RIVER TIRACOL AT KERI, PERNEM

Sr.No.	Parameters	Jan-21	Feb-21	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.8	7.71	6.5-8.5
2	Turbidity (NTU)	3.37	3.90	30 NTU
3	Dissolved Oxygen mg/l	6.8	6.0	4 mg/l or more
4	BOD mg/l	BDL	BDL	3 mg/l or less
5	Fecal Coliform MPN/100ml	170	790	100 or less MPN/100ml

Remarks: Fecal Coliform is exceeding the permissible limit for the month of Jan and Feb 21.

3.RIVER SINQUERIM, CANDOLIM SIDE

Sr.No.	Parameters	Jan-21	Feb-21	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.76	7.42	6.5-8.5
2	Turbidity (NTU)	7.70	5.40	30 NTU
3	Dissolved Oxygen mg/l	4.1	5.4	4 mg/l or more
4	BOD mg/l	BDL	BDL	3 mg/l or less
5	Fecal Coliform MPN/100ml	1700	130	100 or less MPN/100ml

Remarks: Fecal Coliform is exceeding the permissible limit for the month of Jan and Feb 21.

RIVER SINQUERIM, NEAR GANPATI TEMPLE

Sr.No.	Parameters	Jan-21	Feb-21	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.71	7.45	6.5-8.5
2	Turbidity (NTU)	3.21	7.67	30 NTU
3	Dissolved Oxygen mg/l	4.3	5.8	4 mg/l or more
4	BOD mg/l	BDL	BDL	3 mg/l or less
5	Fecal Coliform MPN/100ml	2300	20	100 or less MPN/100ml

Remarks: Fecal Coliform is exceeding the permissible limit for the month of Jan 21.

4.RIVER ZUARI AT MADKAI JETTY

Sr.No.	Parameters	Jan-21	Feb-21	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	6.59	7.16	6.5-8.5
2	Turbidity (NTU)	5.37	7.28	30 NTU
3	Dissolved Oxygen mg/l	5.0	5.0	4 mg/l or more
4	BOD mg/l	BDL	BDL	3 mg/l or less
5	Fecal Coliform MPN/100ml	490	1700	100 or less MPN/100ml

Remarks: Fecal Coliform is exceeding the permissible limit for the month of Jan and Feb 21.

RIVER ZUARI AT BORIM BRIDGE

Sr.No.	Parameters	Jan-21	Feb-21	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	6.71	6.76	6.5-8.5
2	Turbidity (NTU)	5.08	3.61	30 NTU
3	Dissolved Oxygen mg/l	6.7	5.0	4 mg/l or more
4	BOD mg/l	BDL	BDL	3 mg/l or less
5	Fecal Coliform MPN/100ml	170	130	100 or less MPN/100ml

Remarks: Fecal Coliform is exceeding the permissible limit for the month of Jan and Feb 21.

5.RIVER ASSANORA AT ASSANORA

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.79	6.63	6.0-9.0
2	Dissolved Oxygen mg/l	7.1	7.4	4 mg/l or more
3	BOD mg/l	BDL	2.1	3 mg/l or less
4	Total Coliform MPN/100ml	23	45	5000 or less MPN/100ml

Remarks: All parameters are within permissible limits.

6.RIVER VALVANTI AT SANQUELIM

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.84	6.78	6.0-9.0
2	Dissolved Oxygen mg/l	8.0	8.0	4 mg/l or more
3	BOD mg/l	BDL	BDL	3 mg/l or less
4	Total Coliform MPN/100ml	330	5400	5000 or less MPN/100ml

Remarks: Total Coliform is exceeding the permissible limit for the month of Feb 21.

7.RIVER KHANDEPAR, OPA, PONDA

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.66	7.39	6.0-9.0
2	Dissolved Oxygen mg/l	6.7	7.0	4 mg/l or more
3	BOD mg/l	BDL	BDL	3 mg/l or less
4	Total Coliform MPN/100ml	790	1700	5000 or less MPN/100ml

Remarks: All parameters are within permissible limits.

RIVER KHANDEPAR, CODLI

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.85	7.35	6.0-9.0
2	Dissolved Oxygen mg/l	7.5	7.5	4 mg/l or more
3	BOD mg/l	BDL	BDL	3 mg/l or less
4	Total Coliform MPN/100ml	1300	3500	5000 or less MPN/100ml

Remarks: All parameters are within permissible limits.

8.RIVER BICHOLIM BARAZAN NAGAR, BICHOLIM

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	7.04	6.70	6.0-9.0
2	Dissolved Oxygen mg/l	9.3	7.3	4 mg/l or more
3	BOD mg/l	BDL	BDL	3 mg/l or less
4	Total Coliform MPN/100ml	9400	14000	5000 or less MPN/100ml

Remarks: Total Coliform is exceeding the permissible limit for the month of Jan and Feb 21.

9.RIVER MANDOVI AT TONCA MARCELA

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	6.85	7.17	6.5-8.5
2	Turbidity(NTU)	4.62	4.29	30 NTU
3	Dissolved Oxygen mg/l	5.6	5.9	4 mg/l or more
4	BOD mg/l	BDL	BDL	3 mg/l or less
5	Fecal Coliform MPN/100ml	1300	1300	100 or less MPN/100ml

Remarks: Fecal Coliform is exceeding the permissible limit for the month of Jan and Feb 21.

10.RIVER TALPONA AT CANACONA

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.45	6.34	6.0-9.0
2	Dissolved Oxygen mg/l	7.0	7.0	4 mg/l or more
3	BOD mg/l	BDL	BDL	3 mg/l or less
4	Total Coliform MPN/100ml	7.8	110	5000 or less MPN/100ml

Remarks: All parameters are within permissible limits.

11.RIVER SALAT KHAREBAND,MARGAO

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	6.82	6.80	6.5-8.5
2	Turbidity(NTU)	4.38	8.37	30 NTU
3	Dissolved Oxygen mg/l	BDL	BDL	4 mg/l or more
4	BOD mg/l	6.0	3.9	3 mg/l or less
5	Fecal Coliform MPN/100ml	2300	35000	100 or less MPN/100ml

Remarks: Dissolved Oxygen , BOD and Fecal Coliform is exceeding the permissible limit for the month of Jan and Feb 21.

RIVER SAL AT MOBOR

Sr.No.	Parameters	Jan-21	Feb-21	Limit for class SW II rivers as per CPCB classification based on designated best use of rivers
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1	pH	7.56	7.65	6.5-8.5
2	Turbidity(NTU)	4.79	4.53	30 NTU
3	Dissolved Oxygen mg/l	4.8	7.1	4 mg/l or more
4	BOD mg/l	BDL	BDL	3 mg/l or less
5	Fecal Coliform MPN/100ml	2200	780	100 or less MPN/100ml

Remarks: Fecal Coliform is exceeding the permissible limit for the month of Jan and Feb 21.

NOTE:

1)BDL- Below Detection Limit