

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

E.A. No. 35/2023

IN

ORIGINAL APPLCIATION No.673/2018

(M.A. NO. 92/2023)

IN THE MATTER OF:

*News Item Published in 'The Hindu' authorized by Shri Jacob Koshy titled as
"More river stretches are now critically polluted: CPCB"*

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Through

DATE: 12 .03.2026

PLACE: New Delhi

3308



Surjendu Sankar Das

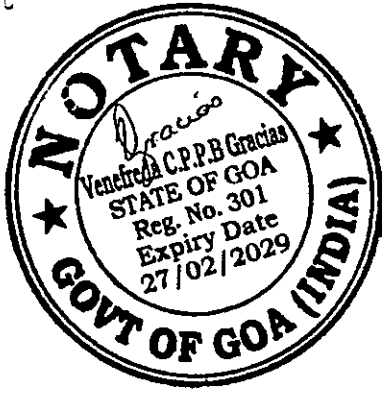
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**STATUS REPORT OF THE STATE OF GOA IN
COMPLIANCE TO THE ORDER DATED 01.10.2024 PASSED
BY THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI**

I, Shri Sachin S. Desai, major in age, posted as Director, Department of Environment & Climate Change, having office at 4th Floor, Dempo Tower, patto, Patto Centre, Panaji, Goa 403001, do hereby solemnly affirm and state as under:

1. I am fully conversant with the facts of the case and am competent and authorized to swear the present Affidavit.
2. That this Execution Application has been filed by the Applicants seeking execution of the Order dated 6 December 2019 passed by this Hon'ble Tribunal in O.A. 673 of 2018. The O.A. was suo moto registered by this Hon'ble National Green Tribunal, Principal Bench, New Delhi (hereinafter referred to

as Hon'ble Tribunal) on the basis of a news item published in the Hindu under the heading "more river stretches are now critically polluted: CPCB". This Hon'ble Tribunal vide its Order dated 6 December 2019 had taken note of the fact that 351 polluted river stretches were identified based upon the data compiled by the CPCB and others.

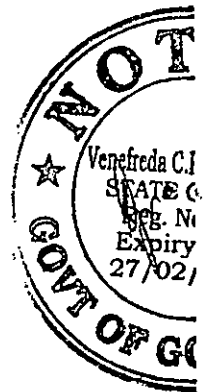
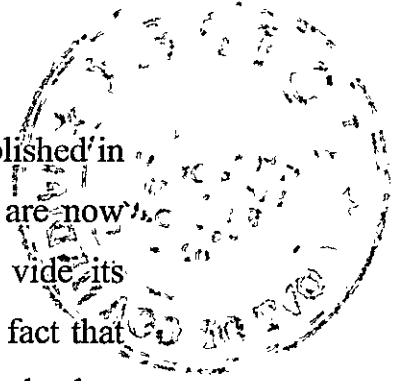
3. That further it is submitted that vide its order dated 1 October 2024 this Hon'ble Tribunal, in the captioned matter, has passed the directions to States/UTs to file their response in terms of compliance of the directions issued in Order dated 6 December 2019 in OA No. 673 of 2018. This Hon'ble Tribunal had disposed of the OA No. 673 of 2018 issuing the following directions:

"XII. Directions:

47. We now sum up our directions as follows:

i. 100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 atleast to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of the States/UTs will be liable to pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e. Rs. 5 lakhs per month per drain, for default in in-situ remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP.

ii. Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already



directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.

iii. We further direct that an institutional mechanism be evolved for ensuring compliance of above directions. For this purpose, monitoring may be done by the Chief Secretaries of all the States/UTs at State level and at National level by the Secretary, Ministry of Jal Shakti with the assistance of NMCG and CPCB.

iv. For above purpose, a meeting at central level must be held with the Chief Secretaries of all the States/UTs atleast once in a month (option of video conferencing facility is open) to take stock of the progress and to plan further action. NMCG will be the nodal agency for compliance who may take assistance of CPCB and may give its quarterly report to this Tribunal commencing 01.04.2020.

v. The Chief Secretaries may set up appropriate monitoring mechanism at State level specifying accountability of nodal authorities not below the Secretary level and ensuring appropriate adverse entries in the ACRs of erring officers. Monitoring at State level must take place on fortnightly basis and record of progress maintained. The Chief Secretaries may have an accountable person attached in his office for this purpose.

vi. Monthly progress report may be furnished by the States/UTs to Secretary, Ministry of Jal Shakti with a copy to CPCB. Any default must be visited with serious consequences at every level, including initiation of prosecution, disciplinary action and entries in ACRs of the erring officers.



vii. As already mentioned, procedures for DPRs/tender process needs to be shortened and if found viable business model developed at central/state level.

viii. Wherever work is awarded to any contractor, performance guarantee must be taken in above terms.

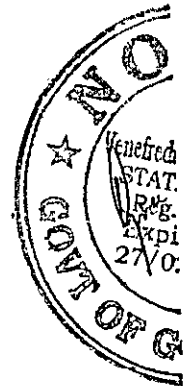
ix. CPCB may finalize its recommendations for action plans relating to P-III and P-IV as has been done for P-I and P-II on or before 31.03.2020. This will not be a ground to delay the execution of the action plans prepared by the States which may start forthwith, if not already started.

x. The action plan prepared by the Delhi Government which is to be approved by the CPCB has to follow the action points delineated in the order of this Tribunal dated 11.09.2019 in O.A. No. 06/2012.

xi. Since the report of the CPCB has focused only on BOD and FC without other parameters for analysis such as pH, COD, DO and other recalcitrant toxic pollutants having tendency of bio magnification, a survey may now be conducted with reference to all the said parameters by involving the SPCB/PCCs within three months. Monitoring gaps be identified and upgraded so to cover upstream and downstream locations of major discharges to the river. CPCB may file a report on the subject before the next date by e-mail at judicial-ngt@gov.in.

xii. Rivers which have been identified as clean may be maintained."

4. That it is most respectfully submitted that in compliance of the Order dated 20 February 2021 passed by this Hon'ble Tribunal, the matter has been examined. Further, it is stated that this Hon'ble Tribunal vide its order dated 20 September 2018



passed in O.A. No. 673 of 2018 has directed the States to prepare Action Plans for the polluted river stretches in the State.

5. That based on periodic assessments of water quality of rivers in the Country, Central Pollution Control Board (“CPCB”) identifies polluted river stretches (“PRS’s”) considering Bio-chemical Oxygen Demand (“BOD”) as a criteria parameter.
6. I state that as per the periodic assessment of Goa State Pollution Control Board dated December 2025, in the State of Goa water quality of 15 rivers at 32 locations was monitored in the year 2022- 2023. Out of these, 4 locations on 2 rivers were found to be non-complying to the prescribed water quality criteria with respect to the BOD, wherein 1 polluted river stretch is for Sal river: from Runder to Orlim bridge under Priority Class – II and other polluted river location is Mapusa river on culvert on Highway at Tar under Priority Class – V. It is pertinent to note that over the years from 2018 to 2025 the PRS in the State of Goa has reduced significantly from 11 to 2 river stretches.



A copy of Report of the periodic assessment by Goa State Pollution Control Board dated December 2025 is annexed herewith and marked as **Annexure 1**.

7. I state that as per the Monthly Progress Report for the months June to July 2025 for the State of Goa, there are 14 existing and operational Sewage Treatment Plants (“STP”) with 113.85 MLD capacity. The details of the existing and operational

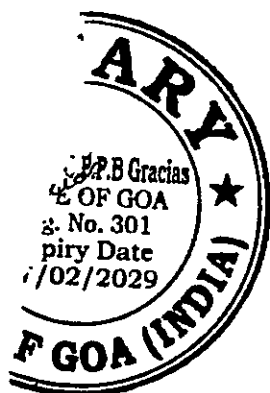
Sewage Treatment Plants, under construction Sewage Treatment Plants and proposed Sewage Treatment Plants for the State of Goa is as follows:

A. Details of existing / operational Sewage Treatment Plants in the State of Goa

No.	Location	Existing STP Capacity	Capacity Being Utilized (June / July)	Operational Status of STP	Compliance Status of STP
1.	Shirvodem, Navelim.	20 MLD	- 23.34 MLD / 24.14 MLD	Operational	Complied-with
2.	Vasco	20 MLD	- 8.90 MLD / 8.8 MLD	Operational	Complied-with
3.	Durbhat	01 MLD	- 0.15 MLD / 0.23 MLD	Operational	Complied-with
4.	Sancoale	01 MLD	- 1.0 MLD / 1.0 MLD	Operational	Complied-with
5.	Sanquelim	0.8 MLD	- 0.87 MLD / 0.32 MLD	Operational	Complied-with
6.	Kavlem, Ponda	15 MLD	- 3.13 MLD / 11.27 MLD	Operational	Complied-with
7.	Colva	7.5 MLD	- 7.50 MLD / 5.29 MLD	Operational	Complied-with



8.	Goa Medical College (GMC)	1.35 MLD	0.47 MLD / 0.47 MLD	Operational	Complied-with
9.	Tonca, Panaji	12.5 MLD	6.53 MLD / 10.83 MLD	Operational	Complied-with
10.	Tonca, Panaji	15 MLD	13.58 MLD / 15.07 MLD	Operational	Complied-with
11.	Shirvodem-Navelim	6.7 MLD	6.7 MLD / 6.7 MLD	Operational	Complied-with
12.	Patto, Panaji	2 - MLD	2.04 MLD / 2.59 MLD	Operational	Complied-with
13.	Baga	5.6 MLD	1.2 MLD / 2.7 MLD	Operational	Complied-with
14.	Mapusa	5.4MLD	----- ----	Operational	Complied-with
Total		113.85 MLD	75.41 MLD (June) / 89.41 MLD (July) <i>Previous-month in May 2025, capacity being utilised was 56.75 MLD</i>		



B. Details of under-construction Sewage Treatment Plants in the State of Goa

No.	Location	Capacity of the plant in MLD	Physical Progress (in %) (as in July 2025)	Status of I&D or	Completion Timeline

				House sewer connections	
1.	Porvorim	20 - MLD	80% i. About 3% change since June 2025 of civil works has been completed. ii. Around 92 % has been completed.	-----	December 2025
2.	Curchorem	7.5 MLD	i. Work has started for STP and Pile Cap work is in progress. ii. Around 96% of the sewer-network is completed.	-----	December 2026

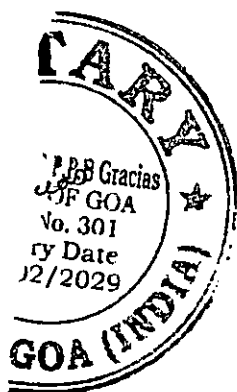
C. Details of proposed Sewage Treatment Plants in the State of Goa

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	i. STP work could not be started due to local issues.	16 months time period is



			ii. Around 65% of the sewer-network is completed.	required from start of work.
2.	Curti, Ponda	08- MLD	i. STP work could not be started due to local issues. ii. Around 92% of the sewer-network is completed.	

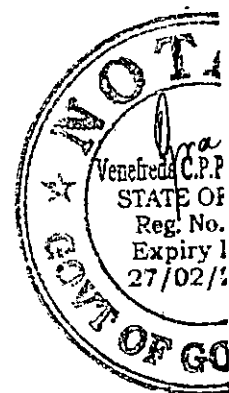
8. I state that in the State of Goa, in areas where a sewer network is not available, septic tank and soak pit systems arrangement is commonly adopted. Numerous hotels and residential buildings (having 50 rooms or flats and above) maintain their own treatment plants, as mandated under the Town and Country Planning Act, 2010 ("TCP Act"). Additionally, Sulabh toilets constructed by the Public Works Department (PWD) are provided for clusters of houses and community use, and bio-toilets have been installed across the State pursuant to the Open Defecation Free (ODF) policy.



9. I state that with regard to the status of Industrial Pollution in the State of Goa, it is submitted that there are a total of 8,611 industries operating in the State, of which 850 were added during the period from October 2023 to March 2024. At present, there are no water-polluting industries identified in the State. A total of 209 industrial units have installed Effluent Treatment Plants (ETPs), and the data is presently being updated; out of these, 207 units are reported to be compliant. The State does not have any Common Effluent Treatment Plant (CETP), and consequently, no industrial units are

connected to any CETP, nor are there any existing, under-construction, or proposed CETPs in the State.

10. I state that with respect to Solid Waste Management, the State of Goa, presently generates approximately 766 tons per day ("TPD") of municipal solid waste. A solid waste treatment plant with a capacity of 250 TPD is fully operational at Saligao, catering primarily to the coastal stretch of North Goa district and certain other identified areas. Details regarding the number, installed capacity, and utilization of existing municipal solid waste (MSW) processing facilities, categorized by type of processing such as waste-to-energy, composting (including Windrow, Vermi composting, and decentralized pit composting), biometanation, and material recovery facilities (MRFs) operated by the Goa Waste Management Corporation are provided as follows:



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

	Total Waste generation is 766 TPD		
	Capacity	Total Capacity	Waste
1	Existing Capacity Municipal Councils/Corporation	200	

2	Existing Village Panchayat Treatment Facility	35
3	GWMC Saligao Facility (250 TPD +20%)	300
4	GWMC Cacora Facility (100 TPD + 25%)	125
5	Village Panchayat MRF, GWMC Baling Stations etc.,	110
	Total Existing Capacity	770

11. The action plan to bridge any gap between installed capacity and current utilization (where such gap exceeds 20%), including the establishment of common waste treatment facilities for hazardous, biomedical, construction and demolition (C&D), and e-waste, is detailed as follows:

- (i) As in July 2025 the Integrated Solid Waste Management Facility at Bainguinim, with a capacity of 100 TPD (+25%), is catering to Tiswadi and Ponda Talukas. The Goa Waste Management Corporation ("GWMC") Board and the expert committee have decided to re-float the RFQ for the 100 TPD SWMF at Bainguinim with revised estimates, as two years have elapsed since the earlier RFQ and re-floating the tender is expected to attract more bidders. However, Civil Appeal No. 4983 of 2021 along with Interlocutory Application No. 105533 of 2021 (application for stay) has been filed before the Supreme Court of India by the Bainguinim Citizen Forum. The revised RFQ has already been technically approved and is currently awaiting Government approval for the



floating of the tender. The proposed timeline for implementation will be decided after the verdict of the Supreme Court in the matter.

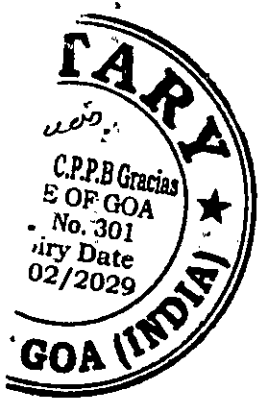
- (ii) As in July 2025 the Solid Waste Management Facility at Verna, with a capacity of 250 TPD (+20%) along with a 250 TPD Waste-to-Energy facility, is designed to cater to Mormugao and Salcete Talukas. The GWMC, through its appointed consultant, is in the process of submitting an application for extension of the Terms of Reference (“ToR”) issued by the Goa State Expert Appraisal Committee. After the extension of the ToR, the application for Environmental Clearance (EC) will be resubmitted. Further, the Department of Environment has requested GWMC to submit a fresh EC application on the PARIVESH 2.0 portal, since the earlier proposal submitted on the PARIVESH 1.0 portal has been delisted and that portal is scheduled to be decommissioned. Accordingly, the consultant is currently uploading the updated Environmental Impact Assessment (EIA) Report along with additional studies on the PARIVESH 2.0 portal on behalf of GWMC, following the extension of the ToR. Upon grant of Environmental Clearance, GWMC will proceed to float the tender for the 250 TPD Solid Waste Management Facility.



12. I state that with regards to Construction and Demolition waste management, the State of Goa had earlier proposed a 500-TPD

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processing plant at Cudchirem in Bicholim Taluka, North Goa district, however, due to revenue-related litigations, steps have been initiated to identify alternate land at Tuem in Pernem Taluka, North Goa district, and a proposal has been made to take over land bearing Survey Nos. 120 and 125 in Tuem village for establishing the Construction & Demolition waste facility. The State comprises 189 Village Panchayats, where door-to-door waste collection and source segregation are being implemented at the Panchayat level. At present, there are no uncontrolled garbage dumpsites or sanitary landfills reported, no legacy waste within a one-kilometre buffer on either side of rivers, and no drains discharging into rivers requiring installation of floating racks or screens to prevent solid waste from entering the rivers.



13. I state that in respect of bio medical waste management in the State of Goa, as per the Annual Report, the total bio-medical waste generation in the State is 2,992 kilograms per day, in addition to 17,179 kilograms per day of sanitary waste. Common Bio-Medical Waste Treatment Facility (CBMWTF) is operational at Kundaim, which caters to the treatment and disposal of bio-medical waste generated across the State. The number of hospitals and health care facilities operating in the State is detailed as follows:

- (i) The healthcare infrastructure in the State comprises both public and private facilities. There are 50 public healthcare facilities (excluding veterinary hospitals and

dispensaries) with a combined bed capacity of 3,159, which are bedded facilities. In addition, there are 14 public dispensaries functioning as non-bedded facilities. The private healthcare sector consists of 102 facilities with a bed capacity of 2,443 beds. Thus, the total combined bed strength in the State across public and private healthcare facilities is 5,602 beds.

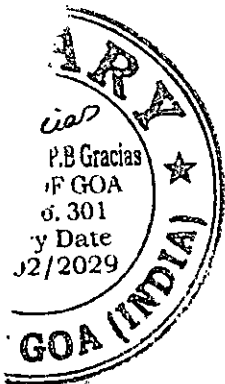
- (ii) Apart from these, the State also has one public dental college and 251 private dental clinics operating under the private healthcare sector. In the veterinary healthcare sector, there are 5 public veterinary hospitals and 25 public veterinary clinics, along with 27 private pet clinics operating in the private sector. Additionally, there are approximately 482 private non-bedded healthcare facilities (excluding dental clinics) that cater to consultation, diagnostics, observation, and select treatments across the State.

14. I state that with regards to Plastic Waste Management in the State of Goa, the total plastic waste generation is approximately 80.66 tons per day (TPD), as per the Waste Characterization Report, 2018. As part of the measures adopted for reduction and management of plastic waste, Common Material Recovery Facilities (MRFs) along with baling facilities have been established at Cacora and Bicholim. The State of Goa has adopted alternate treatment technology through the establishment of a Plastic-to-Fuel plant at Pernem Municipal Council in North Goa.



15. I state that in respect to identification of polluting sources, including drains contributing to river pollution and action pursuant to the orders of this Hon'ble Tribunal regarding in-situ treatment, it is submitted that there is no industrial discharge within any of the polluted river stretches in the State. In furtherance, the Secretary (Environment) has been appointed as the Nodal Officer by the Chief Secretary of the State, assisted by the Director of the Department of Environment & Climate Change, Goa.

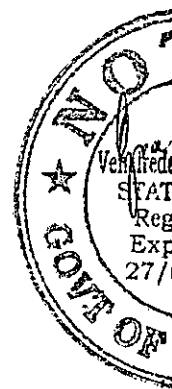
16. I state that pursuant to the O.A. No. 606 of 2018, which was disposed off by this Hon'ble Tribunal, vide Order dated 2 March 2023, the State of Goa has have ensured compliance with the said directives. The latest water quality of polluted rivers and their tributaries, the Central Pollution Control Board (CPCB) has re-assessed the polluted river stretches in the State of Goa, resulting in a reduction in the number of such stretches, as detailed below:



A. Water quality in the months of July 2025

1. RIVER CHAPORA NEAR ALORNA FORT, PERNEM			
Sr. No.	Parameters	Jul-25	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	7.01	6.0-9.0
2	Dissolved Oxygen (mg/l)	8.6	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)	220	-
Remarks: All parameters are within permissible limits for the month of JULY 2025			

2. RIVER CHAPORA NEAR SIOLIM BRIDGE			
Sr. No.	Parameters	Jul-25	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.68	6.5-8.5
2	Turbidity(NTU)	38.80	30 NTU
3	Dissolved Oxygen (mg/l)	7.2	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)	220	-
Remarks: Turbidity and Fecal Coliform parameters are exceeding the permissible limits for the month of JULY 2025			



3. RIVER TIRACOL AT KERI, PERNEM

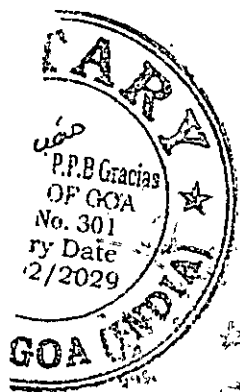
Sr. No.	Parameters	Jul-25	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.14	6.5-8.5
2	Turbidity(NTU)	45.60	30 NTU
3	Dissolved Oxygen (mg/l)	7.0	4 mg/l or more
4	BOD (mg/l)	BDL	3 mg/l or less
5	Fecal Coliform (MPN/100ml)	330	100 or less MPN/100ml
6	Fecal Streptococci (MPN/100ml)	110	-

Remarks: Turbidity and Fecal Coliform parameters are exceeding the permissible limits for the month of JULY 2025

4. RIVER BICHOLIM BARAZAN NAGAR, BICHOLIM

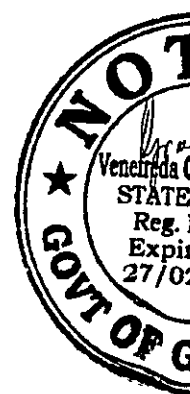
Sr. No.	Parameters	Jul-25	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.53	6.0-9.0
2	Dissolved Oxygen (mg/l)	7.0	4 mg/l or more
3	BOD (mg/l)	BDL	3 mg/l or less
4	Total Coliform (MPN/100ml)	1400	5000 or less MPN/100ml
5	Fecal Streptococci (MPN/100ml)	220	-

Remarks: All parameters are within permissible limits for the month of JULY 2025



5. RIVER MANDОВI AT TONCA MARCELA			
Sr. No.	Parameters	Jul-25	Limit for class 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)	10.19	30 NTU
3	Dissolved Oxygen (mg/l)	7.9	4 mg/l or more
4	BOD (mg/l)	BDL	3 mg/l or less
5	Fecal Coliform (MPN/100ml)	230	100 or less MPN/100ml
6	Fecal Streptococci (MPN/100ml)	140	-
Remarks: Fecal Coliform parameter is exceeding the permissible limit for the month of JULY 2025			

6. RIVER SINQUERIM, CANDOLIM SIDE			
Sr. No.	Parameters	Jul-25	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.68	6.5-8.5
2	Turbidity(NTU)	14.99	30 NTU
3	Dissolved Oxygen (mg/l)	7.2	4 mg/l or more
4	BOD (mg/l)	BDL	3 mg/l or less
5	Fecal Coliform (MPN/100ml)	490	100 or less MPN/100ml
6	Fecal Streptococci (MPN/100ml)	230	-
Remarks: Fecal Coliform parameter is exceeding the permissible limit for the month of JULY 2025			



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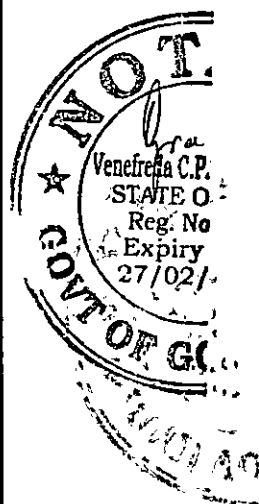
7. RIVER SINQUERIM, NEAR GANPATI TEMPLE			
Sr. No.	Parameters	Jul-25	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.57	6.5-8.5
2	Turbidity(NTU)	9.04	30 NTU
3	Dissolved Oxygen (mg/l)	6.7	4 mg/l or more
4	BOD (mg/l)	BDL	3 mg/l or less
5	Fecal Coliform (MPN/100ml)	700	100 or less MPN/100ml
6	Fecal Streptococci (MPN/100ml)	230	-
Remarks: Fecal Coliform parameter is exceeding the permissible limit for the month of JULY 2025			

8. RIVER ASSANORA AT ASSANORA			
Sr. No.	Parameters	Jul-25	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.46	6.0-9.0
2	Dissolved Oxygen (mg/l)	5.2	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)	210	-
Remarks: All parameters are within permissible limit for the month of JULY 2025			



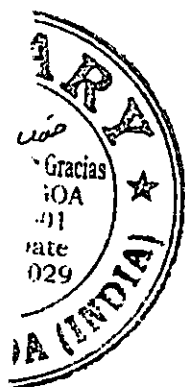
9. RIVER VALVANTI AT SANQUELIM			
Sr. No.	Parameters	Jul-25	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.76	6.0-9.0
2	Dissolved Oxygen (mg/l)	7.1	4 mg/l or more
3	BOD (mg/l)	BDL	3 mg/l or less
4	Total Coliform (MPN/100ml)	1700	5000 or less MPN/100ml
5	Fecal Streptococci (MPN/100ml)	220	-
Remarks: All parameters are within permissible limit for the month of JULY 2025			

10. RIVER ZUARI AT MADKAI JETTY			
Sr. No.	Parameters	Jul-25	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	6.73	6.5-8.5
2	Turbidity(NTU)	4.34	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)	700	100 or less MPN/100ml
6	Fecal Streptococci (MPN/100ml)	220	-
Remarks: Fecal Coliform parameter is exceeding the permissible limit for the month of JULY 2025			



6

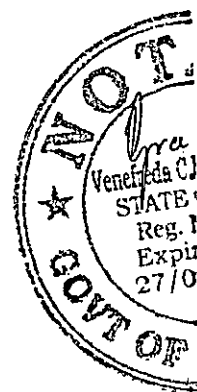
11.RIVER ZUARI AT BORIM BRIDGE			
Sr. No.	Parameters	Jul-25	Limit for SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	6.97	6.5-8.5
2	Turbidity(NTU)	6.37	30 NTU
3	Dissolved Oxygen (mg/l)	7.5	4 mg/l or more
4	BOD (mg/l)	BDL	3 mg/l or less
5	Fecal Coliform (MPN/100ml)	780	100 or less MPN/100ml
6	Fecal Streptococci (MPN/100ml)	170	-
Remarks: Fecal Coliform parameter is exceeding the permissible limit for the month of JULY 2025			



12.RIVER KHANDEPAR, OPA, PONDA			
Sr. No.	Parameters	Jul-25	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.33	6.0-9.0
2	Dissolved Oxygen (mg/l)	7.3	4 mg/l or more
3	BOD (mg/l)	BDL	3 mg/l or less
4	Total Coliform (MPN/100ml)	790	5000 or less MPN/100ml
5	Fecal Streptococci (MPN/100ml)	170	-
Remarks: All parameters are within the permissible limits for the month of JULY 2025			

13. RIVER KHANDEPAR, CODLI			
Sr. No.	Parameters	Jul-25	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	6.4	6.0-9.0
2	Dissolved Oxygen (mg/l)	7.6	4 mg/l or more
3	BOD (mg/l)	BDL	3 mg/l or less
4	Total Coliform (MPN/100ml)	1100	5000 or less MPN/100ml
5	Fecal Streptococci (MPN/100ml)	210	-
Remarks: All parameters are within the permissible limits for the month of JULY 2025			

14. RIVER TALPONA AT CANACONA			
Sr. No.	Parameters	Jul-25	Limit for class C rivers as per CPCB classification based on designated best use of rivers
1	pH	7.2	6.0-9.0
2	Dissolved Oxygen (mg/l)	7.7	4 mg/l or more
3	BOD (mg/l)	BDL	3 mg/l or less
4	Total Coliform (MPN/100ml)	540	5000 or less MPN/100ml
5	Fecal Streptococci (MPN/100ml)	140	-
Remarks: All parameters are within the permissible limits for the month of JULY 2025			



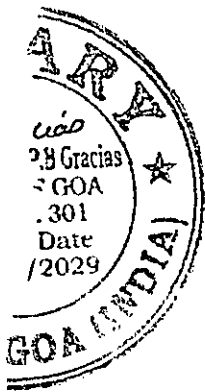
15. RIVER SAL AT KHAREBAND, MARGAO

Sr. No.	Parameters	Jul-25	Limit for class SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	6.85	6.5-8.5
2	Turbidity(NTU)	20	30 NTU
3	Dissolved Oxygen (mg/l)	4.6	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)	350	-
Remarks: Fecal coliform parameter is exceeding the permissible limits for the month of JULY 2025			

16. RIVER SALAT MOBOR

Sr. No.	Parameters	Jul-25	Limit for class SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.15	6.5-8.5
2	Turbidity(NTU)	30.5	30 NTU
3	Dissolved Oxygen (mg/l)	6.3	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)	220	-
Remarks: Turbidity and Fecal coliform parameters are exceeding the permissible limit for the month of JULY 2025			

17. RIVER MAPUSA ON CULVERT ON HIGHWAY MAPUSA-PANAJI

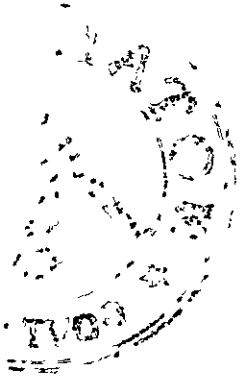


Sr. No.	Parameters	Jul-25	Limit for class SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	6.74	6.5-8.5
2	Turbidity(NTU)	7.09	30 NTU
3	Dissolved Oxygen (mg/l)	4.9	4 mg/l or more
4	BOD (mg/l)	BDL	3 mg/l or less
5	Fecal Coliform (MPN/100ml)	790	100 or less MPN/100ml
6	Fecal Streptococci (MPN/100ml)	170	-
Remarks: Fecal coliform parameter is exceeding the permissible limit for the month of JULY 2025			

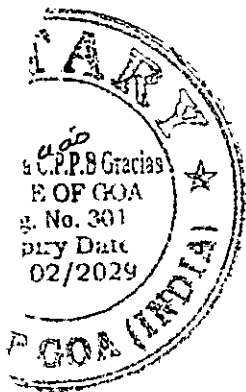
18. RIVER KALNA AT CHANDEL, PERNEM			
Sr. No.	Parameters	Jul-25	Limit for class SW II rivers as per CPCB classification based on designated best use of rivers
1	pH	7.03	6.0-9.0
2	Dissolved Oxygen (mg/l)	8.9	4 mg/l or more
3	BOD (mg/l)	BDL	3 mg/l or less
4	Total Coliform (MPN/100ml)	1700	5000 or less MPN/100ml
5	Fecal Streptococci (MPN/100ml)	240	-
Remarks: All parameters are within the permissible limits for the month of JULY 2025			

NOTE:



**BDL- Below Detection Limit**

17. I state that in relation to groundwater regulation, the Goa Ground Water Act, 2002 has been enacted in the State. Groundwater extraction is monitored, and registration of all groundwater structures is mandatory. Commercial extraction is subject to levy of water tax. The Central Ground Water Board (CGWB) has declared Goa as a "Safe Zone" with respect to groundwater development, and its guidelines are being implemented. Compliance stands at 100%, and the target has been achieved. In furtherance, as regards to irrigation practices, Water User Associations (WUAs) have been constituted to promote economical use of water. The expected compliance level is 90%, whereas actual compliance is approximately 80%.



18. I state that with respect to rainwater harvesting, industries are being encouraged through the Department of Industries, Trade & Commerce (DITC) to adopt such measures. Further, the Town and Country Planning (TCP) Department has made rooftop rainwater harvesting mandatory for multi-dwelling units and residential-cum-commercial complexes. The expected compliance level is 50%, with actual compliance at 40%, and the same is being monitored. In furtherance, the demarcation of floodplains and removal of illegal encroachments have been completed, achieving 100% compliance and fulfilling the target.



19. I state that in respect of maintenance of minimum environmental flow (e-flow) of rivers, it is submitted that the rivers in the State are perennial in nature, and there is no issue concerning e-flow in major rivers.
20. I state that the model river is being adopted by the State of Goa is Sal River. The expected compliance level for achieving bathing water quality standards is 100%, and the Water Resources Department has achieved 100% compliance.
21. I state that all action plans prepared for eleven polluted rivers are being periodically reviewed through meetings of the River Rejuvenation Committee (RRC-Goa) under the Chairmanship of the Secretary (Environment). Based on water quality parameters, particularly Biochemical Oxygen Demand (BOD) for the years 2019 and 2021, the Central Pollution Control Board revised the polluted river stretches in August 2022, reducing the number in Goa from 11 (2018) to 6 (2022).
- A copy of the minutes of meeting the River Rejuvenation Committee (RRC-Goa) documented over the tenure November 2018 to December 2024 is annexed herewith and marked as **ANNEXURE-2**.
22. I state that in furtherance to ensure compliance with the steps taken, action against identified polluters, violators, and officers responsible for monitoring failures is undertaken under the Goa Ground Water Act, 2002 and the Goa Irrigation Act, 1973 by the



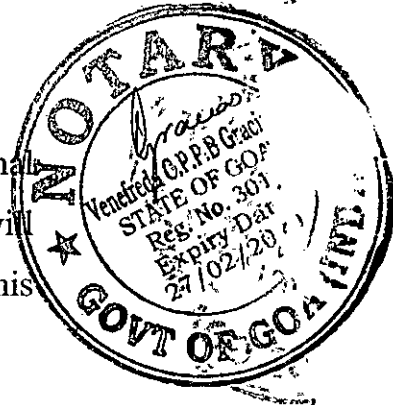
designated Ground Water and Canal Officers respectively. The expected and actual compliance level as stated is 100%, and the target has been achieved.

23. I state that with regard to Phase II remediation works in the State of Goa, remediation activities have been undertaken across seven identified dumpsites under various Urban Local Bodies (ULBs). The remediation work at the Assagao dumpsite under the jurisdiction of Mapusa Municipal Council, the Pernem dumpsite under Pernem Municipal Council, the Cacora dumpsite under Curchorem Cacora Municipal Council, the Headland Sada dumpsite under Mormugao Municipal Council, and the waste inside the Sonsoddo MSW shed under Margao Municipal Council has been completed. Remediation and disposal work at the Taleigao dumpsite under the Taleigao Panchayat, Tiswadi Taluka, and at the Curca dumpsite under the Corporation of the City of Panjim is presently in progress.

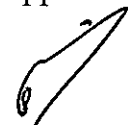
24. In terms of the Phase II tender, considering all seven dumpsites collectively, a total quantity of approximately 1,11,849.31 cubic meters of waste has been remediated to date. Out of this, approximately 57,611.73 cubic meters of Refuse-Derived Fuel (RDF) has been disposed of, and around 37,987 cubic meters of inerts and compost have been disposed of. The remaining quantities at certain sites are presently stored at site pending further processing and disposal.

Signature
Date: 02/2029

25. It is submitted that the Respondent holds this Hon'ble Tribunal in highest esteem and with utmost respect and regard will remain bound and comply any further directions passed by this Hon'ble Court in the present matter.



26. I state that whatever I have stated is true to the best of my knowledge and belief and nothing material has been suppressed there from.


DEPONENT

VERIFICATION

I, the above named Deponent, do hereby solemnly affirm and further verify that the contents of my above Affidavit are true and correct to the best of my knowledge; no part of it is false; and nothing material has been concealed there from.

Verified at Panaji on this day of 12th March 2026.


DEPONENT

Solemnly affirmed before me

Sachin S. Desai

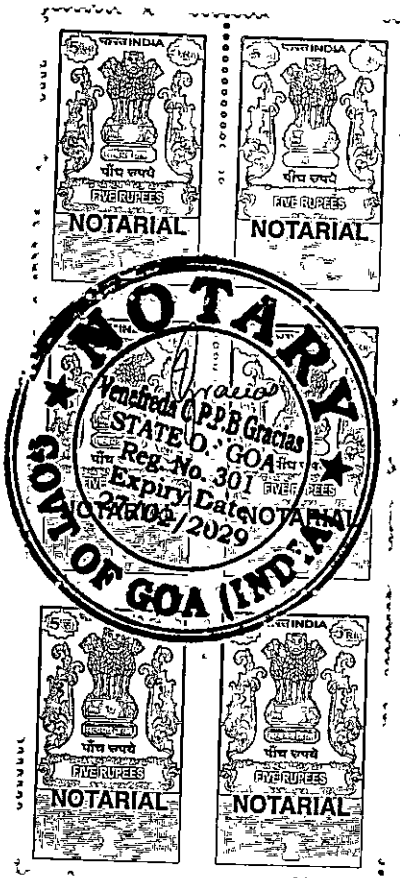
Who is identified before me by

At Calangute - Goa

Sr. No. 128/03/2026

Date. 12/03/2026


Venefrada C.P.P.B. Gracias
Advocate & Notary Goa State





POLLUTED RIVER-STRETCHES / LOCATIONS FOR RESTORATION OF WATER QUALITY

Water Quality Management (I) Division
Central Pollution Control Board, Parivesh Bhavan, East Arjun Nagar, New Delhi – 110032

December 2025



Central Pollution Control Board (*hereinafter referred as CPCB*) has been assessing water quality of aquatic resources in the Country in association with State Pollution Control Board & Pollution Control Committees for Union Territories under the National Water-quality Monitoring Programme (NWMP).

At present, the **network consists of 4,736 locations** (*that includes 2,155 locations on rivers*) spread in 28 States & 07 Union Territories. While in Goa, the **Goa State Pollution Control Board (GSPCB)** monitors at 115 locations (*that includes 30 river-stretches / locations + 20 coastal-waters*) on monthly basis under the said programme.

Based on periodic assessments of water quality of rivers in the Country, CPCB identifies polluted river stretches (PRS's) considering **Bio-chemical Oxygen Demand (BOD) as a criteria parameter**.

The present assessment (*i.e. September 2025*) is based on river water quality data monitored during 2022 & 2023 wherein PRS's indicate that the **number of PRS's has decreased from 351 in 2018 to 279 in 2025**.

Detailed assessment indicates that improvement in water quality has been observed in 219 polluted river stretches identified during the year 2018. Out of these 218 polluted river stretches, 148 river-stretches are not identified as polluted stretches (**Goa has 10 such stretches**) due to **its compliance to BOD-criteria – i.e. value less than 3.0 mg/l**.

Criteria for identification and classification of Polluted River Stretch (PRS) / Location (PRL)

PRS / PRL are categorised under five Priority Classes (I to V) on the basis of maximum BOD level is observed as under :

- Priority Class I : Monitoring locations exceeding BOD 30.1 mg/L
- Priority Class II : Monitoring locations with BOD ranging between 20.1 to 30 mg/L**
- Priority Class III : Monitoring locations with BOD ranging between 10.1 to 20 mg/L
- Priority Class IV : Monitoring locations with BOD ranging between 6.1 to 10 mg/L
- Priority Class V : Monitoring locations with BOD ranging between 3.1 to 6 mg/L**

While categorising above, **Primary Water Quality Criteria for Bathing Waters (used for organised outdoor bathing)** – i.e. **BOD > 3.0 mg/L** was taken as a benchmark target.

In the State of Goa, water quality of 15-rivers at 32 locations was monitored in 2022 / 2023. Out of which, 04-locations on 02-rivers were found non-complying to the prescribed water quality criteria w.r.t. BOD wherein there is 01-polluted river stretch (*Sal river : from Rumder to Orlim bridge – Priority Class - II*) and 01-polluted river location (*Mapusa river : on culvert on Highway at Tar – Priority Class - V*)

Table – 1: State-wise no. of polluted river locations and polluted rivers stretches identified

S. No.	State	Priority Class					Total
		I	II	III	IV	V	
1	Andhra Pradesh	0	0	1	0	3	4
2	Arunachal Pradesh	0	0	0	0	4	4
3	Assam	1	0	0	1	4	6
4	Bihar	0	0	4	3	5	12
5	Chhattisgarh	0	1	3	0	2	6
6	Daman- Diu & Dadra Nagar Haveli	0	1	0	0	0	1
7	Delhi	1	0	0	0	0	1
8	Goa	0	1	0	0	1	2



3341

GOA STATE POLLUTION CONTROL BOARD

33

गोंय राज्य प्रदूषण नियंत्रण मंडळ

Comparison of PRS / PRL as identified by the CPCB in 2018 / 2022 / 2025 in Goa

2018 –
11 PRS

GOA	SAL	KHAREBAND TO MOBOR	4.2 - 16.8	III
	MANDOVI	MARCELA TO VOLVOI	3.3 - 6.2	IV
	TALPONA	along canacona	6.8	IV
	ASSONORA	ASSONORA TO SIRSAIM	3.3	V
	BICHOLIM	BICHOLIM TO CURCHIREM	4.8	V
	CHAPORA	PERNEM TO MORJIM	3.5 - 5.2	V
	KHANDEPAR	PONDA TO OPA	3.4	V
	SINQUERIM	Along Candolim	3.6	V
	TIRACOL	Along Tiracol	3.9	V
	VALVANT	SANKLI – BICHOLIM TO PORIEM	4.3	V
	ZUARI	Curcholem to Madkai	3.2 - 5.1	V

Table - 9: Number of Polluted River Stretches in Goa

S NO.	RIVER	POLLUTED RIVER STRETCH/ LOCATION	MAX BOD OBSERVED	PRIORITY CLASS
1.	KALNA	ALONG CHANDEL	4.0	V
2.	KHANDEPAR	ALONG KHANDEPAR	4.2	V
3.	MANDOVI	ALONG AMONA	3.7	V
4.	MAPUSA	ALONG KARASWADA	5.0	V
5.	SAL	KHAREBAND TO ASSOLNA	6.0	V
6.	ZUARI	PANCHAWADI TO MARCAIM	6.4	IV

2022 –
06 PRS

Table – 3.8: Number of Polluted River Stretches in Goa

S. No.	River	Polluted river stretch/ location	Priority Class
1.	SAL	RIVER SAL FROM RUMDER TO ORLIM BRIDGE, ORLIM	II
2.	MAPUSA	RIVER MAPUSA ON CULVERT ON HIGHWAY MAPUSA-PANAJI	V

2025 –
02 PRS /
PRL

Thus, if compared for a period from 2018 till 2025, following 10 PRS are not identified as polluted during present assessment : 2025

46.	GOA	MANDOVI	MARCELA TO VOLVOI	3.3 - 6.2	IV
47.	GOA	TALPONA	ALONG CANACONA	6.8	IV
48.	GOA	ASSONORA	ASSONORA TO SIRSAIM	3.3	V
49.	GOA	BICHOLIM	BICHOLIM TO CURCHIREM	4.8	V
50.	GOA	CHAPORA	PERNEM TO MORJIM	3.5 - 5.2	V
51.	GOA	KHANDEPAR	PONDA TO OPA	3.4	V
52.	GOA	SINQUERIM	ALONG CANDOLIM	3.6	V
53.	GOA	TIRACOL	ALONG TIRACOL	3.9	V
54.	GOA	VALVANT	SANKLI – BICHOLIM TO PORIEM	4.3	V
55.	GOA	ZUARI	CURCHOREM TO MADKA	3.2 - 5.1	V

Refer pg. no. 125 of the draft CPCB report, September 2025

Thus, it is seen that the Action Plan prepared by the River Rejuvenation Committee (RRC-Goa) in March 2020 (*in response to the NGT directives in a matter of O.A. 673 of 2018*) under the Chairmanship of the Secretary, Environment that comprised of representatives of various stakeholder departments – SIDCGL / PWD / CoP/ WRD / DoP / DMA (DUD) / DHS / GWMC has shown a gradual improvement in river water-quality (*with specific reference to Biochemical Oxygen Deman – BoD*) due to time-bound on-site interventions *vis-à-vis* implementation of action plan strategies (APS) by these departments which has resulted in decreasing the numbers of such PRS from 11 in 2018 to 02 in 2025.

Meanwhile, the GSPCB, under the mandate of National Water-quality Monitoring Programme (NWMP), is continuing to collect, analyse and monitor the water-quality on monthly basis at 115 locations that includes water sources (surface and groundwater) from fresh / brackish / saline locations. The details of which will be presented, in detail, separately. The said database is regularly uploaded on the CPCB's web-portal : NWQDES as well as published in Annual Report to be released on World Environment Day every year.

Draft for Approval

Minutes of the 1st Meeting of the River Rejuvenation Committee (RRC) held under the Chairmanship of Chief Secretary in the conference hall of the Secretariat, Alto-Porvorim on 26th November 2018.

The First meeting of the River Rejuvenation Committee (RRC), *constituted by the Department of Environment*, vide 'Order' no. 1/20/18-PCB/Lab-13798/667 dated 21st October 2018 (*in response to NGT's Order pronounced on 20th September 2018 in a matter of Application No. 673 of 2018*), was held on 26th November in the Conference Hall of the Chief Secretary, Secretariat at 03.00p.m. onwards.

The meeting was chaired by the Chief Secretary, Govt. of Goa and the following officials / Department representatives were present during the meeting:-

1.	Shri. Ravi Jha , <i>IAS</i> , Director, Department of Environment, Porvorim.
2.	Shri. S. T. Nadkarni , Chief Engineer, Water Resources Department (WRD), Porvorim.
3.	Dr. Sanjeev Dalvi , Director, Directorate of Health Services, Panaji.
4.	Shri. P. B. Seldarkar , Managing Director, Sewerage Infrastructure Development Corporation of Goa Ltd., (SIDCGL), Panaji.
5.	Shri. Rohit Naik , Technical Assistant, Sewerage Infrastructure Development Corporation of Goa Ltd., Panaji.
5.	Shri. Pundalik Khorjuvenkar , Dy. Director, Directorate of Panchayats, Panaji.
6.	Shri. Ramesh P. Naik , Asst. Director, Department of Urban Development (DMA), Panaji.
7.	Shri. Akshay Potekar , Dy. Director, Directorate of Industries, Trade and Commerce (DITC), Panaji.
8.	Dr. Shamila Monteiro , Member Secretary, Goa State Pollution Control Board (GSPCB), Saligao.

At the outset the Chief Secretary highlighted the importance of the NGT Order, *referred above*, as well as its compliance and mandated the role of line departments concerned to share the subject-specific data / information (*i.e. polluted riverine stretches in the State of Goa*) so as to enable to compile a preliminary Action Plan to be submitted to the Central Pollution Control Board (CPCB) latest by 16/12/2018 as per the Hon'ble NGT Order, *referred above*. It was also informed that the proposed Action Plan be prepared in line with the guidelines referred at sr.no.48 (A), (B), (C) & (D) of the NGT-Order *referred above*.

In order to understand the current status of polluted riverine stretches in the State and as instructed by Dr. Shamila Monteiro, Member Secretary (GSPCB), Dr. Mohan R. Girap, Scientist-C (GSPCB) made a technical presentation about the eleven polluted riverine

stretches which includes, three stretches (03 nos.) in South Goa - (i) Sal river – stretch from Khareband to Mobor, (ii) Talpona river – at Canacona and (iii) Zuari river – stretch from Curchirem to Madkai and eight stretches (08 nos.) in North Goa - (i) Mandovi river – stretch from Marcela to Volvoi, (ii), (iv) Assonora river – stretch from Assonora to Sirsaim, (iii) Bicholim river – stretch from Bicholim to Curchirem, (iv) Chapora river – stretch from Pernem to Morjim, (v) Khandepar river – stretch from Ponda to Opa, (vi) Siquerim river – at Candolim, (vii) Tiracol river – at Tiracol, (viii) Valvant river – stretch from Bicholim to Poriem. Accordingly, it was informed that based on the ‘priority-criteria prescribed for pollution index by the CPCB’ the river-Sal has the “higher” priority (*category-III*) as compared to Mandovi and Talpona rivers (*category-IV*) with “moderate” priority, while Assonora / Bicholim / Chapora / Khandepar / Siquerim / Tiracol / Valvant / Zuari rivers have the “least” priority (*category - V*), thereby indicating that the State needs to prioritise action plan for Sal river followed by Mandovi / Talpona and other rivers. It was also informed that the State of Goa does not have any riverine stretches in the highest priority category of I and II.

During the discussions, the Chief Secretary opined that the polluted riverine stretches (*i.e. pollution-index*) are primarily due to discharge / release of untreated or partially-treated domestic waste-water. However, he stressed on the fact that to arrive at such a logical conclusion, it is important to ascertain and rule out the possibility of any fallouts likely to be arising due to indiscriminate/uncontrolled industrial discharge, due to non operational or faulty maintenance of ETP/STP, from industrial units located / operational within the immediate periphery of identified riverine stretches. Accordingly, he suggested to compile baseline information with respect to number / category of industry as well as operational status of wastewater disposal / treatment and verify its compliance to the CPCB-prescribed water-quality standards with specific reference to Biological Oxygen Demand (BOD) and COD stipulated while granting consent to such industries by the GSPCB. He reiterated that such an exercise would involve inputs from line-departments as it mandates on-site inspection conducted jointly by Department of Industries, Trade and Commerce (DITC), Water Resources Department (WRD), Public Works Department (PWD), Directorate of Health Services, Sewerage Infrastructure Development Corporation of Goa Ltd., (SIDCGL), Department of Urban Development (DMA), Department of Panchayats and Goa State Pollution Control Board.

In response to the same, the Chief Secretary instructed the representative of DITC to share the information in respect of various industrial units located and operational within the immediate vicinity of above referred riverine stretches. Further, he requested the representative from WRD, PWD and SIDCGL to provide the status of ongoing / proposed sewerage schemes for areas covering polluted river stretches.

In response to the same, it was informed by the SIDCGL that proposed schemes are as under -

Sr. No.	River Name	Polluted river stretches	Priority	Status
1.	Assonora	Assanora-Sirsaim	V	Not Applicable
2.	Bicholim	Bicholim-Curchirem	V	Detailed Project Report (DPR) has been prepared amounting to Rs.1.85 cr.
3.	Chapora	Pernem to Morjim	V	DPR has been prepared amounting to Rs.25 cr.
4.	Khandepar	Ponda to Opa	V	Not Applicable
5.	Mandovi	Marcel to Volvoi	IV	DPR has been prepared amounting to Rs.256 cr.
6.	Sal	Khareband to Mobor	III	DPR has been prepared amounting to Rs.351.2 cr.
7.	Sinquerim	Sinquerim to Candolim	V	DPR has been prepared amounting to Rs.254 cr.
8.	Talpona	Canacona to Talpona Beach	IV	Not Applicable
9.	Tiracol	Arona to Tiracol	V	Not Applicable
10.	Valvanti	Sankli to Bicholim	V	This stretch is covered under sr. no. (2).
11.	Zuari	Borim bridge to Marcaim jetty	V	Not Applicable

While, on-going / completed works are detailed as -

- Sewerage scheme for Porvorim and its surround areas in Bardez Taluka –***Phase I in progress.***
- Sewerage scheme for Ponda Municipal areas including Curti, Kavlem Bandora and other surrounds agglomerates in Ponda Taluka.
- Sewerage scheme for Margao, Navelim and its surrounding areas in Salcete Taluka – Laying of sewerage network in Navelim and surround areas is in progress and is nearing completion. 20 MLD STP at Margao by Sewerage Infrastructure Development Corporation of Goa Ltd is in ***completed and commissioned.***

SIDCGL also informed about New Proposals which has been prioritised as -

Sr. No.	New Proposals	Fully/Partly covered
I.	Sewerage scheme for Candolim and surrounding areas	Sinquerim to Candolim
II.	Sewerage scheme for Bicholim and surrounding areas	Bicholim to Curchirem
III.	Sewerage scheme South coastal belt Phase-II	River Sal (Khareband to Mobor)
IV.	Sewerage scheme Dabolim and its surrounding areas in Mormugao Taluka- Phase II	River Zuari
V.	Sewerage scheme for Marcela Town and surrounding areas	River Mandovi
VI.	Sewerage scheme for Old Goa (Heritage site) and surrounding areas	River Mandovi
VII.	Sewerage scheme for Valpoi Municipal Town and surrounding areas	River Valvanti
VIII.	Sewerage scheme for Pernem Municipal area and surrounding agglomerates.	River Chapora

In response to NGT directives referred at sr.nos. 50 (iii), with specific reference to ground water extractions, adopting good irrigation practices, protection and management of Flood Plain Zones, Rain Water Harvesting, Ground Water Charging, Maintaining minimum environmental flow of river and plantation on both sides of the river, Chief Engineer, WRD informed as under -

1. **Groundwater recharge** - As estimated by the Central Ground Water Board (CGWB), the utilization of ground water in the State is 37% which is considered 'safe'. The State has good recharge areas and through the monsoons are from June to September, most of the aquifers are recharged by the month of July itself. The quality of the ground water is normally safe, except for few site-specific issues.

Goa is one of the foremost States which is implementing the ground water regulation in a right perspective. Goa has enacted the 'Goa Ground Water Regulation Act' and Ground Water Officers have been notified. Government is also levying charges for commercial and industrial withdrawals of ground water.

2. **Floods and flood plains** - State, being very small in its geographical area as well as considering its physiography and topography, flood plains have not be mapped / delineated. However, the flood-prone areas have been demarcated and mitigation

measures have been prioritised to mitigate the normal floods. Flood monitoring systems has also been put in place with real time data transfers on water levels of the rivers during the monsoons.

3. **Rainwater harvesting** – State has already notified the ‘Rainwater Harvesting Policy’ and matter has been taken up with the Town and Country Planning (TCP) Department and Directorate of Municipal Administration (DMA) to amend their acts in tune with the notified policy. The Water Resources Department has also constructed a series of pot-monsoon harvesting structures (*about 320 in nos.*) across the rivers which create storages as well as enable in effective recharge of the ground water in surrounding areas.

4. The WRD is making efforts to provide for e-flows in the rivers, wherever possible.

The Chief Secretary further desired to know about the status of solid waste management and waste-processing facilities, quantification and characterization of solid waste, trade and sewerage generated in the catchment area of the polluted river stretch. He also stressed that the action plan should focus on diversion of sewerage carrying drains to the sewage treatment plant and utilization of treated sewage to minimize the extraction of ground water.

Based on the input from the line departments referred above, the Chief Secretary instructed to prepare a preliminary action plan, in line with the ‘model Action Plan prepared for prevention and control of pollution as well as rejuvenation of River Hindon’ as referred in the NGT directives. However, in the meantime, Chief Secretary stressed on the fact that the RRC needs to send a progress report by e-mail to filing.ngt@gmail.com latest by 14th December 2018.

A meeting ended with thanks to the Chair


(Dr. Shamila Monteiro)
Member Secretary
Goa State Pollution Control Board

Minutes of the 2nd RRC-Goa Meeting held on 07th January 2019**Minutes of the Meeting**

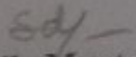
The 2nd River Rejuvenation Committee meeting was held on 7th January, 2019 in the Conference Hall of Secretariat, Porvorim – Goa. At the outset the Member Secretary welcomed the members and informed that the NGT passed an Order in the matter of Application No. 673 of 2018 to prepare the Action Plan for rejuvenation of the polluted river stretches and the same has to be complied by 31st January, 2019. As per the decision taken in the 1st meeting of the committee, a team comprising of the officials of the Pollution Control Board and the Sewerage and Infrastructural Development Corporation of Goa Limited (SIDCGL) inspected the river stretches and inspection report is awaited. Further she requested Shri. Sanjeev Joglekar, O.S.D. to Director (Environment) to brief the members. He informed the committee that the river stretches are categorised under 5 categories based on the pollution. There are 312 rivers which are polluted as per the monitoring carried out by the various State Boards under the National Water Quality Monitoring Protocol (NWMP) programme. The said programme is funded by CPCB. The severity of pollution is based on BOD, Fecal Coliform and DO. In the said programme there are 11 river stretches in Goa out of these rivers 2 stretches are in Category 4, 08 stretches are Category 5 and 01 in Category 3.

He informed the Committee that the Action Taken Report has to be filed by 12th January, 2019 in Central Pollution Control Board and 31st January, 2019 in Court failing which fines will be levied as per categorization of rivers. He informed that there is an empanelment of 09 consultants with Sewerage and Infrastructural Development Corporation of Goa Limited and we may entrust this work to one of the consultants.

The Chief Engineer, Water Resource Department informed that it would not be advisable to choose one consultant from the empanelled consultants without proper tendering process. The Secretary (Environment) then directed the Chief Engineer, Water

Resource Department to prepare Terms of Reference for the bid for the tendering process and Member Secretary, Goa State Pollution Control Board to issue letter to the 09 empanelled consultants to submit their Detail Project Reports (DPRs) based on the Term of Reference, immediately due to the time constraint. Further, the Chairman of the Committee (Secretary – Environment) informed that the funds towards appointment of consultant shall be placed to the Board by the Department of Environment so the work can be initiated immediately.

The opening of Bids will be carried out by Member Secretary, Goa State Pollution Control Board and placed before the government through the Department of Environment for administrative approval and financial sanction.


(Shamila Monteiro)
Member Secretary
Goa State Pollution Control Board

Minutes of the 3rd RRC-Goa meeting held on 29th January 2019

Minutes of the Meeting

The 3rd River Rejuvenation Committee (RRC) meeting was held on 29th January, 2019 in the Conference Hall of Secretariat, Porvorim, Goa. At the outset the Member Secretary welcomed the members and informed that as per the decision taken in the 2nd meeting of the RRC tenders were invited to appoint consultant for the work of preparation of Action Plans for "Restoration of Polluted River Stretches" on the terms and reference given by the Chief Engineer, WRD, and the work order was issued to Unity I.E. World Pvt. Ltd., Kothrud, Pune. The Consultant gave a brief presentation on the Report. The Committee stressed that the report should be reviewed and more details have to be given regarding the source with plans. Also the report should include the remediation measures.

As the report had to be filed by 31st January 2019 to Central Pollution Control Board (CPCB) it was approved by Committee that Member Secretary, Goa State Pollution Control Board (GSPCB) should forward the report to CPCB on approval from Chairman, GSPCB.


(Dr. Shamila Monteiro)
Member Secretary
Goa State Pollution Control Board

Minutes of the 5th River Rejuvenation Committee (RRC) meeting held on 1st March 2019 under the Chairmanship of Secretary (Environment), at 03.00 p.m. in his chamber at Secretariat, Alto-Porvorim.

The forth meeting of the River Rejuvenation Committee (RRC) was held on 1st March 2019 (Friday) in the chamber of Secy., (*Environment*) under his Chairmanship at Secretariat, Porvorim. The following Members were present for the meeting.

1. Mr. Sanjay Gihar, IAS Secy., Environment, Secretariat, Alto-Porvorim
2. Mr. Sandeep Nadkarni, Chief Engineer, Water Resources Department (WRD),
3. Shri Ravi Jha, IAS Director, Department of Environment
4. Dr. Tarik Thomas, IAS Director, Department of Municipal Administration (DMA)
5. Dr. Anant Patekar, Dy. Director, Directorate of Health Services (DHS).
6. Mr. P. B. Sheldarkar, Managing Director, Sewerage Infrastructure Development Corporation of Goa Limited (*SIDCGL*). Mr. Manuel Fernandez, Industries Officer, Directorate of Industries, Trade and Commerce (DITC).
7. Dr. Shamila Monteiro, Member Secretary (M.S.), Goa-PCB, Saligao.

At the outset, Member Secretary, RRC welcomed the Members and briefed about the purpose of conducting a meeting at a very short notice. It was informed that the said meeting has been convened to appraise the Members about the preparation of Action Plan towards Rejuvenation of polluted river stretches with specific reference to Sal-river stretch from Khareband to Mobor. Accordingly, the report compiled by the consultant – M/s Unity I. E., *with inputs from various line-departments*, was placed before the Committee for kind perusal, deliberation and discussions prior to its finalization and onward submission to the NGT as per the NGT Order pronounced in a matter of O.A. no. 673 of 2018. Further, M.S., RRC appraised the members that the minutes of the 3rd RRC meeting held on 25th February could not be minuted as during the said meeting the representative of the Consultant – M/s Unity I.E., Pune, *after a brief presentation on the Action Plan prepared towards rejuvenation of polluted river-stretches*, was instructed to incorporate Department-specific inputs to be presented again by early next-week. Thus, the revised Action Plan has been presented during this meeting as a follow-up of the previous meeting.

Secretary, Environment requested the Members concerned and categorically stated to comment on the timelines and financial estimates envisaged in the Action Plan by the respective stakeholder Department. The RRC approved the Action Plan prepared for the Sal-river polluted river stretch and accordingly, Secy., Environment, further instructed the Member Secretary, Goa-PCB, *being a Member Secretary of the RRC*, to forward the same to NGT through e-mail – ngt.filing@gmail.com. Further, it was also agreed by the RRC that all the financial and allied expenses to be incurred in the instant matter of addressing the subject-matter (*i.e. engagement of lawyers / NGT-expenses, etc.*) shall be met by the State Government through the Department of Environment. However, it was clarified that the expenditure towards the execution / implementation of actual work, *as*

envisaged in the Action Plan, shall be met by respective stakeholder department by making required budgetary provision respectively. It was emphasized and impressed upon by the Secy., Environment that required budgetary provision has to be processed for approval on priority and action has to be prioritized immediately as envisaged in the Action Plan submitted to the NGT. A copy of the Action Plan to be circulated to all the Members concerned and to Departments/ Corporations from where certain action-based initiatives are expected such as Captain of ports and Directorate of Fisheries. It was also instructed that M.S., GSPCB would upload the constitution of the RRC and Action Plan prepared for polluter river stretch along Sal-river on Goa State Pollution Control Board's website.

Further, Secretary, Environment directed the representative of **M/s Unity I.E.**, Pune to submit the Action Plans for remaining ten polluted riverine-stretches by early next-week, preferably by Monday in respect of priority criteria-IV followed by priority criteria-V thereafter to comply with the NGT-directives.

The meeting ended with thanks to the Chair.

Sd. /-

Dr. Shamila Monteiro)
Member Secretary, RRC

Date: 1st March 2019.

Minutes of the 7th Meeting of the River Rejuvenation Committee (RCC), held on 13th March, 2019 under the Chairmanship of Secretary (Environment), at 11.30 a.m. in the Conference Hall of Secretariat

The 7th Meeting of the River Rejuvenation Committee was held on 13th March, 2019 at 11.30 a.m. in the Conference Hall of Secretariat, Porvorim under the Chairmanship of Secretary (Environment).

The following members were present for the meeting:-

1. Shri. Govind Jaiswal, Secretary (Environment)
2. Shri. Ravi Jha, Director, Department of Environment
3. Shri. Tariq Thomas(IAS), Director, Department of Municipal Administration
4. Shri. S.T. Nadkarni, Chief Engineer, Water Resource Department (WRD)
5. Shri. Levinson J. Martins, Managing Director, Goa Waste Management Corporation
6. Shri. P.B. Sheldarkar, Managing Director, Sewerage & Infrastructural Development Corporation of Goa Limited
7. Shri. Akshay Potekar, Deputy Director, Directorate of Industries, Trade & Commerce (DITC)
8. Dr. M. Desa, Representative, Directorate of Health Services
9. Shri. U.R. Kerkar, SE, Public Works Department
10. Shri. M.U. Jamadar, EE, Public Works Department, Works Department XII
11. Shri. Sanjeev Joglekar, Environmental Engineer, Goa State Pollution Control Board
12. Smt. Neha Bandekar, Office Superintendent, Directorate of Panchayats
13. Dr. Shamila Monteiro, Member Secretary, Goa State Pollution Control Board

Member Secretary welcomed the Chairman and other members for the meeting and was also informed that the minutes of the previous meeting ^(i.e. 6th meeting held on 08/08/2019) was not drawn as during the meeting the consultant was requested to revise the draft action plan prepared for Zuari, Terecol and Chapora River stretches. With the permission of the Chair; Member Secretary requested the committee to make a presentation on the proposed Action Plan for the polluted river stretches in Zuari, Terecol & Chapora Rivers.

Subsequent to the presentation and based on the discussions and suggestions raised by the River Rejuvenation Committee members; the consultant was requested to edit/minor changes with specific reference to Solid Waste Management and the time for expansion of the Saligao Waste Treatment Plant.

The Chairman also directed the Member Secretary to forward the same report after ^{for Chapora/Terecol/Zuari} incorporating the said changes to the National Green Tribunal on priority.

Meeting ended with thanks to the Chair.


(Dr. Shamila Monteiro)
Member Secretary

Minutes of the 8th River Rejuvenation Committee (RRC) meeting held on 28th March 2019 under the Chairmanship of Secretary (Environment), at 11.00 a.m. in the conference hall of the Secretariat, Alto-Porvorim.

The eighth meeting of the River Rejuvenation Committee (RRC) was held on 28th March 2019 (Thursday) in the conference hall of the Secretariat under the Chairmanship of Secy., (*Environment*). The following Members were present for the meeting.

1. Mr. Govind Jaiswal, IAS Secy., Environment, Secretariat, Alto-Porvorim.
2. Dr. Anant M. Palekar, Dy. Director, Directorate of Health Services (DHS).
3. Mr. P. B. Seldarkar, Managing Director, Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).
4. Mr. Manuel Fernandes, Industries Officer, Directorate of Industries, Trade and Commerce (DITC).
5. Mr. Ram Asare M. Gupta, Directorate of Health Services (DHS).
6. Mr. Ulhas R. Kerkar, S. E. (V), Public Works Department (PWD).
7. Ms. Megha S. Kerkar, Superintendent of Fisheries, Department of Fisheries.
8. Zigyasa Murkar, A. S. F.,
9. Dr. Shamila Monteiro, Member Secretary (M.S.), Goa-PCB / M. S., (RRC).

At the outset, Member Secretary, RRC welcomed the Members and briefed about the purpose of conducting a meeting so as to enable the RRC to finalize the Action Plan prepared for rejuvenation of polluted river stretches along (i) Assonora (*fresh-water stretch from Assonora – Sirsaim*), (ii) Bicholim (*fresh-water stretch from Bicholim – Curchirem*), (iii) Khandepar (*upstream stretch of fresh-water from Ponda to Opa*), (iv) Sinquerim (*estuarine stretch from Sinquerim to Candolim*), (v) Valvanti (*fresh-water stretch from Sanquelim – Bicholim*) prepared by the consultant – M/s Unity I. E., Pune after incorporating relevant inputs from stakeholder departments /corporations concerned. Accordingly, the brief presentation was made by the consultant.

Subsequent to the discussions /deliberations and inputs from Members in respect of ongoing and proposed sewerage-related projects, the consultant was requested to incorporate the changes and accordingly edit these action plans. The consultant was further instructed to submit the action plans for the remaining polluted riverine stretches in (a) Talpona (*fresh-water stretch upstream of water-intake point*) and (b) Mandovi – *estuarine stretch from Panjai to Volvoi* incorporating a stretch from (i) Panaji to Marcel as per 'Order' pronounced by Hon'ble NGT in O. A. 486 of 2018 and (ii) Marcela to Volvoi as per the 'Order' dated 20th September 2018 pronounced by Hon'ble NGT in O. A. 673 of 2018 at the earliest, so that the same may be discussed /deliberated prior to submission to the NGT.

Later, the Chairman directed the Member Secretary, RRC to forward these Action Plans to the NGT on ngt.filing@gmail.com with a copy to the Central Pollution

Control Board (CPCB) as per the directions of Hon'ble NGT in a matter of O.A. no.673 of 2018. 3357 49

It was decided to convene the next meeting by early next-week (i.e. first week of April 2019).

Meeting ended with vote of thanks to the Chair.

Sd. / -

Dr. Shamila Monteiro
Member Secretary, RRC

Date: 28th March 2019.

Minutes of the 9th River Rejuvenation Committee (RRC) meeting held on 2nd April 2019 under the Chairmanship of Secretary (Environment), at 04.00 p.m. in the conference hall of the Secretariat, Alto-Porvorim.

The ninth meeting of the River Rejuvenation Committee (RRC) was held on 2nd April 2019 (Tuesday) in the conference hall of the Secretariat under the Chairmanship of Secy., (Environment). The following Members were present for the meeting.

1. Mr. Govind Jaiswal, IAS Secy., Environment, Secretariat, Alto-Porvorim.
2. Dr. Anant M. Palekar, Dy. Director, Directorate of Health Services (DHS).
3. Mr. V. P. Dangui, Director, Directorate of Industries, Trade and Commerce (DITC).
4. Mr. U.R. Kerkar, S. E. (V), Public Works Department (PWD).
5. Mr. Krupa Sharma, Sup. (HSO), Captain of Ports (CoP).
6. Mrs. Megha S. Kerkar, Superintendent of Fisheries, Department of Fisheries.
7. Zigyasa Murkar, A. S. F.,
8. Dr. Shamila Monteiro, Member Secretary (M.S.), Goa-PCB / M. S., (RRC).

At the outset, Member Secretary, RRC welcomed the Members and briefed about the purpose of this meeting as a follow-up of the previous meeting (*i.e.* 8th) meeting held on 28th March 2019. Further, she appraised the members that action plans prepared and approved by the RRC during its earlier meetings (*i.e.* Sal-river stretch during 5th meeting held on 1st March 2019 / Chapora – Terecol and Zuari river stretches during 7th meeting held on 13th March 2019 / Assonora – Bicholim - Khandepar - Siquerim and Valvanti stretches during previous meeting (*i.e.* 8th) held on 28th March 2019) have been e-mailed to the NGT on ngt.filing@gmail.com as per the 'Order' pronounced by Hon'ble NGT in O. A. 673 of 2018, a copy of which was also endorsed to the Central Pollution Control Board (CPCB) as well.

Subsequently and as per the decision taken during the last-meeting, the consultant – **M/s Unit I.E., Pune** was requested to make a power-point presentation (.ppt) in respect of action plan prepared for rejuvenation of polluted river-stretches in (a) Talpona river and (b) Mandovi river. Subsequent to the discussions / deliberations and inputs from Members concerned, the consultant was requested to incorporate the changes in the Talpona action plan based on the identified stretch (*i.e.* priority – IV) vis-à-vis its classification based on 'best designated use' of water (*i.e.* class – C). In addition, suitable changes / incorporations have been suggested in action plan prepared for Mandovi stretch with specific reference to EIA reports / existing facilities at fish-landing sites / performance evaluation of STPs' / latest water-quality analysis, etc., prior to its finalization.

Accordingly, the consultant was directed to submit the same at the earliest so that the same can be incorporated as one of the parts of a 'status report', *to be presented by the Chief Secretary (Goa)*, during a personal interaction before the NGT, Principal Bench, New Delhi scheduled on 10th April 2019 as per the 'Order' dated 16th January 2019 pronounced by Hon'ble NGT in a matter of O. A. no. 606 of 2018.

Later, the Chairman directed the Member Secretary, RRC to forward Action Plan prepared for rejuvenation of polluter river stretch in (a) Talpona river and (b) Mandovi river, *after incorporating corrections suggested by the RRC*, to the NGT on ngt.filing@gmail.com with a copy to the Central Pollution Control Board (CPCB).

Meeting ended with vote of thanks to the Chair.

Sd. / -

Dr. Shamila Monteiro
Member Secretary, RRC

Date: 03rd April 2019.

Minutes of the 10th River Rejuvenation Committee (RRC) meeting held on 30th April 2019 under the Chairmanship of Secretary (Environment), at 11.00 a.m. in the conference hall of the Secretariat, Alto-Porvorim.

The tenth meeting of the River Rejuvenation Committee (RRC) was held on 30th April 2019 in the conference hall of the Secretariat under the Chairmanship of Secy., (Environment). The following Members were present for the meeting.

1. Mr. Govind Jaiswal, IAS Secy., Environment, Secretariat, Alto-Porvorim.
2. Mr. Amey Abhyankar, IAS Director, Directorate of Mines and Geology (DMG).
3. Mr. Ravi Jha, IAS Director, Department of Environment.
4. Mr. V. P. Dangui, Director, Directorate of Industries, Trade and Commerce (DITC).
5. Mr. D. G Sardesai, Director (Administration), Goa Medical College (GMC).
6. Mr. Levinson J. Martins, Managing Director (M.D.), Goa Waste Management Corporation (GWMC).
7. Mr. S. D. Patil, Chief Engineer (C.E.), Water Resources Department (WRD).
8. Mr. P. P. Badami, Superintendent Engineer (S.E.), WRD.
9. Mr. Umesh Kulkarni, Chief Engineer (C. E.), Public Works Department (PWD).
10. Mr. P. B. Seldarkar, Managing Director (M.D.), Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).
11. Capt. Prem Lal Sirsaikar, Deputy Captain of Ports (CoP), Captain of Ports Department.
12. Mr. Ankush G. Gaonkar, Executive Engineer (E. E.), WRD – Div.- II.
13. Mr. C. D. Velip, Deputy Director of Fisheries, Department of Fisheries.
14. Mrs. Megha S. Kerkar, Superintendent of Fisheries, Department of Fisheries.
15. Mrs. Siddhi Halarnkar, Additional Director, Directorate of Panchayats.
16. Mr. Subhash Mhalsekar, Engineering Assistant, Department of Urban Development (DUD) / Directorate of Municipal Administration (DMA).
17. Mr. Vijaykumar Honawad, General Manager (Eng.), Goa Industrial Development Corporation (Goa-IDC).
18. Mr. Ulhas Kerkar, Superintendent Engineer (S.E.) -V, PWD.
19. Mrs. Concy Pereira, I. A., Department of Tourism.
20. Dr. Shamila Monteiro, Member Secretary (M.S.), Goa-PCB / M. S., (RRC).

At the outset, Member Secretary, RRC welcomed the Members and briefed about the purpose of this meeting as a follow-up of the previous meeting (*i.e.* 9th) meeting held on 02nd April 2019. Further, she apprised the members that action plans prepared and approved by the RRC during its earlier meetings have been mailed to all the Members as well as has been uploaded on the Goa State Pollution Control Board (*hereinafter referred as the 'Board'*) and requested to peruse the same and expedite its compliance as per the timeline referred therein.

Subsequently, Chairman, RRC-Goa sought status-update in respect of individual action plan in light of the progress made by the stakeholder departments and reiterated that targeted works in respect of 'Sal-river' needs to be prioritized as per the timeline referred and submitted to the NGT. Accordingly, representatives from the Water

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Resources Department (WRD), Sewerage Infrastructure Development Corporation Goa Limited (SIDCGL), Captain of Ports along with Directorate of Municipal Administration (DMA) and Directorate of Panchayats informed that status of ongoing works.

Chairman instructed that if any of the stakeholder departments have not yet submitted the details in respect of 'Nodal Officers', the names of the respective Head of Departments be uploaded on the website as per the NGT directions to seek status update / compliance. He further instructed the Member representative from the Directorate of Panchayat to compile panchayat-wise action plan to address the issues referred in the Action Plans prepared for polluted river-stretches and submit the same by next meeting. Similarly, he instructed the Director, DMA to initiate action w.r.t. (i) disconnection of illegal discharges and (ii) compliance of connectivity to common sewerage network in areas wherein the same has been made operational and submit the report by next meeting. In response to the sand mining / major-minor mineral extraction, he desired to know status-update / report from the Director, Directorate of Mines (DMG) in respect of the estimation of loss of damage to environment and loss of livelihood as well as health-hazard and loss to forest cover as a compliance to the NGT order dated 10th April 2019 in a matter of O.A. no.606 of 2018. Accordingly, he instructed the Director, DMG to compile the same by next meeting.

In respect of polluter-pay-principle, he instructed the Board to submit the list of defaulters vis-à-vis total amount fined either for operating without valid consent of the Board as well as non-compliance to consent conditions.

Meeting ended with vote of thanks to the Chair.

Sd./-
Dr. Shamila Monteiro
Member Secretary, RRC

Date: 30th April 2019.

Minutes of the 11th Meeting of River Rejuvenation Committee (RRC)**held on 09th May 2019**

The eleventh meeting to the River Rejuvenation Committee (RRC) was held on 09/05/2019 in the conference hall of the Secretariat under the Chairmanship of Secretary Environment. The following members were present for the meeting:-

1. Mr. Govind Jaiswal, Secretary Environment, Secretariat, Alto-Porvorim
2. Mr. Pramod Badami, Superintending Engineer (S.E.), Water Resources Dept. (WRD)
3. Mr. Rajan Satardekar, Director, Directorate of Panchayat, Panaji
4. Dr. Anand Palekar, Dy. Director , Directorate of Health Services.
5. Mr. Prashant Kamat, Functional Manager, Directorate of Industries, Trade and Commerce.
6. Dr. Tariq Thomas, IAS, Director for Municipal Administration, DMA
7. Mr. Ulhas Kerkar, S.E. V, Public Works Department
8. Mr. N. P. Parsekar, EE II, Public Works Dept.
9. Mr. P. B. Sheldarkar, M. D. SIDCGL

10. Mr. Deelip Dhavalikar, CGM, Sewerage Infrastructure Development Corporation Goa Limited (SIDCGL)

11. Mr. Subhash Kelekar, Asst. Director of Tourism

12. Mr. Chandrakant Velip, Dy. Director of Fisheries

13. Ms. Megha Kerkar, Superintendent of Fisheries

14. Capt. Premal Sirsaiker, Captain of Ports

15. Mr. Ankush Gaunkar, Exe. Engr, WRD

16. Mr. Deepak Mayenkar, Asst. Geologist, Directorate of Mines & Geology

The Member Secretary welcomed the Chairman and other Members of the Committee. The status of the action plan as submitted to the NGT for River Rejuvenation of the 11 polluted stretches of the rivers were taken up:

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
Sal river – Priority- III (From Mobor to Khareband Madgaon)					
1.	Natural treatment (SIBF/ Phytoid Beds) will be installed immediately in eighteen months along the banks in order to avoid the pollution	Khareband to Mobor	SIDCGL	18 months	SIDCGL has identified 9 nallahs and water samples have been collected and analysed so as to recommend the treatment technology to be

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					implemented. They also require the flood levels from WRD. The Managing Director, SIDCGL brought to the notice that most of the waste is getting into river Sal from upstream area and this source has to be taken care of which includes discharge coming from the SGPDA market and the whole sale market. The Secretary Environment directed the Pollution Control Board to issue SCN/Directions to SGPDA with copy to Directorate of Municipal

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					Administration (DMA).
2.	Improvement and up gradation of the existing Solid Waste Management Facility including collection system, composting facilities and erection of material recovery facilities / storage shed for non-biodegradable waste at Sonsoddo Margaon	Khareband to Mobor		9 months	The (DMA) informed that a Joint Survey is being carried out with Directorate of Health Services (DHS) and Directorate of Panchayat (DoP) and will be completed by 27/05/2019 to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently DHS has issued 79 notices to households to comply within 60 days Door to door

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					(D2D) collection is being carried out and they have issued directions to bulk waste generators.
3.	De weeding	Khareband to Mobor	WRD	18 months	Survey and quantification is under process and tender issued shortly
4.	Recycling and Reuse of treated sewage from the Sewage treatment plant at Navelim for flushing and maintaining E-flow during dry season.	Khareband to Mobor	SIDCGL	18 months	Proposal is under way
5.	Installation of DO control measures	Khareband to Mobor	WRD	18 months	WRD may furnish the report in the next RRC meeting
Talpona River- Priority- IV (from Talpona to Gokarna Math Poinginium)					
1.	i) Clear the solid waste dumped along the bank ii) Prevent further solid waste dumping along the bank of the River.	Along the Canacona a) Talpona b) Poinginium	Directorate of Panchayat.	6 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					606/2018 matter Further he stated that priority will be given to Villages along the polluted River Stretches and model villages. He also stated that wire meshes will be installed in storm water drains so as to avoid any solid waste entering into the main river.
2.	Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Talpona River.	a) Talpona b) Poingini um	Respective Village Panchayat and Directorate of Panchayat	12 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter
3.	Providing toilet facilities at Talpona fishing jetty		Department of Fisheries	6 months	2 seater toilets are proposed.. Site was inspected by PWD and the Dept. Secretary

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					Env. directed that the work should be completed by 6 moths
4.	Proposed SWM facility at Curchorem having 100 TPD and the estimated cost the work is 190.00 Cr. This facility will be operational in next 18 months.		Goa Waste Management Corporation	18 months	Letter issued to concessionaires to submit final proposal with regards to expert committees recommendations on 03/05/2019. And concessionaries submitted final proposal on 09/05/2019. Same is send for technical sanction to project management consultant.
Mandovi River – Priority- IV – (from Panjim to Volvoi)					
1.	Disconnection of direct discharges of domestic sewage into the Mandovi. River/storm water drains/nallah. ➤ Disconnection of the direct discharge into the	Panjim to Volvoi a) Betqui- Candola b) Marcem - Tivrem- Orgao	Directorate of Panchayat, Directorate of Health Services;	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and Dop and will be

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	river or through storm water drain/ Nallah. ➤ Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains. ➤ Initiating action under the Water act including levying of fines for commercial establishment under Pollutant pay principal. (within 1 month)	c) Amona d) Navelim e) Candola, Volvoi f) Panchayat St. Estevam g) Se-old Goa. h) Salvador-Do - Mundo i) Penha de France j) Reis Magos k) Panchayat Nerul		1 month	completed by 27/05/2019 to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently DHS has issued 218 notices to households to comply within 60 days. GSPCB has issued notices to 28 commercial establishments which were found to be discharging in the river. Out of which 5 establishments have paid the penalty.
2.	a) Improvement to	a) Betqui-	Respective	6 months	D2D collection is

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	collection system, and ensuring collection of segregated waste. b) Installation of Bio-digester having capacity 100 TPD at Bainguinim by the Goa Waste Management Corporation.	Candola b) Marcem - Tivrem- Orgao c) Amona d) Navelim e) Candola, Volvoi f) Panchayat St. Estevam g) Se-old Goa. h) Salvador-Do-Mundo i) Penha-De-France j) Reis Magos k) Panchayat Nerul	Village Panchayat and Directorate of Panchayat		being carried out and they have issued directions to bulk waste generators. DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter MD, GWMC informed that since the draft EIA report has been received from NEERI they have proposed for putting up the integrated Solid Waste Management Facility at Bainguinim. The proposal has been submitted to G-SEAC for further processing as per

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					TOR.
3.	Providing toilet facility and sanitation facility for fishing Jetty at IFFI, Volvoi & Marcem	a) IFFI b) Volvoi c) Marcel	Captain of Port & SIDCGL	12 months	COP has already fitted Bio toilets at Adpai and is proposed to install 2 at Vashi. Permanent toilets have been constructed at Volvoi, Ribander and Saramanus Ramp.
4.	Existing 8 toilets, 7 Bath rooms, 7 urinals at the fisheries complex Malim Betim, Goa managed by Sulabh International Social Service Organization Porvorim Goa. The 20 seated toilet block is proposed along the waste water treatment plant of 40 KLD. The work is been carried out through Goa State Infrastructure Development Corporation.	a) Fishing Jetty at Malim	Dept. of Fisheries	12 months	Work handed over to GSIDC and work will be completed by 31/05/2019.
5.	The up gradation of Sewage Treatment Plant at Patto Plaza at Panjim is under progress by PWD, Goa and	STP at Patto, Panjim.	PWD, Goa	18 months	The plant will be operational by Dec, 2020.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	expected to be completed in one year.				
Chapora River – Priority V – (from Alorna Fort , Pernem Taluka to Morjim)					
1.	Disconnection of direct discharges of domestic sewage into the Chapora River/storm water drains/ Nallah. ➤ Disconnection of the direct discharge into the river/storm water drain/Nallah. ➤ Installation of Bio toilets ➤ Construction of septic tank and soak pits by residential houses. s	Alorna fort to Morjim	Directorate of Panchayat and Directorate of Health	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and Dop and will be completed by 27/05/2019 to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently DHS has issued 68 notices to households to comply within 60 days.
2.	Improvement to collection system, and erection of	a) Alorna b) Casaver	Respective Village	12 months	DoP informed that this matter is

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Chapora River	em c) Ozorim d) Dhargal im e) Tuem f) Parcem g) Agarwa da h) Chopde m i) Morjim j) Menecu rim k) Pirna l) Nadora m) Rivora n) Colvale o) Camurli m p) Oxel q) Siolim r) Assagao s) Anjuna	Panchayat and Directorate of Panchayat		taken up in the Solid Waste Action Plan submitted in the 606/2018 matter
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day). Project cost i.e. 82 cr.			9 months	Letter issued to concessionaire to issue final proposal on 09/05/2019. Same is sent for technical sanction to project

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					management consultant (GSIDC) on 09/05/2019 itself.
4.	Providing toilet facilities at Chapora fishing jetty		Department of Fisheries	6 months	The Department has proposed to provide a toilet block of 2 seaters through PWD.
Terekhol River – Priority – V:					
1.	Disconnection of direct discharges of domestic sewage into the Terekhol River/storm water drains/Nallahs. ➤ Disconnection of the direct discharge into the river/storm water drains/Nallahs. ➤ Installation of Bio-toilet. ➤ Construction of septic tank and soak pits by residential houses.	Along Terekhol River a) Tambosa b) Nanerwada c) Bhalkhaj d) Querim - Tiracol	Directorate of Panchayat and Directorate of Health	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and Dop and will be completed by 27/05/2019 to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently DHS has issued 2

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					notices to households to comply within 60 days.
2.	Improvement and up gradation of the existing Solid Waste Management Facility including collection system and erection of material recovery facilities / storage shed for non-biodegradable waste in the village panchayat areas along the banks of Terekhol River.	a) Querim-Tiracol b) Paliyem c) Corgao d) Pernem municipal council e) Casne – Ambere m – porosca dem f) Tamboxem-Mopa-Uguem g) Torxem	Respective Village Panchayat and Directorate of Panchayat	12 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day). Project cost i.e. 82 cr.			9 months	Letter issued to concessionaire to issue final proposal on 09/05/2019. Same is sent for technical sanction to project management

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					consultant (GSIDC) on 09/05/2019 itself.
Zuari River- Priority – V – (from Curchorem to Madkai)					
1.	Disconnection of direct discharges of domestic sewage into the Zuari River/storm water drains/ Nallahs. ➤ Disconnection of the direct discharge into the river/storm water drains/Nallahs. ➤ Installation of Bio-toilet. ➤ Construction of septic tank and soak pits by residential houses.	Curchorem to Madkai	Directorate of Panchayat and Directorate of Health	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and Dop and will be completed by 27/05/2019 to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently DHS has issued 232 notices to households to comply within 60 days.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
2.	Improvement and up gradation of the existing Solid Waste Management Facility including collection system and erection of material recovery facilities / storage shed for non-biodegradable waste in the village panchayat areas along the banks of Zuari River. Establishment of toilets at Fishing Jetty at Cortalim in one year. Establishment of SWM facility at Curchorem of 100 tpd capacity within 18 months at cost of Rs 190 Cr. This will cater to Quepem, Sanguem, and	a) Savorde m b) Panchwadi c) Shiroda d) Borim e) Wadi – talaulim f) Durbhat g) Bandora h) Marcaim i) Neura j) St. Lawrence (Agasaim) k) St. Andre (Velha) l) Siridao – pale m) Curchorem – kakora n) Macasona o) Curtorim p) Rachol	Respective Village Panchayat and Directorate of Panchayat	12 months	D2D collection is being carried out and they have issued directions to bulk waste generators. DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter Dept has proposed toilet block of 2 seater and treatment plant. Letter issued to concessionaires to submit final proposal with regards to expert committees

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	Dharbandora Taluka.	Lotoliu m q) Cortali m – Quelosi m r) Sancoal			recommendations on 03/05/2019. And concessionaries submitted final proposal on 09/05/2019. Same is send for technical sanction to project management consultant.
3.	Toilets facility for Fishing Jetty at Cortalim		De partment of Fisheries	6 months	Dept has proposed toilet block of 2 seater and treatment plant.
4.	The underground sewerage scheme in progress for Ponda municipal area including Curti, Bandora, Kavelem, Undir and area close to Kapleshwari nallah which further joins the Zuari River. Three STP's are proposed at Curti, Kavelem		SIDCGL	12 months	Ponda-Curti STP matter is subjudice. Bandora plant is given in favour of SIDCGL and has to be retendered. Kavlem 50% of work has to be

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	and Bandora of capacity 8MLD, 15MLD and 15MLD respectively. At present 70% sewerage network is laid and 15MLD STP at Kavelem is in progress. Sewerage scheme with 1MLD STP is commissioned for Durbhat village which is on the bank on River Zuari. This STP was commissioned in September 2017 and is running successfully. The total cost of all the projects mentioned above is 536 cr.				completed.
Khandepar – Priority V- (from Opa Ponda & Codli- u/s of Opa Water works)					
1.	Disconnection of direct discharges of domestic sewage into the Khandepar. River/storm water drains/nallah. ➤ Disconnection of the direct discharge into the river/storm water drain / Nallah. ➤ Construction of septic tank and soak pits by	Codli to U/s of Opa water works a) Khandepar b) Usgao	Directorate of Panchayat, Directorate of Health Services;	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and Dop and will be completed by 27/05/2019 to identify those notices discharging

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains.				sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently DHS has issued 2 notices to households to comply within 60 days.
Assonora – Priority –V – from Assonora to Sirsaim					
1.	Disconnection of direct discharges of domestic sewage into the Assonora. River /storm water drains/ nallah. ➤ Disconnection of the direct discharge into the river/storm water drain/Nallah. ➤ Installation of Bio toilets along the river stretch for residential areas. ➤ Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks	Assonora to U/s of Sirsaim a) Assonora b) Sirsaim	Directorate of Panchayat, Directorate of Health Services;	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and Dop and will be completed by 27/05/2019 to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	in order to avoid untreated domestic sewage discharge in to the natural drains.				subsequently.
2.	Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Assonora River.	a) Assonora b) Sirsaim	Respective Village Panchayat and Directorate of Panchayat	12 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day). Project cost i.e. 82 cr.			9 months	Letter issued to concessionaire to issue final proposal on 09/05/2019. Same is sent for technical sanction to project management consultant (GSIDC) on 09/05/2019 itself.
Valvanti River – Priority – V- from Poriem to Sanquelim-Bicholim					
1.	Disconnection of direct discharges of domestic sewage into the Valvanti. River/storm water drains/	Poriem to Sanquelim a) Poriem b) Honda	Directorate of Panchayat, Directorate of	6 months	The DMA informed that a Joint Survey is being carried out with Dept of

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	nallah. ➤ Disconnection of the direct discharge into the river/storm water drain/Nallah. ➤ Installation of Bio toilets ➤ Construction of septic tank and soak pits by residential houses.	c) Karapur & Sarvona	Health Services;		Health and Dop and will be completed by 27/05/2019 to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently DHS has issued 7 notices to households to comply within 60 days.
2.	a) Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Valvanti River. b) Improvement and Up gradation of the existing Solid Waste	a) Poriem b) Honda c) Karapur & Sarvona	Respective Village Panchayat and Directorate of Panchayat	12 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter D2D collection is being carried out

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	Management Facility of Sanquelim Municipal Council; installation of biogas plant of 3 tons per day and construction of storage shed.				and they have issued directions to bulk waste generators.
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day). Project cost i.e. 82 cr.	a) Pernem b) Bardez c) Bicholim & d) Sattari talukas in North Goa District.		9 months	Letter issued to concessionaire to issue final proposal on 09/05/2019. Same is sent for technical sanction to project management consultant (GSIDC) on 09/05/2019 itself.
4.	Commissioning of existing sewerage network and STP 0.8 MLD capacity. (Covering 3 wards)	a) Sanquelim b) 3 wards i.e. Bandharwada, Muslim Wada Muzarwada & Gokulwadi	SIDCGL	12 months	Total network length is 2900m. Tested network length is 1980m. Network balance to be tested 920m. It is observed during testing that 270m is blocked. There is proposed for replacement of 200m. The

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					time required for rectification of manholes, replacement of main sewer line within 8 months.
Bicholim River- Priority- V – from Bicholim to Curchirem					
1.	Disconnection of direct discharges of domestic sewage into the Bicholim. River/storm water drains/nallah. ➤ Disconnection of the direct discharge into the river/storm water drain/Nallah. ➤ Installation of Bio toilets Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains.	Curchirem to Bicholim a) Curchirem b) Bicholim Municipal Council c) Ona-Maulinguem d) Karapur-Sarvan e) Amona f) Pilgao	Directorate of Panchayat and Directorate of Health, ULB.	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and Dop and will be completed by 27/05/2019 to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently DHS has issued 10 notices to households to comply within 60

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					days.
2.	a)Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the Municipal Council, village Panchayat areas along the banks of Bicholim River. b) Improvement and up gradation of the existing Solid Waste Management facility of Bicholim Municipal Council ;	a) Curchirem b) Bicholim Municipal Council c) Ona-Maulinguem d) Karapur-Sarvan e) Amona f) Pilgao	Respective ULB & Village Panchayat and Directorate of Panchayat	12 months 6 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter D2D collection is being carried out and they have issued directions to bulk waste generators.
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20%	a) Curchirem b) Bicholim Municipal Council c) Ona-Maulinguem d) Karapur-Sarvan e) Amona f) Pilgao		9 months	Letter issued to concessionaire to issue final proposal on 09/05/2019. Same is sent for technical sanction to project management consultant (GSIDC) on 09/05/2019 itself.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
Sinquerim River- Priority- V- from Candolim to Ganesh Temple, Nerul					
1.	Disconnection of direct discharges of domestic sewage into the Sinquerim. River/storm water drains/ nallah. ➤ Disconnection of the direct discharge into the river or through storm water drain/ Nallah. ➤ Installation of Bio toilets along the river stretch. ➤ Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains.	Candolim Bridge to Ganpati Temple (Nerul) d) Pilerne-Marra e) Candolim f) Reis-Magos g) Nerul	Directorate of Panchayat, Directorate of Health Services;	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and Dop and will be completed by 27/05/2019 to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently DHS has issued 3 notices to households to comply within 60 days.
2.	a) Improvement to collection system, and ensuring collection of segregated waste b) Improvement and Up	a) Pilerne-Marra b) Candolim c) Reis-	Respective Village Panchayat and Directorate	6months	DoP informed that this matter is taken up in the Solid Waste Action Plan

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	gradation of the existing Solid Waste Management.	Magos d) Nerul	e of Panchayat		submitted in the 606/2018 matter D2D collection is being carried out and they have issued directions to bulk waste generators.
3.	Providing toilet facility and sanitation facility for Fishing trawlers near Nerul.		Departme nt of Fisheries	6 months	The Department has proposed to provide 2 seater toilet facility at Nerul Ramp.

Sd/ -

Dr. (Ms.) Shamila Monteiro
Member Secretary, RRC-Goa

Date : 09th May 2019

Minutes of the 12th Meeting of River Rejuvenation Committee (RRC)**held on 31st May 2019**

The twelfth meeting to the River Rejuvenation Committee (RRC) was held on 31/05/2019 in the conference hall of the Secretariat under the Chairmanship of Secretary, Environment. The following members were present for the meeting:-

1. Mr. Govind Jaiswal IAS, Secretary (Environment), Secretariat, Alto-Porvorim.
2. Mr. Ravi Jha IAS, Director, Department of Environment.
3. Mr. Pramod Badami, Superintending Engineer (S.E.), Water Resources Dept. (WRD).
4. Mr. Rajan Satardekar, Director, Directorate of Panchayat, Panaji
5. Dr. Anand Palekar, Dy. Director, Directorate of Health Services (DHS).
6. Mr. Prashant Kamat, Functional Manager, Directorate of Industries, Trade and Commerce (DITC).
7. Dr. Tariq Thomas, IAS, Director for Municipal Administration (DMA).
8. Mr. Ulhas Kerkar, S.E. V, Public Works Department (PWD).
9. Mr. Umesh Kulkarni, Chief Engineer, PWD.
10. Mr. P. B. Sheldarkar, M. D., Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).
11. Ms. Megha Kerkar, Superintendent of Fisheries.

12.Capt. Premlal Sirsaiker, Dy. CoP., Captain of Ports.

13.Mrs. Neha A. N. Panvelkar, Dy. Dir. (I, II & III), Department of Mines and Geology (DMG).

14.Mr. Sudesh Sangodkar, Manager (Civil), Goa State Infrastructure Development Corporation (GSIDC).

15.Mr. CliffordD'Mello, Asst. Tourism Officer, Directorate of Tourism.

16.Mrs. Fiona A. Cardozo, Dy. Director, Directorate of Panchayats (DoP).

17.Mrs. Siddhi Halarnkar, Additional DoP.

18.Mr. Sanjeev Joglekar, OSD, Department of Science and Technology (DST).

19.Dr. Umesh Kamat, Asst. Lecturer, Goa Medical College.

20.Dr. Shamila Monteiro, Member Secretary, Goa-PCB / Secy., (RRC).

The Member Secretary, Goa-PCB welcomed the Chairman and other Members of the Committee. The status of the action plan as submitted to the NGT for rejuvenation of eleven polluted river-stretches were taken up:

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
Sal river – Priority- III (From Mobor to Khareband Madgaon)					
1.	Natural treatment (SIBF/ Phytoid Beds) will be installed immediately in eighteen months along the banks in	Khareband to Mobor	SIDCGL	18 months	Water samples (24 in nos.) collected from 9 identified nallahs and analysed through M/s ITA Labs, Margao indicate that D.O and

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	order to avoid the pollution				BoD are within prescribed limits while, 'faecal coliform' is marginally exceeds the limit. It was also informed that the WRD has provided the flood-levels data. It was clarified that the Quotations towards design of treatment methodology (<i>to be done within the channel as no place is available along the banks of these nalas</i>) will be completed in two-months and construction would be completed by March 2020. Further, as instructed the Goa-PCB has issued 'SCN / directions' to SGPDA to treat the waste, being generated on-site.
2.	Improvement and up gradation of the existing Solid Waste	Khareband to Mobor		9 months	The (DMA) informed that a Joint Survey will be continued along with

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	Management Facility including collection system, composting facilities and erection of material recovery facilities / storage shed for non-biodegradable waste at Sonsoddo Margaon				Directorate of Health Services (DHS) and Directorate of Panchayat (DoP) to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently. Presently, DHS has issued 715 notices to households to comply within 60 days from date of issuance. In addition, 'directions' have been issued to bulk waste generators. On expiry of the stipulated period of sixty-days, DHS will proceed with disconnection of water-supply / electricity.
3.	De weeding	Khareband to Mobor	WRD	18 months	Estimates have been completed. Tenders have been issued and 'work order' to be issued by October 2019. It has been made mandatory that the firm needs to maintain the system for three-

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					years.
4.	Recycling and Reuse of treated sewage from the Sewage treatment plant at Navelim for flushing and maintaining E-flow during dry season.	Khareband to Mobor	SIDCGL	18 months	Proposal is under way.
5.	Installation of DO control measures	Khareband to Mobor	WRD	18 months	Estimates have been completed. Tenders have been issued and 'work order' to be issued by October 2019. It has been made mandatory that the firm needs to maintain the system for three-years.
Talpona River- Priority- IV (from Talpona to Gokarna Math Poinginium)					
1.	i) Clear the solid waste dumped along the bank ii) Prevent further solid waste dumping along the bank of the River.	Along the Canacona a) Talpona b) Poingini um	Directorate of Panchayat.	6 months	DoP informed that priority will be given to villages located along the polluted river-stretches and model villages. He also stated that installation of wire meshes has been initiated in storm-water drains so

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					as to avoid any solid waste entering into the main river-channel. Tenders to be finalised in one-week time. Further, he clarified that directions have been issued to clear-off the black-spots. Accordingly, Bye-laws to be amended within 02-weeks.
2.	Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Talpona River.	a) Talpona b) Poingini um	Respective Village Panchayat and Directorate of Panchayat	12 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter.
3.	Providing toilet facilities at Talpona fishing jetty		Department of Fisheries	6 months	It was informed that construction of 02-seater toilets would be completed by 06 months.
4.	Proposed SWM facility at Curchorem having 100 TPD and the estimated cost the		Goa Waste Management	18 months	The matter is pending with the GSIDC.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	work is 190.00 Cr. This facility will be operational in next 18 months.		Corporat ion		
Mandovi River – Priority- IV – (from Panjim to Volvoi)					
1.	Disconnection of direct discharges of domestic sewage into the Mandovi. River/storm water drains/ nallah. ➤ Disconnection of the direct discharge into the river or through storm water drain/ Nallah. ➤ Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains.	Panjim to Volvoi a) Betqui- Candola b) Marcem - Tivrem- Orgao c) Amona d) Navelim e) Candola, Volvoi f) Panchaya t St. g) Se-old Estevam Goa. h) Salvador- Do - Mundo i) Penha de France j) Reis Magos k) Panchaya	Directorate of Panchayat, Directorate of Health Services;	06 months 1 month	The DMA informed that a Joint Survey is being carried out with Dept of Health and DoP to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	➤ Initiating action under the Water act including levying of fines for commercial establishment under Pollutant pay principal. (within 1 month)	t Nerul			
2.	a) Improvement to collection system, and ensuring collection of segregated waste. b) Installation of Bio-digester having capacity 250 TPD at Bainguinim by the Goa Waste	a) Betqui-Candola b) Marcem - Tivrem- Orgao c) Amona d) Navelim e) Candola, Volvoi f) Panchaya t St. Estevam g) Se-old Goa. h) Salvador-Do-Mundo i) Penha-De-France j) Reis	Respecti ve Village Panchay at and Directora te of Panchay at	6 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter. MD, GWMC informed that EIA report in response to 'Integrated Solid Waste Management Facility' at Bainguinim has been submitted by NEERI, Nagpur and would process it further for conducting public hearing.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	Management Corporation.	Magos k) Panchayat Nerul			
3.	Providing toilet facility and sanitation facility for fishing Jetty at IFFI, Volvoi & Marcem	a) IFFI b) Volvoi c) Marcel	Captain of Port & SIDCGL	12 months	CoP has already fitted Bio toilets at Adpai and is proposed to install 2 at Vashi. Permanent toilets have been constructed at Volvoi, Ribander and Saramanus Ramp.
4.	Existing 8 toilets, 7 Bath rooms, 7 urinals at the fisheries complex Malim Betim, Goa managed by Sulabh International Social Service Organization Porvorim Goa. The 20 seated toilet block is proposed along the waste water treatment plant of 40 KLD. The work is been carried out through Goa State Infrastructure Development Corporation.	a) Fishing Jetty at Malim	Dept. of Fisheries	12 months	Work handed over to GSIDC and work will be completed by 31/05/2019.
5.	The up gradation of	STP at	PWD,	18 months	It is informed that the

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	Sewage Treatment Plant at Patto, Plaza at Panjim is under progress by PWD, Goa and expected to be completed in one year.	Patto, Panjim.	Goa		plant will be operational by Dec, 2020.
Chapora River – Priority V – (from Alorna Fort , Pernem Taluka to Morjim)					
1.	Disconnection of direct discharges of domestic sewage into the Chapora River/storm water drains/ Nallah. ➤ Disconnection of the direct discharge into the river/storm water drain/Nallah. ➤ Installation of Bio toilets ➤ Construction of septic tank and soak pits by residential houses.	Alorna fort to Morjim	Directorate of Panchayat and Directorate of Health	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and DoP to identify those discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently.
2.	Improvement to collection system, and	a) Alorna b) Casaver	Respective	12 months	DoP informed that this matter is taken up in the

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Chapora River	em c) Ozorim d) Dhargalim e) Tuem f) Parcem g) Agarwada h) Chopdem i) Morjim j) Menecurim k) Pirna l) Nadora m) Rivora n) Colvale o) Camurli p) Oxel q) Siolim r) Assagao s) Anjuna	Village Panchayat and Directorate of Panchayat		Solid Waste Action Plan submitted in the 606/2018 matter.
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day). Project cost i.e. 82 cr.			9 months	The matter is pending with the GSIDC.
4.	Providing toilet		Departm	6 months	It was informed that the

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	facilities at Chapora fishing jetty		ent of Fisheries		work of providing a toilet block of 02-seaters has been awarded to the PWD.
Terekhol River – Priority – V:					
1.	Disconnection of direct discharges of domestic sewage into the Terekhol River/storm water drains/ Nallahs. ➤ Disconnection of the direct discharge into the river/storm water drains/Nallahs. ➤ Installation of Bio-toilet. ➤ Construction of septic tank and soak pits by residential houses.	Along Terekhol River a) Tambosa b) Nanerwada c) Bhalkhaj an d) Querim - Tiracol	Directorate of Panchayat and Directorate of Health	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and Dop to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently.
2.	Improvement and up gradation of the existing Solid Waste Management Facility including collection system and erection of	a) Querim-Tiracol b) Paliyem c) Corgao d) Pernem municip	Respective Village Panchayat and Directorate	12 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	material recovery facilities / storage shed for non-biodegradable waste in the village panchayat areas along the banks of Terekhol River.	al council e) Casne – Ambere m – porosca dem f) Tambox em- Mopa- Uguem g) Torxem	te of Panchayat		
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day). Project cost i.e. 82 cr.			9 months	The matter is pending with the GSIDC.
Zuari River- Priority – V – (from Curchorem to Madkai)					
1.	Disconnection of direct discharges of domestic sewage into the Zuari River/storm water drains/ Nallahs. ➤ Disconnection of the direct discharge into the river/storm water	Curchorem to Madkai	Directorate of Panchayat and Directorate of Health	6 months	The DMA informed that a Joint Survey is being carried out with Dept. of Health and DoP to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	drains/Nallahs. ➤ Installation of Bio-toilet. ➤ Construction of septic tank and soak pits by residential houses.				subsequently.
2.	Improvement and up gradation of the existing Solid Waste Management Facility including collection system and erection of material recovery facilities / storage shed for non-biodegradable waste in the village panchayat areas along the banks of Zuari River. Establishment of toilets at Fishing Jetty at Cortalim in one year.	a) Savorde m b) Panchwadi c) Shiroda d) Borim e) Wadi – taulim f) Durbhat g) Bandora h) Marcai m i) Neura j) St. Lawrence (Agasim) k) St. Andre (Velha) l) Siridao – pale m)	R espective Village Panchayat and Directorate of Panchayat	12 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter. NoC from the Panchayat has been received and work shall be taken up on priority.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	Establishment of SWM facility at Curchorem of 100 tpd capacity within 18 months at cost of Rs 190 Cr. This will cater to Quepem, Sanguem, and Dharbandora Taluka.	Curchorem – kakora n) Macasona o) Curtorim p) Rachol Lotolium q) Cortalim – Quelosim r) Sancoala			
3.	Toilets facility for Fishing Jetty at Cortalim		Department of Fisheries	6 months	NoC has been received from the Panchayat and the GSIDC has been requested to carry out the work.
4.	The underground sewerage scheme in progress for Ponda municipal area including Curti, Bandora, Kavelem,		SIDCGL	12 months	Ponda-Curti STP matter is subjudice. Bandora plant is given in favour of SIDCGL and has to be retendered. In respect of work at Kavlem, 55% of

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	Undir and area close to Kapleshwari nallah which further joins the Zuari River. Three STP's are proposed at Curti, Kavelem and Bandora of capacity 8MLD, 15MLD and 15MLD respectively. At present 70% sewerage network is laid and 15MLD STP at Kavelem is in progress. Sewerage scheme with 1MLD STP is commissioned for Durbhat village which is on the bank on River Zuari. This STP was commissioned in September 2017 and is running successfully. The total cost of all the projects mentioned above is 536 cr.				work has been completed. Further, it was informed that in respect of Sanquelim STP, the GSIDC has agreed to lay pipeline (<i>i.e. 200-meters of 'missing line'</i>) and accordingly, the work to be commenced thereafter.
Khandepar – Priority V- (from Opa Ponda & Codli- u/s of Opa Water works)					
1.	Disconnection of	Codli to U/s	Directora	6 months	The DMA informed that

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	direct discharges of domestic sewage into the Khandepar. River/storm water drains/ nallah. ➤ Disconnection of the direct discharge into the river/storm water drain / Nallah. ➤ Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains.	of Opa water works a) Khandepar b) Usgao	te of Panchayat, Directorate of Health Services;		a Joint Survey is being carried out with Dept of Health and DoP to identify those discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently.
Assonora – Priority –V – from Assonora to Sirsaim					
1.	Disconnection of direct discharges of domestic sewage into the Assonora. River /storm water drains/ nallah.	Assonora to U/s of Sirsaim a) Assonora b) Sirsaim	Directorate of Panchayat, Directorate of Health	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and DoP to identify those discharging sewage and disposing solid waste in

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	➤ Disconnection of the direct discharge into the river/storm water drain/Nallah. ➤ Installation of Bio toilets along the river stretch for residential areas. ➤ Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains.		Services;		water bodies. Notices will be issued subsequently.
2.	Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Assonora	a) Assonora b) Sirsaim	Respective Village Panchayat and Directorate of Panchayat	12 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	River.				
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day). Project cost i.e. 82 cr.			9 months	The matter is pending with the GSIDC.
Valvanti River – Priority – V- from Poriem to Sanquelim-Bicholim					
1.	Disconnection of direct discharges of domestic sewage into the Valvanti River/storm water drains/ nallah. ➤ Disconnection of the direct discharge into the river/storm water drain/Nallah. ➤ Installation of Bio toilets ➤ Construction of septic tank and soak pits by residential houses.	Poriem to Sanquelim a) Poriem b) Honda c) Karapur & Sarvona	Directorate of Panchayat, Directorate of Health Services;	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and DoP to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently.
2.	a) Improvement to collection system, and erection of	a) Poriem b) Honda c) Karapur	Respective Village	12 months	DoP informed that this matter is taken up in the Solid Waste Action Plan

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Valvanti River. b) Improvement and Up gradation of the existing Solid Waste Management Facility of Sanquelim Municipal Council; installation of biogas plant of 3 tons per day and construction of storage shed.	& Sarvona	Panchayat and Directorate of Panchayat at		submitted in the 606/2018 matter.
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day). Project cost i.e. 82 cr.	a) Pernem b) Bardez c) Bicholim & d) Sattari talukas in North		9 months	The matter is pending with the GSIDC.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
		Goa District.			
4.	Commissioning of existing sewerage network and STP 0.8 MLD capacity. (Covering 3 wards)	a) Sanqueli m b) 3 wards i.e. Bandhar wada, Muslim Wada Muzar wada & Gokulw adi	SIDCGL	12 months	Total network length is 2900m. Tested network length is 1980m. Network balance to be tested 920m. It is observed during testing that 270m is blocked. There is proposed for replacement of 200m. The time required for rectification of manholes, replacement of main sewer line within 8 months.
Bicholim River- Priority- V – from Bicholim to Curchirem					
1.	Disconnection of direct discharges of domestic sewage into the Bicholim. River/storm water drains/ nallah. ➤ Disconnection of the direct discharge into the river/storm water drain/Nallah. ➤ Installation of Bio	Curchirem to Bicholim a) Curchirem b) Bicholim Municipal Council c) Ona-Mauling uem	Directorate of Panchayat and Directorate of Health, ULB.	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and DoP to identify those discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	toilets Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains.	d) Karapur -Sarvan e) Amona f) Pilgao			
2.	a)Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the Municipal Council, village Panchayat areas along the banks of Bicholim River. b) Improvement and up gradation of the existing Solid Waste Management facility of Bicholim	a) Curchirem b) Bicholim Municipality Council c) Ona-Maulinguem d) Karapur -Sarvan e) Amona f) Pilgao	Respective ULB & Village Panchayat and Directorate of Panchayat	12 months 6 months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	Municipal Council ;				
3.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20%	a) Curchirem b) Bicholim Municipal Council c) Ona-Maulinguem d) Karapur-Sarvan e) Amona f) Pilgao		9 months	The matter is pending with the GSIDC.
Sinquerim River- Priority- V- from Candolim to Ganesh Temple, Nerul					
1.	Disconnection of direct discharges of domestic sewage into the Sinquerim. River/storm water drains/ nallah. ➤ Disconnection of the direct discharge into the river or through storm water drain/ Nallah.	Candolim Bridge to Ganapati Temple (Nerul) d) Pilerne-Marra e) Candolim f) Reis-Magos g) Nerul	Directorate of Panchayat, Directorate of Health Services;	6 months	The DMA informed that a Joint Survey is being carried out with Dept of Health and DoP to identify those notices discharging sewage and disposing solid waste in water bodies. Notices will be issued subsequently.

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
	➤ Installation of Bio toilets along the river stretch. ➤ Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains.				
2.	a) Improvement to collection system, and ensuring collection of segregated waste b) Improvement and Up gradation of the existing Solid Waste Management.	a) Pilerne-Marra b) Candolim c) Reis-Magos d) Nerul	Respective Village Panchayat and Directorate of Panchayat	6months	DoP informed that this matter is taken up in the Solid Waste Action Plan submitted in the 606/2018 matter.
3.	Providing toilet facility and sanitation facility for Fishing trawlers near Nerul.		Department of Fisheries	6 months	The Department has proposed to provide 02-seater toilet facility at Nerul Ramp. Accordingly, the work

Sr. No.	Action Strategy	River Stretch	Agency	Time Frame	Present Status
					has been awarded to the PWD.

Based on the above-referred status-update, the Secretary (Environment) directed the officials from (i) Directorate of Municipal Administration (DMS), (ii) Directorate of Panchayat (DoP) and (iii) Directorate of Health Services (DHS) to complete the joint survey-cum-inspection on priority and submit a comprehensive compilation as per eleven polluted river-stretches giving details namely (a) No. of units / establishments inspected, (b) No. of observed violations as per provisions of PHC / SWM Rules, as applicable, (c) No. of Notices issued to units / establishments, (d) No. of responses /replies received from units / establishments within 60-days period, (e) Actions initiated (*i.e. disconnection of water-supply /electricity*) against units / establishments for non-compliance / non-submission of reply/responses to Notices issued, if any.

Further, he also instructed that list of ‘commercial establishments’ which have noted to be violating the provisions under PHC Act / SWM Rules, be forwarded to the Goa-PCB, who in turn would issue necessary ‘directions / SCNs’s’ and seek timely compliance within definite time-frame, failing which closure directions be issued, thereafter.

Sd. / -

Dr. Shamila Monteiro,

Member Secretaty, Goa-PCB / M. S., (RRC-Goa)

Minutes of the 13th Meeting of River Rejuvenation Committee (RRC)
held on 05th July 2019

The thirteenth meeting to the River Rejuvenation Committee (RRC) was held on 05/07/2019 in the conference hall of the Secretariat under the Chairmanship of Secretary, Environment in the presence of Chief Secretary.

The following members were present for the meeting:-

1. Mr. Puneet Kumar Goel IAS, Secretary (Environment), Alto-Porvorim.
2. Dr. Neeta Kanedkar, Dy. Director, Directorate of Health Services.
3. Mr. Ashutosh R. Apte, Director, Department of Mines and Geology.
4. Capt. Premlal Sirsaikar, Dy. Captain of Port.
5. Mr. Gopal A. Parsekar, Director, Directorate of Panchayats.
6. Mr. Sandip K. Prabhu Chodnekar, General Manager (GSIDC).
7. Mr. Ulhas R. Kerkar, S. E. (V), PWD.
8. Dr. Pradip Sarmukadam, Member Secretary, Goa State Biodiversity Board (GSBB), Saligao.
9. Mr. Dilip Dhawlikar, CGM, SIDCGL, Panaji.
10. Dr. Tariq Thomas, Director, Directorate of Municipal Administration.
11. Mr. Levinson J. Martins, M. D., GWMC, Saligao.
12. Mr. Vijaykumar Honawad, G.M. (E), Goa-IDC.
13. Dr. Anant Palekar, Dy. Director (NVBBDCP), Directorate of Health Services (DHS).
14. Mr. V. P. Dangui, Director, DITC.
15. Mr. Vikas Gaunekar, Addl. Coll. (North Goa).
16. Mr. D.G. Sardesai, Dir. (Adm.). Goa Medical College (GMC).
17. Ms. Megha S. Kerkar, Superintendant of Fisheries.
18. Ms. Zigyasa Murkar, Asst. Superintendent of Fisheries.
19. Ms. Disha Shrikant, Dy. Manager (Civil).

- 20.Mr.Subhash Kavlekar, Asst. Director, Directorate of Tourism.
21.Mr. Tanmay Bakhu, T.A., SIDCGL.
22.Mr. Rohit Naik, T.A., SIDCGL.
23.Mr. Sanjeev Joglekar, OSD, Department of Environment, Porvorim.
24.Dr. Shamila Monteiro, Member Secretary, Goa-PCB / Secy., (RRC).

The Member Secretary, Goa-PCB welcomed the Chairman and other Members of the Committee. The status / follow-up action in respect of eleven polluted stretches, namely (i) **Sal river** – Priority-III (*from Mobor to Khareband*), (ii) **Talpona river** – Priority-IV (*from Talpona to Gokarn math*), (iii) **Mandovi river** – Priority- IV (*from Panjim to Volvoi*), (iv) **Chapora river** – Priority V (*from Alorna Fort to Morjim*), (v) **Terekhol river** – Priority – V (*at Terekhol*), (vi) **Zuari river** - Priority – V (*from Curchorem to Madkai*), (vii) **Khandepar river** – Priority V (*from Opa Ponda & Codli- u/s of Opa Water works*), (viii) **Assonora river** – Priority –V (*from Assonora to Sirsaim*), (ix) **Valvanti river** – Priority – V (*from Poriem to Sanquelim-Bicholim*), (x) **Bicholim river** - Priority- V (*from Bicholim to Curchirem*) and (xi) **Sinquerim river** - Priority- V (*from Candolim to Ganesh Temple, Nerul*) vis-à-vis the progress made by the following stakeholder departments, along was reviewed.

1. Directorate of Municipal Administration (DMA) along with the Directorate of Panchayats (DoP) and Directorate of Health Services (DHS).
2. Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).
3. Goa Waste Management Corporation (GWMC).

4. Water Resources Department (WRD)
5. Directorate of Fisheries.
6. Captain of Ports (CoP).
7. Goa State Pollution Control Board

It was informed by DMA /DoP / DHS that 'Notices' have been issued and the validity period of sixty-days expires by July-end to initiate further action for non-compliance.

Later, Member Secretary, RRC-Goa informed that the Central Pollution Control Board (CPCB) has submitted its observation / comments (*refer Annexure – A*) after perusing the Action plans submitted for Terekhol river and suggested that the same observations are required to be addressed in case of other action plans submitted for remaining polluted river-stretches. The 'revised' action plans need to be submitted to the CPCB after obtaining approval by RRC-Goa. Accordingly, the consultant – M/s Unity I.E., Pune has been instructed to collate the requested information from stakeholder departments concerned, incorporate the same and submit revised action plans by early next-week.

Sd. / -

Dr. Shamila Monteiro,
Member Secretary, Goa-PCB / M. S., (*RRC-Goa*)

Date: 5th July 2019

ANNEXURE – AAnnexure -I**Main observation of CPCB on the Action Plan submitted for rejuvenation of Polluted River Terekhol:**

- I. Executive summary along with achievable water quality goals with specific timelines to be included.
- II. Detailed list of major towns with total population, distributaries & major drains contributing to pollution in identified river along with a digital map showing above details to be provided.
- III. Latest characteristics of water quality of, tributaries, drains and ground water in the catchment area to be included.
- IV. Detailed gap analysis w.r.to town-wise sewage management, performance of existing STPs, STP sludge management, up gradation of existing STPs if required for ensuring compliance to the discharge norms, present treated water utilization practices and proposal for utilization of treated sewage, also be included.
- V. As there is no industrial discharge as per the action plan submitted, therefore details may be provided in support of the same.
- VI. Detailed gap analysis w.r.to waste Management (M.SW, HW, E-waste, biomedical waste, plastic waste) & development of infrastructure for waste management if required also be included.
- VII. Interception & diversion of sewage/ industrial effluent carrying drains to STPs/CETPs to be provided.
- VIII. As it is mentioned that there is no issue of E-flows in the polluted stretch of Terekhol River, the flow details of the river may be provided.
- IX. Action plan to be revised covering all the aspects w.r.to utilization of treated sewage to minimize abstraction of ground water, FPZ protection and its management, rain water harvesting and ground water recharge, maintaining E-flows and water shed management and setting up of Bio-diversity parks including removal of encroachment along the banks of polluted river as per Hon'ble NGT orders dated 20.09.2018 and 19.12.2018 apart from inclusion of action plan wise implementing agency, timelines and budget estimates.

Minutes of the 15th Meeting of River Rejuvenation Committee (RRC)
held on 19th August 2019

The fifteenth meeting to the River Rejuvenation Committee (RRC) was held on 19/08/2019 in the Conference Hall of the Ministerial block, Secretariat under the Chairmanship of Secretary, Environment. The following members were present for the meeting:-

1. Mr. Puneet Kumar Goel _{IAS}, Secretary (Environment), Alto-Porvorim.
2. Mr. Prasanna Acharya, Addl. Collector –I (*South*), Margao.
3. Mr. Dasharath M. Redkar, Addl. Collector – II (*North*), Panaji.
4. Dr. Tariq Thomas,_{IAS}, Director, Directorate of Municipal Administration (DMA).
5. Mr. Johnson Bedy Fernandes, Director, Department of Environment.
6. Dr. Jose D'Sa, Director, Directorate of Health Services (DHS).
7. Dr. Anant Palekar, Dy. Director (NVBBDCP), Directorate of Health Services (DHS).
8. Mr. Gurudas S. T. Dessai, Dy. Director, Department of Mines and Geology (DMG).
9. Mr. Gopal A. Parsekar, Director, Directorate of Panchayats.
10. Mr. Ram Asare M-Gupta, Hydrographic Surveyor, Captain of Ports (CoP).
11. Mr. Jude A. D. Carvalho, General Manager (GSIDC).
12. Mr. Prashant Kamat, Functional Manager, Directorate of Industries, Trade and Commerce (DITC).
13. Mr. Kirankumar Naik, Regional Manager (Engg.), Goa Industrial
14. Mr. P. B. Seldarkar, Managing Director, SIDCGL.
15. Mr. Ulhas R. Kerkar, S. E. (V), PWD.
16. Mr. Shrikant Patil, SE-II, Water Resources Department (WRD).
17. Mr. Vinesh Arlenkar, Director, Department of Fisheries.
18. Mr. D.G. Sardesai, Dir. (Adm.). Goa Medical College (GMC).
19. Mr. Ajay Raikar, Assistant Engr., SGPDA, Margao.

20.Mr. Sanjeev Joglekar, OSD, Department of S, T & E, Porvorim.

21.Mr. Bento Thomas, Assistant Manager, Goa Waste Management Corporation (GWMC).

22.Dr. Shamila Monteiro, Member Secretary, Goa-PCB / Secy., (RRC).

At the outset, Secretary (RRC) welcomed the members and appraised about the purpose of the said meeting to understand the present status of works, being undertaken by various stakeholder departments as per the action plan prepared for restoration of polluted river-stretches. Chairman (RRC-Goa) desired to understand the on-site status of such works from officer-concerned who has been assigned to implement / execute the works on ground. Based on the same and as decided during the previous meeting (*i.e. 14th meeting held on 7th August 2019 of which minutes have not been drafted*), the officers responsible for ground level execution along with time-line for achieving the compliance is tabulated below:

Sr. No.	Polluted river stretch	Name of the village / town	Responsible Officer with Name and Designation	Controlling Officer with Name and Designation	Number of household discharging direct sewage	Current Status	Timeline proposed for compliance
1	Sal river – Priority-III (from Mobor to Khareband),	Village Panchayats / BDOs' 1. Nuvem 2. Seraulim 3. Khareband 4. Sirvodem 5. Sirlim (Telaulim) 6. Kankanamoddi (Pazorconi). 7. Navelim 8. Talaulim 9. Cana-Benaulim	Village Panchayats (Secretary, village panchayat) Mr. Mohan Gaonkar, V.P. Aquem-Biaxo Mr. Joaquim Rodrigues, V.P. Navelim Mr. Allaudin Maniyar, V.P. Cavelossim.	Block Development Officer (BDO) Mr. Amitesh A. Shirvoikar (BDO), Salcete. Mr. Uttam K. Pal, BDO (Mormugao).	59	Notices have been issued between 09/08/2019 to 12/08/2019	By 26/08/2019

		10. <i>Varca</i> 11. <i>Orlim</i> 12. <i>Carmona</i> 13. <i>Assolna</i> 14. <i>Cavelossim</i> 15. <i>Velim</i> 16. <i>Mobor</i> 17. <i>Cutbona</i>	Mrs. Sunita Dessai, V.P. Chinchinim. Mr. Shrisail Pattanshetti, V.P. Ambelim. Mr. Krishna Dessai, V.P. Assolna.				
		Municipal Councils	Municipal Councils (Chief officer / Municipal Engineer)				
		Margao	Mr. Manoj Arsekar, Municipal Engineer, Gr.I, Margao Municipal Council (MMC) – 7030910927.	Shri. Siddhivinayak Naik, Chief Officer, Margao Municipal Council (MMC) – 8605007500.			
		Cuncolim	Mr. Vinay Dessai, Municipal Engineer, Gr. II, Cuncolim Municipal Council	Shri. Pritidas Gaonkar, Chief Officer, Cuncolim Municipal Council (CMC) -			

			(CMC) – 9822056541	9403529512			
		DHS	DHS (Health Officer, Primary Health Services)				
2.	Talpona river – Priority-IV (from Talpona to Gokarn math)	Village Panchayats/BDOs' 1. Talpona 2. Poinguinim Municipal Councils Canacona	Village Panchayats (Secretary, village panchayat) Municipal Councils (Chief officer / Municipal Engineer) Shri. Vinod Kotharkar –	Block Development Officer (BDO) Mr. Bhagwant A. Karmali, BDO (Canacona) Mr. Rajiv Naik, BDO (Poinguinim). Shri. Vikas S. Kamble, Chief Officer, Canacona Municipal Council - 7507799303	04	Notices have been issued between 09/08/2019 to 12/08/2019	By 26/08/201 9

			9518774776 Shri. Sanju Dessai (Addl. Charge) – 7798882757 DHS (Health Officer, Primary Health Services)				
3	Mandovi river – Priority- IV (from Panjim to Volvoi)	Village Panchayats/BDOs' 1. Betqui-Khandola 2. Marcem-Tivrem- Orgaon 3. Amona 4. Navelim 5. Candola-Volvoi 6. St.Istevam	Village Panchayats (Secretary, village panchayat) Mr. Raghunath Naik, V.P. Betqui-Candola. Mr.Sushant Naik, V.P. Tivrem-Orgao. Mr.Satish Gauns, V.P. Amona Mr. Tukaram Naik, V.P. Goltim- Navelim. Mr. Shrishkumar G. Tari. V.P.	Block Development Officer (BDO) Mr. Krishnath S. Pangam, BDO (Bardez). Shri. Deepak P. Vaigankar, BDO (Bicholim). Mr.Milind G. Velip, BDO (Ponda). Mrs.Parajakta D. Goltekar, BDO	2082	Notices have been issued between 09/08/2019 to 12/08/2019	By 26/08/201 9

			St.Estevam.	(Tiswadi).			
		7. Se Old-Goa.	Mr.Ashish Naik, V.P. Se Old Goa.				
		8. Salvador-do-Mondo	Mr. Avinash Palni, V.P. Salvador-Do-Mondo				
		9. Penha-de-France	Mr. Rupesh Halarnkar, V.P. Penha-de-Franca				
		10. Reis-Magos	Mr. Premanand				
		11. Nerul	Mandrekhar, V.P. Reis magos.				
			Mrs. Pravishaq Bhosle, V.P. Aldona.				
			Mr. Avelino, V.P. Pomburpha-Olaulim.				
			Mr. Vinod Shetkar, V.P. Bhoma-Adcolna.				
			Mr. Prasad Naik,				

			V.P. Verem-Vaghurmem. Mr. Prasad Naik, V.P. Volvoi. Ms. Lancy Dias, V.P. Chimbel. Ms. Ramita K. Murgaonkar, V.P. Cumbharjua. Mr. Jenu Naik, V.P. Sao-Matias. Mr. Rajesh Naik, V.P. Santa Cruz. Mr. Orville Valles, V.P. Mercedes. Municipal Councils Municipal Councils (Chief officer /				

		City Corporation of Panaji (CCP).	<i>Municipal Engineer)</i> Shri. Sachin Ambe, Municipal Engineer, Gr.II, CCP- 9403687478	Shri. Shashank Tripathi IAS, Commissioner, CCP - 9582373027.			
		DHS	DHS (<i>Health Officer, Primary Health Services</i>)				
4.	Chapora river – Priority V (<i>from Alorna Fort to Morjim</i>)		Village Panchayats (<i>Secretary, village panchayat</i>)	Block Development Officer (BDO) Mr. Krishnakant S. Pangam, BDO (Bardez). Mr. Manish Hari Kedar, BDO (Pernem).	221	Notices have been issued between 09/08/2019 to 12/08/2019	By 26/08/2019 9

			Mr. Amol Sawant, V.P. Ozarim.				
		Village Panchayats/BDOs'	Mr. Rajaram Kamat, V.P. Tuem.				
		1. Alorna	Mr. Viraj Kinalkar, V.P. Parcem.				
		2. Casarvernem	Mr. Ramesh Mandrekar, V.P.				
		3. Ozrim	Agarwada-Chopdem.				
		4. Dhargalim	Mr. Chandan				
		5. Tuem	Chodankar, V.P. Oxel.				
		6. Parcem					
		7. Agarwada	Mr. Subhash Kambli, V.P. Siolim-Marna.				
		8. Chopdem					
		9. Morjim	Mr. Vijay Tilve, V.P. Morjim.				
		10. Mencurem					

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	(at Terekhol)	1. Querim-Tiracol 2. Paliem 3. Corgaon 4. Casnem- Amberem- Poroscodem 5. Tamboxem- Mopa-Uguem 6. Torxem Municipal Councils Pernem DHS	<i>Panchayat)</i> Mr. Abhay Sawant, V.P. Querim- Tiracol. Municipal Councils (Chief officer / Municipal Engineer) Shri. Thomas A. Braganza, Municipal Engineer, Gr.III, PMC – 7972143955. DHS (Health Officer, Primary Health	Mr. Manish Hari Kedar, BDO (Pernem). Shri. Mandar M. Naik, Chief Officer, Pernem Municipal Council (PMC) - 7875352676.	between 09/08/2019 to 12/08/2019	9

			Services)				
6.	Zuari river - Priority – V (from Curchorem to Madkai)	Village Panchayats/BDOs' 1. Savordem 2. Panchwadi 3. Shiroda 4. Borim 5. Wadi-Talaulim 6. Durbhat 7. Bandora 8. Madkai 9. Neura 10. St. Lawrence (Agassim) 11. St. Andre (Goa-Velha)	Village Panchayats (Secretary, village, Panchayat) Mr. Kapil Naik, V.P. Borim. Mr. Sarvesh Naik, V.P. Durbhat Mr. Pradip H. Gaude, V.P. Bandora. Mr. Neetin Bandodkar, V.P. Marcaim. Mr. Viraj Naik, V.P. Dhavli. Mr. Mayur Kudalkar, V.P. Panchawadi. Mr. Harichandra Naik, V.P. Quela. Ms. Divya Surlekar,	Block Development Officer (BDO) Mr. Amitesh A. Shirvoikar, BDO (Salcete). Mr. Uttam K. Pal, BDO (Mormugao). Mr. Milind G. Velip, BDO (Ponda). Ms. Prajakta D. Goltekar, BDO (Tiswadi). Shri. Ajaya R. Gaude, Chief Officer, Curchorem-Cacora Municipal Council - 9923852407.	559	Notices have been issued between 09/08/2019 to 12/08/2019	By 26/08/2019

		12. Siridao-Pale 13. Macasana 14. Curtorim- Quelossim 15. <i>Sancoale</i>	V.P. Querim. Ms.Namita Hazare, V.P. Shiroda. Mr. Jitendra Naik Vaze, V.P. Wadi- Talaulim. Mr. Dinkar Kossambe, V.P.Veling-Priol- Cuncolliem. Mr. Rajendra Gawas, V.P. Curca- Bambolim & Talaulim. Ms. Ramita K. Murgaonkar, V.P. Cumbharjua. Mr. Rajesh Naik, V.P. SantaCruz.				

			Mr. Peter Martins, V.P. Taleigao. Mr. Basilo Pires, V.P. St.Lawrence (Aggasaim). Mr. Dinesh Amonkar, V.P. Loutulim. Mr. Nilesh Shirodkar, V.P. Rachol. Mr. Sachin Naik, V.P. Cortalim. Mr. Narayan Ajgaonkar, V.P. Quelossim. Municipal Councils <i>(Chief officer /</i>				
		Municipal Councils Curchorem – Cacora Municipal Council.					

		DHS	<i>Municipal Engineer)</i> Shri. Deepak Dessai, Municipal Engineer, Gr.II, Curchorem- Cacora Municipal Council – 9284546386 DHS <i>(Health Officer, Primary Health Services)</i>				
7.	Khandepar river – Priority V (from Opa Ponda & Codli- u/s of Opa Water works)	Village Panchayats/BDOs' 1. Khandepar 2. Usgaon 3. Kundaim	Village Panchayats <i>(Secretary, village, Panchayat)</i> Mr. Gokuldas Kudalkar, V.P. Curti-Khandepar. Mr. Prasad Shet, V.P. Usgao-Ganjam. Mr. Sanjay Naik, V.P. Betoda-Nirancal-Conxem-Codar.	Block Development Officer (BDO) Mr. Milind G. Velip, BDO (Ponda).	0		

		Municipal Councils No river stretch within jurisdiction of Ponda Municipal Council DHS	DHS <i>(Health Officer, Primary Health Services)</i>				
8	Assonora river – Priority –V (from Assonora to Sirsaim)	Village Panchayats/BDOs' 1. Assonora 2. Sirsaim-Thivim Municipal Councils No river stretch within jurisdiction of Mapusa / Bicholim Municipal	Village Panchayats <i>(Secretary, village, Panchayat)</i> Mr. Rajkumar Chodankar, V.P. Assonora. Mr. Dinesh Chodankar, V.P. Sirsaim.	Block Development Officer (BDO) Mr. Krishnakant S. Pangam. BDO (Bardez).	36	Notices have been issued between 09/08/2019 to 12/08/2019	By 26/08/2019

		Council	DHS	DHS (Health Officer, Primary Health Services)			
9	Valvanti river – Priority – V (from Poriem to Sanquelim- Bicholim)	Village Panchayats/BDOs' 1. Poriem 2. Honda 3. Karapur Sarvona	Village Panchayats (Secretary, village, Panchayat) Mr. Laxman Naik, V.P. Querim. Mr. Sachin Dhawaskar, V.P. Poriem. Ms. Sujata Morajkar, V.P. Morlem. Mr. Mahadev Naik, V.P. Karapur-Sarvan. Mr. Honaji Morajkar, V.P. Cudnem. Mr. Hanumant	Block Development Officer (BDO) Mr. Deepak P. Vaigankar, BDO (Bicholim). Mr. Suryajirao Rane, BDO (Sattari).	09	Notices have been issued between 09/08/2019 to 12/08/2019	By 26/08/201 9

			Borkar, V.P. Navelim. Ms. Resha Govekar, V.P. Ona- Maulingem.	Smt. Gautami Parmekar, Chief Officer, Sankhali Municipal Council – 9823558935.			
		Municipal Councils	Municipal Councils <i>(Chief officer / Municipal Engineer)</i>				

		Sanquelim Municipal Council.	Smt. Reshma <i>alias</i> Sushanti Harmalkar, Municipal Engineer Gr.III, Sankhali Municipal Council – 9823916528	Smt. Gautami Parmekar, Chief Officer, Sankhali Municipal Council – 9823558935.			
		DHS	DHS (Health Officer, Primary Health Services)				
10	Bicholim river - Priority- V (from Bicholim to Curchirem)	Village Panchayats/BDOs' 1. Curchirem 2. Ona-Maulingem 3. Karapur – Sarvona 4. Amona 5. Pilgaon	Village Panchayats (Secretary, village, Panchayat) Ms. Resha Govekar, V.P. Ona- Maulingem. Mr. Mahadev Naik, V.P. Karapur-Sarvan. Mr.Satish Gauns, V.P. Amona	Block Development Officer (BDO) Mr. Deepak P. Vaigankar, BDO (Bicholim).			

		Municipal Councils Bicholim Municipal Council. DHS	Municipal Councils <i>(Chief officer / Health Officer / Municipal Engineer)</i> Shri. Ashik Khan, Municipal Engineer, Gr.II, BMC. Dr. Medha Salkar, Health Officer. 9011025053 DHS <i>(Health Officer, Primary Health Services)</i>	Shri.Vivek Krishna Naik, Chief Officer, Bicholim Municipal Council (BMC) - 8424014673.	Domestic – 191 Commercial - 15	Commercial – 13 have been disconnected .	As response from 12 domestic units have been received, joint inspection of Domestic units is ongoing.
11	Sinquerim river - Priority-V (from Candolim to Ganesh Temple, Nerul)	Village Panchayats/BDOs' 1. Pilerne – Marra 2. Candolim	Village Panchayats <i>(Secretary, village, Panchayat)</i> Mr. Peter martins, V.P. Pilerne-Marra. Mr. Lawrence Rebeiro, V.P.	Block Development Officer (BDO) Mr. Krishnakant S.Pangam, BDO (Bardez).	0		

		3. Reis-Magos 4. Nerul Municipal Councils No river stretch within jurisdiction of Mapusa Municipal Council. DHS	Candolim. Mr. Premanand Mandrekar, V.P. Reis magos. DHS <i>(Health Officer, Primary Health Services)</i>				

In addition, Chairman (RRC-Goa) also desired to get the current status of other ‘intervention /construction /ongoing works’ from the following stakeholder and implementing Departments along with the names, designation and contact details as per the table below.-

Sr. No.	Departments involved / Stakeholders concerned	Works to be performed	Current status of works	Responsible Officer with Name and Designation	Timelines
1	Directorate of Municipal Administration (DMA) / Directorate of Panchayats (DoP)	a. To monitor the compliances of the respective local authorities and submit the report to the GSPCB. b. Compliance to provisions of the Solid Waste Management (SWM) Rules. c. To tie up with the Goa Waste Management Corporation (GWMC) for technological interventions to treat domestic-sewage. d. Funds to be made available from 14 th finance commission to SGPDA for installation of two-plants of 7.5 TPD. e. DoP/DMA will also ensure that number of Bio-toilets and			

		funds for the same will be given to GWMC.			
2.	Directorate of Health Services (DHS).	a. Disconnection of electricity against illegal discharges. b. Compliance to provisions of the Bio-Medical Waste Management Rules, 2016.			
3	Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).	a. To carry out treatment of nallah for Bioremediation Natural treatment (SIBF/ Phytorid Beds). b. Utilization of STP-sludge / management - proposal c. Utilization of treated sewage to minimize abstraction of groundwater. Discussion with the MPT, ONGC, Forest Department and Fire and Emergency Services for utilisation of treated STP-water, special tankers to be allotted for transportation of STP-treated water. d. Recycling and Reuse of treated sewage from the			

		Sewage treatment plants for flushing and maintaining E-flow during dry season. e. Detailed Gap analysis w.r.t. town-wise sewage management of treatment facility which should include actual waste-water generation, capacities of operational STPs', proposed STPs. f. Submission of action plan for every trunk sewer, peripheral sewer and house hold sewer. g. Present status and completion of proposed STPs' in the State.			
4	DMA / SIDCGL and PWD	a. Utilisation of treated sewage – identify usage for common gardening / traffic islands / construction activities / industrial usage with details of quantity required, investment in terms of transportation. Cost to be levied to the user.			

5	Goa Waste Management Corporation (GWMC).	a. Progress in respect of expansion of 1. Saligao / Cacora solid waste management plant. 2. Biomedical waste treatment plant at Kundaim 3. Hazardous waste treatment facility at Pissurlem 4. Construction and Debris waste Management at Colvale. 5. E-waste treatment facility – It was informed that they had an MoU with agency KaroSamb and had issued a circular to all Government Offices and local bodies etc thereby the agency will collect e-waste without giving any money in return. It was also informed that the			

		main issue regarding e-waste is with respect to disposal of tube lights and CFL bulbs. Hon'ble Minister instructed GWMC to find a solution for scientific disposal of tube lights and CFL bulbs and accordingly send a proposal to the electricity dept. 6. Installation of Bio-toilets.			
6	Water Resources Department (WRD)	a. To carry out de-weeding. WRD has informed that the survey and quantification is in process. b. To de-silt and complete the work in a time bound manner. c. Installation of DO control measures. d. Good Irrigation practices e. Flood prone zone protection and management f. River-flow and e-flow data			

		for last five-years for river-stretches.			
7	Captain of Ports (CoP).	a. Dredging of Sal river. b. Installation of toilets at ferry-points across river stretches.			
8	Directorate of Tourism	Collection and proper disposal of waste-water generated from shacks – policy to be formulated regarding laying of pipe-line connecting all the shacks along a beach-stretch to treatment facility at a common receival point.			
9	Department of Forests	a. Setting up of forest-parks. b. Plantation of trees along both sides of the polluted river-stretches.			
10	Goa Medical College (GMC)	a. Compliance to provisions of the Bio-Medical Waste Management Amended Rules, 2019. b. Upgradation of Incinerator – present status and timelines with role of department involved.			
11	Department of Electricity	a. Ensuring disconnection of			

		electricity of units identified by DMA / DoP and DHS.			
12	Directorate of Fisheries	a. Providing toilet facilities at fishing jetty.			
13	Department of Industries, Trade and Commerce (DITC)	a. Utilization of treated sewage to minimize abstraction of groundwater. b. Rainwater harvesting and ground-water recharge.			
14	Goa Industrial Development Corporation (Goa-IDC)	a. Utilization of treated sewage water by the Industries. b. Discharges of treated / untreated sewage / effluents into the water bodies. c. Rainwater harvesting and ground-water recharge.			
15	Goa State Biodiversity Board (GSBB)	a. Setting of Biodiversity-parks.			
16	Collector (North Goa)	a. Removal of encroachment along both sides of the polluted river stretches			
17	Collector (South Goa)	a. Removal of encroachment along both sides of the polluted river stretches.			

18	Goa State Pollution Control Board	a. Performance of existing STPs. b. Sampling and analysis of all the tributaries and drains identified by the consultant along polluted river-stretches.		Scientific section, GSPCB Mr. Sanjay Kankonkar, Sci.-B / Laboratory staff.	Consultant to inform the site-specific locations of sampling points along (i) tributaries and (ii) drains identified during the preliminary survey.
19	Department of Environment	Bio-indexing of river stretches.		Status of proposal submitted to the NIO.	

The meeting ended with thanks to the Chair.

Sd./-
Dr. Shamila Monteiro,
M. S. (Goa-PCB) / Secretary, RRC-Goa

Panaji, Goa.

Six-monthly Progress Report in compliance to NGT Orders 12th September 2019 in a matter of O.A. no. 606 of 2018 –State of Goa

(compiled based on inputs received through e-mail from Department of Environment / Directorate of Fisheries / Directorate of Health Services / District Collector (North) / Directorate of Municipal Administration / Directorate of Panchayats / Department of Mines and Geology / Goa Industrial Development Corporation / Goa Waste Management Corporation / Water Resources Department)

Sr. No	Clause in the Order dated 10 th April 2019	Action required / mandated	Follow-up action / Status as on 11 th October 2019
1	A. Clause – 29 / 39 (i) - Compliance under Rule 22 of Solid Waste Management (SWM) Rules 2016.	a. Identification of suitable sites for setting up solid waste processing facilities. b. Identification of suitable sites for setting up common regional sanitary landfill facilities for suitable clusters of local authorities and for setting up common regional sanitary landfill facilities or stand alone sanitary landfill facilities by all local authorities. c. Procurement of suitable sites for setting up solid waste processing facility and sanitary landfill facilities. d. Enforcing waste generators to practice segregation of bio-degradable, recyclable, combustible, sanitary waste domestic hazardous and inert solid wastes at source. e. Ensure door to door collection of segregated waste and its transportation in covered vehicles to processing or disposal facilities. f. Ensure separate storage, collection and transportation of construction and demolition wastes.	Presently, all the ULBs' have their suitable sites for treatment of waste except for Cacora Curchorem Municipal Council (CCMC) in South Goa district. The site in respect of CCMC has been handed over to Goa Waste management Corporation (GWMC) for setting up Solid Waste Management Facility at Cacora. . Directions have been issued to all ULBs' in this regard, and directions have been issued with respect to bulk waste generators All 191 village panchayats are undertaking door-to-door collection / street cleaning / conversion of black-spots into green-spots Site has been identified as a temporary measure for dumping of construction & demolition (C & D) waste in respect of North Goa District and will be notified once Government approval is accorded for the same

		g. Setting up solid waste processing facilities by all local bodies. h. Setting up common or stand alone sanitary landfills by or for all local bodies for the disposal of only such residual wastes from the processing facilities as well as untreatable inert wastes as permitted under the Rules.	for which proposal has been moved to Government through Collector, North Goa . In South Goa District, the search for a temporary site is ongoing. The action with respect to the C & D plant is carried out by GWMC. There are 191 village panchayats in the State of Goa. • Procedure in process where Land Available for construction of MRF—64 V.P. • Land Identified by Village Panchayats—113 V.P. • No Land Available with VP –14 V.P. (Decided for cluster approach with neighbouring Panchayats.) Technical sanction (part) for civil works in respect of expansion of Saligao Solid Waste Treatment Facility (SWMF) is accorded by Goa State Infrastructure Development Corporation (GSIDC) and subsequently, GWMC has issued letter of acceptance of proposal to the concessionaire. Concessionaire is required to submit bank guarantee (BG) and detailed working drawings for issue of work order. Further, Goa Industrial Development Corporation (Goa-IDC)’s approval for construction is awaited. Electro-mechanical proposal was scrutinised on 4th October 2019 by Goa State Infrastructure Development Corporation (GSIDC) and concessionaire has been directed to submit revised proposal incorporating

			corrections recommended. Further, Technical sanction (part) for civil works in respect Cacora Solid Waste Treatment Facility is accorded by GSIDC. Further, the concessionaire is required to submit electromechanical proposal for approval. In respect of proposed SWM facility at Bainguinim, Final EIA report is received on 10/09/2019, which was forwarded to Goa State Expert Appraisal Committee (Goa-SEAC) on 13/09/2019. Further NEERI, Nagpur (Consultant) presented before the Goa State Expert Appraisal committee (Goa-SEAC) on 01/10/2019, in which the Goa-SEAC has recommended to verify and revalidate studies and has recommended some additional suggestions to be carried in the draft EIA report. Subsequently, NEERI, Nagpur has started to revalidate studies from 07/10/2019. In respect of waste treatment facility proposed at Verna Industrial Estate, it is informed that Terms of Reference (TOR) has been obtained from Goa- SEAC for conducting EIA study. Draft DPR has been prepared by M/s Paradigm Strategies Pvt. Ltd., <i>(appointed by the GIZ)</i>. As regard to CSR project at Chicalim by Airport Authority of India (AAI), presentation of revised proposal to be scheduled in the next board meeting of

	B. Compliance under Rule 24 of Solid Waste Management (SWM) Rules 2016.	i. Bio-remediation or capping of old and abandoned dump sites (<i>i.e. legacy-dumps</i>). j. Submission of Annual report by local bodies (<i>i.e. CCP / municipal councils / village panchayats</i>).	AAI (<i>tentatively in October, 2019</i>). GWMC has floated tender for remediation of legacy (<i>i.e. old</i>) dumpson 16/08/2019 and pre-bid meeting was held on 27/08/2019. Tender will be opened on 15/10/2019. In addition, survey for mapping and quantification of fourteen sites of ‘legacy-waste’ has been conducted through M/s Owlways Creatives, Goa (<i>refer Enclosure – I</i>) All Municipal Councils / Village Panchayats have submitted annual-reports. Local authorities in South Goa district – South Goa Collectorate has informed that in Salcete / Mormugao / Ponda / Quepem / Canacona / Sanguem / Dharbandora talukas out of 89 panchayats - 69 panchayats have identified the sites for garbage management, 36 panchayats have obtained NoC and 22 panchayats have received technical sanction from the Public Works Department (PWD). Margao municipality has achieved 90% door-to-door collection of segregated waste, Vasco / Ponda / Curchorem / Sanguem / Cuncolim / Canacona have achieved 100%. In respect of Mormugao municipality, 10,000 metre square land has been transferred to the Directorate of Municipal Administration for capacity

			augmentation for the Urban Local Bodies (ULB), Canacona municipality is in the process of augmenting its waste treatment capacity. Local authorities in North Goa district – All local bodies are undertaking door-to-door collection / street cleaning / conversion of black-spots into green-spots. (i) As regards to a proposal to set-up ‘Bio-digester’ at Taleigao, CCP will be floating a expression of interest (EOI) for the same While, at Calangute and Candolim, common area has been identified and proposal to obtain NOC for land is under progress. (ii) As regard to waste-management in industrial areas, Goa-IDC has identified areas within respective Industrial Estates (<i>refer Annexure - A</i>) and GWMC shall carry out feasibility study of these areas for utilizing it for appropriate Waste Treatment facility, (iii) Policy is being framed for relocation of scrap-yards (iv) For plastic-to-fuel plant, shed has been made ready, NOC of fire department is obtained and Goa State Urban Development Agency (GSUDA) and GWMC is awaiting instructions from GSUDA for stocking of plastic waste at the plastic-to-fuel plant facility. (v) In respect of minimizing the usage of single-use plastic, all local authorities have passed a ‘resolution’ in this regard and raids / inspections are being conducted for its implementation. Further, Government has issued circular on ban of single use

			plastic in all Government Departments/ Corporations/ PSU / Autonomous bodies (vi) New agency is appointed for the purpose of ‘Beach-cleaning’. (vii) All bus-stands are regularly cleaned and garbage segregation shed is available at Panjim and Mapusa (<i>In progress</i>). (viii) Secretariat is making arrangements for handling different types of waste, namely Wet / Dry Waste, E-Waste, Furniture Waste and Paper Waste generated within its complex and revised proposal is sent for Govt. approval. In other North Goa Talukas, Joint Inspections to identify suitable land has been conducted and report is under preparation. Further GWMC is working on proposal to utilise 3000 – 4000 sq. mts. land at Dona Paula belonging to IT Department to set up transfer station for North Goa.
C. Compliance to Plastic waste Management Rules, 2016.	k. Ban on single-use plastic items.		The Department of Environment has Notified the Goa Non-Biodegradable Garbage (Control) (Amendment)Act, 2019 in an Official Gazette (Extraordinary), Series I, No. 25 dated 23rd September 2019 (<i>pg.26 – 27</i>), wherein vide clause 3(A) use of plastic carry-bags have been prohibited (<i>refer Annexure - B</i>).
D. Compliance to Bio-medical waste Management Rules, 2018.	1. Setting up of Common BMWT facility		In respect of setting up of a Common Bio-medical waste treatment facility proposed at Kundaim IE, tender for selection of service provider for Design, Build, Operate and Transfer (DBOT) a CBMWT at Kundaim is floated on 09/08/2019 and pre-bid

	E. Compliance to Hazardous wastes Management Rules, 2018. F. Compliance to Construction and Demolition wastes Management Rules, 2016.	m. Setting up of Common HWTSD facility n. Setting up of C & D facility	meeting was held on 27/08/2019.Tender will be opened on 17/10/2019. Further, Environmental Clearance (EC) for the CBWTDF has been granted by Goa-SEAC on 27/09/2019, which is uploaded on DST website. Further, as regard to setting up of Common Hazardous Waste Treatment Storage & Disposal Facility (CHWTSDF) at Pissurlem Industrial Estate, agreement for Deed of lease with Goa Industrial Development Corporation (GIDC), Goa Industries Environmental Management Association (GIEMA) and GWMC has been executed on 24/09/2019. Further, with respect to setting up of a Construction and Demolition waste (C & D waste) treatment facility, land acquisition of Colvale site is in process and proposal for transfer of alternate revenue land under survey no. 146/2,3,4,6, and 148/2,6,7 in Curchirem village admeasuring an area of approx 44,478 sq.mt. to GWMC moved to O/o North District Collectorate. Proposal for identifying abandoned quarries/mines for backfilling is issued to Director Municipal Administration on 22/07/2019 to notify the sites under survey no, 146, 148, 129 & 130 in Village Curchirem, 95 & 98 in Mayem Village.

	Clause 39(ii) – Identification of three major cities/towns in the State and at least three Panchayats in every District to be notified on the website as “Model cities /towns’. Remaining cities, towns and Village Panchayats of the State to be fully complaint in respect of environmental norms.	Identification of Model Cities /Towns / Villages	With respect to <u>Three identified Model Cities</u>, the status is as given below:- 1. Corporation of The City of Panaji- Class A: 100% Door to Door collection is being carried out . Steps have been taken to augment processing and disposal capacity. The ULB has sufficient capacity with respect to Dry waste and in respect of wet waste the ULB is floating EOI for setting up Bio methanation plants .The paucity of land and opposition to the proposed projects has slowed progress. 2. Cuncolim Municipal Council- Class B : 100% Door-to-Door Collection is being carried out . The ULB is augmenting capacity for waste treatment and has floated tender for the same. 3. Valpoi Municipal Council- Class C: 100% Door to Door Collection is being carried out . The ULB is augmenting capacity for waste treatment and work in this regard is in progress. Capacity augmentation proposals with respect to Solid Waste Treatment have been worked out for each ULB in the state except for Quepem and Sanguem Municipal Councils which have achieved 100% Door to Door Collection and are currently having sufficient waste treatment facilities for wet and dry waste. Additionally, Bicholim Municipal Council also has achieved 100% Door to Door Collection and has sufficient Dry and Wet waste handling capacity. However, capacity augmentation is proposed to handle future increase in waste generation. Further, with respect to six identified model villages, the status is as under - South Goa District <u>V.P. Chicalim-</u> • Land Available in in Sy. No. 7/1, Estimation Prepared and Technical Sanction

			obtained from PWD and also obtained N.O.C from GSPCB, file is sent for the Administrative Approval to Directorate of Panchayats. Once the approvals are received the further tendering process will be completed. • The wet waste is disposed by the Contractor in the composting pit at Nofra and setting up of Material recovery facility along with 10TPD bio digester/Composting Unit under CSR through GWMC is in process. • Collect both the Dry and Wet waste from the entire Household. The Village Panchayat has provided 10 ltr. Of 2 Dustbins for each house to keep their waste separately. • V.P. constituted Garbage Management committee and it is functional • V.P has collected all the E-waste and taken initiative for handing over the same to Karo Sambhav for scientific disposal. • V.P. levy fines for littering and burning of Garbage and also user charges are collected from all households. • All Black Spots are converted into Green spots. • Street sweeping is done on daily basis. <u>V.P. Navelim-</u> • Existing Shed is available for segregation of Garbage. Also, new Site of 300 sq. Mts. of land at Moddi is in process for setting up of Material Recovery Facility. • Wet Waste Composting Machine is installed at Panchayat Premises of 75kg per day capacity. Black Soldier Fly Larvae of 1000 kg capacity (2 Units) are installed in premises of Panchayat. As well as in all 11 wards Bio Digesters are installed. • Collect both the Dry and Wet waste from the entire Household. • E-waste is collected regularly and disposed through Government empanel. • V.P. constituted Garbage Management committee and it is functional • V.P. levy fines for littering and burning of Garbage and also user charges are collected from all households

			<u>V.P. Ugum-</u> • Identified land in Survey No.26/3 of Village Uguem belonging to Govt Dept and NOC awaited. • All households are disposing their wet waste at their own level. • collect only dry waste from all the households • V.P. constituted Garbage Management committee and it is functional • V.P. levy fines for littering and burning of Garbage and also user charges are collected from all households North Goa District <u>V.P. Old Goa-</u> • Identified land in Survey No. 154/3 at Ella, Old Goa. ,Sy. No.154 at Ella, Old Goa. ,) Sy. No.20 at Bainguinim, Old Goa. Belonging to Govt Dept and NOC awaited. • Only dry waste is being collected and it is disposed at Goa Solid Waste Management Corporation, Saligao Goa. • Street sweeping is Done twice in the month at Tourist places. • V.P. constituted Garbage Management committee and it is functional <u>V.P. Oxel-</u> • Shed has been constructed close to the Panchayat admeasjouring of 50-60 Sq mtr in S.Y.No. 104/1(Part) • V.P. is carrying out Door to door both wet and dry waste and is being sent at GWMC Saligao for disposal. • V.P. constituted Garbage Management committee and it is functional <u>V.P. Aldona-</u> • Land identified in Sy. No. 340/1/(Part A) of village Aldona. But there are objection from the villagers. The V.P. is in process to identify alternate land for setting up MRF facility.

			• V.P. is carrying out dry Door to door garbage collection. Wet Waste is collected from Aldona Market on Daily Basis and same is being sent to SWM Plant at Saligao Goa. • V.P. constituted Garbage Management committee and it is functional In addition to above-referred six villages, following eight villages have been prioritised 1. Moira 2. Pilerne-Marra 3. Surla 4. Casnem-Ambere-Porsocodem 5. Veling -Priol 6. Cavelossim 7. Chicolna-Bogmalo 8. Nuem

2	Clause 39(iv) – Quarterly report be furnished by the Chief Secretary	Submission of quarterly report (<i>i.e. every three-months</i>) by Chief Secretary	First quarterly progress report was submitted to the CPCB / NGT on 15 th July 2019.
3	Estimate of value of environmental degradation and cost of restoration be prepared and	Estimation of Loss of damage to environment and loss of livelihood	The Department of Environment has informed that the proposal has been forwarded to the Government for financial approval.
4	compensation be planned and recovered from polluters for environmental restoration and Restitution on that basis.	Threatening health hazard and loss to forest cover	In respect of extraction of major mineral i.e. Iron ore & Manganese Ore mining in State of Goa, it is informed that vide Order dated 07.02.2019, the Hon’ble Supreme Court of India has quashed the second renewal granted to 88 mining leases & at present there is no extraction activities of Iron ore/Manganese ore being carried out in the State of Goa. In respect of scientific closure of illegal laterite/ minor mineral extraction as well as <u>compensation levied for illegal extraction</u>, it is submitted that the Dy. Collector, Pernem has identified the occupant of the land/offending parties responsible for said act & notices has been issued upon them for restoration of land. Show cause notice has been issued to

			the violators for recovery of value of mineral from polluters. Flying squads has been reconstituted empowering respective taluka Mamlatdars for monitoring of illegal extraction, Transportation & Storage of minor mineral. Illegal extraction sites identified in Pernem, Bicholim, Sattari and Tiswadi taluka along with officials of respective Mamlatdar, Goa Waste Management Corporation, GSPCB, and DLSR. Extraction sites on Government land to be filled with construction debris. All details of abandoned minor mineral extraction sites are given to Collectorate to facilitate action plan by Goa Waste Management Corporation to fill the same by C & D waste.
5	Clause – 35: Polluters-Pays-Principle	Implementation of Polluters Pay Principle	The GSPCB has levied polluter-pay-penalty on 220 numbers of units. Out of which 57 no. of units have paid the penalties. Further, action is in the process of being initiated.
6	Clause (vi) – Monitoring of progress with all District Magistrates.	Monitoring / progress with District Collectors by Chief Secretary	The O/o North Goa Collector has convened ten (10 nos.) meetings, last being held on 30 th September 2019, while, O/o South Goa Collector has convened three (03 nos.) meetings to monitor the progress the NGT compliance.
7	Clause 39(vii) – Monitor the status of compliance of environmental norms.	Monitoring of compliance to environmental norms by District Collector.	

7	Clause 39(ix) – Performance audit of functioning of all regulatory bodies and all local bodies	To be conducted and remedial measures be taken	The CPCB has conducted the ‘Performance Audit’ of the GSPCB on 22 nd May 2019 and on its scrutiny, the Goa State Pollution Control Board (GSPCB) has been placed at sixth-position nationwide.	In respect of Solid Waste Management in Urban Local Bodies, the office of the Principal Accountant General (PAG) -Goa has already carried out Performance Audit. The Department of Urban Development will carry out Performance Audit as per requirement from time to time. While, in respect of conducting audit of village panchayats, Directorate of Panchayat is in a process of working out on modalities on how to conduct performance audit of the village panchayats

In addition to above, the follow-up / status-update in respect of following matters (*as discussed / deliberated during the C.S.'s personal appearance before the NGT on 10th April 2019 as well as in compliance to NGT Order dated 12th September 2019*) is as under -

A	Water Audit of all Casinos	Work Order has been issued to M/s TUV during 2 nd week of September 2019	
B	Bio diversity index for all rivers	The study is proposed to be conducted through the National Institute of Oceanography (NIO). Accordingly, financial approval is being processed through the Department of Environment.	
D	All RRC's plans to be displayed on the website with name of designated official to ensure compliance.	Action Plans prepared by RRC-Goa through a consultant – M/s Unity I.E. (<i>as per NGT Order in a matter of O.A. no. 673 of 2018 dated 20th September 2018</i>) for rejuvenation of polluted river-stretches have already been uploaded on GSPCB-website. These plans were also discussed / deliberated during the meeting conducted by the CPCB on 12th September 2019 and comments have been suggested. Further, the State Government (<i>through the Department of Environment</i>) has submitted a 'Performance Guarantee' of Rs. 15 crores to the CPCB as per NGT Order dated 8th April 2019 in a same matter. Further, as per NGT Order dated 12th September 2019, RRC plans is yet be uploaded on State Government website. Further, as a remedial measure, action initiated by Urban Local Bodies (ULBs') in response to non-compliance to 'Notices' issued to various units (residential as well as commercial establishments) for release / discharge of untreated sewage into water-bodies (<i>refer Annexure - C</i>). Further, similar action initiated by Directorate of Panchayats (<i>refer Annexure – D</i>) and Directorate of Health Services (DHS) (<i>refer Annexure - E</i>).	
E	Providing infrastructural facilities / common toilets along Fishing-jetties	The Department of Fisheries (DoF) has – (a) initiated upgrading/ reconstructing/ extending the present infrastructure comprising of 20-seater toilet block / waste-water treatment plant at <u>Malim jetty</u> and to be completed by 30th September, 2019 by GSIDC, (b) initiated upgrading/reconstructing/ extending the present infrastructure comprising of 02-seator toilet block / waste-water treatment plant at <u>Cortalim jetty</u> and to	<u>Malim jetty:</u> a. The work of Construction of 20 seater toilet block and waste water treatment plant is undertaken by Goa State Infrastructure Development Corporation. b. As informed by Goa State Infrastructure Development Corporation vide its e-mail dtd: 11/10/2019, 95% of the work of the toilet block is complete and the remaining is likely to complete by 31/10/2019. The work of waste water treatment plant is in progress and is likely to complete by

		(c) be completed by 30th September, 2019 by GSIDC, (d) initiated/upgrading/reconstructing/ extending the present infrastructure comprising of 03-nos. of Bio-toilets at <u>Chapora</u> to be constructed by M/s Go Green Solutions Pvt. Ltd., (e) proposed 02-seator toilet block at <u>Talpona jetty</u> to be completed by 10th October 2019 by PWD, (f)proposed 02-seator toilet block at <u>Nerul-ramp</u> to be completed by 10th October 2019 by PWD. In addition, DoF has requested GWMC to provide 04-nos. of Bio-toilets, one each at Chapora / Talpona / Cortalim / fishing ramp at Nerul.	15/11/2019. <u>Cortalim jetty:</u> a. A toilet block of one seater will be installed by Goa Waste Management Corporation by 15/10/2019. b. The work of Construction of Permanent 2 seater toilet block and waste water treatment plant is undertaken by Goa State Infrastructure Development Corporation. c. As informed by Goa State Infrastructure Development Corporation vide its e-mail dtd: 11/10/2019, 40% of the work of the toilet block is complete and the remaining is likely to complete by 31/11/2019. The work of waste water treatment plant is in progress and is likely to complete by 15/12/2019 <u>Chapora jetty:</u> A toilet block of one seater will be installed by Goa Waste Management Corporation by 15/10/2019. <u>Talpona jetty:</u> Goa Waste Management Corporation has constructed 2 seater toilets at Talpona jetty. <u>Nerul ramp:</u> A toilet block will be installed by Goa Waste Management Corporation by 15/10/2019.
F	Status of CETPs' / ETPs' including performance	There are no CETP's in the State of Goa. In respect of Effluent Treatment Plant (ETP), out of 209, one ETP is non-complying with the effluent water-quality standards and an action has been against the said industry. In respect of Sewage Treatment Plant (STP), although there are no Municipal STPs'. Other STP's (<i>total nos. 399</i>) are complying with the treated water-quality standards. The Board has inspected / conducted performance evaluation of eight (08 nos.) of STP during the month of August 2019.	

G	Groundwater extraction / contamination and recharge	Ground Water Extraction and Recharge. ➤ The State has implemented Goa Ground Water Regulation Act 2002 on 29th January 2002. ➤ The State is actively monitoring the ground water resources for its availability, use and contamination. ➤ To monitor and for judicial use the ground water the government has declared entire state of Goa as Scheduled area, where in the registration of the ground water structure is mandatory. ➤ Ground water cell is constituted by the govt headed by the Chief Engineer, with Sr Engineer , as members to monitor and regulate the sinking of new wells, and control drawl of water for commercial purpose. ➤ Govt has nominated 6 nos. Ground Water Officer in the state in the grade of Executive Engineer who are implementing provisions of the act. ➤ The commercial exploitation of water is regulated by levying water use tax at rate of Rs2 per Cum during monsoon , from Nov to May is Rs 6/ m3. Domestic purpose Rs 0.1 /m3. ➤ 105 ground water monitoring station are installed in the state for monitoring the Pre Mansoon and Post Manson groundwater availability. ➤ Though the Central Ground Water Board (CGWB) sate has conducted study on Dynamic Ground water Resources of the State . ➤ 44 nos of hydrograph stations are maintained in the State to study the ground water fluctuations spread all over the state. Pre- monsoon and Post- Monsoon levels have been monitored. ➤ Ground Water available in the state is estimated to be 14625 Ha –M as against which the utilisation is 5377 ha-m. ➤ Considering future Consumption the ground water upto year 2025 for agriculture, domestic and industrial purpose is estimated at 3902 ha-m ➤ The ground water harnessed to <i>only 37 % of its availability and hence is categorised as SAFE.</i> ➤ Dept has registered (851) nos. wells, which have been registered for commercial use, and water used is being charged with water usage charges by fixing water meters. Recharge;- ➤ The department has implemented over 350 water harvesting structuring by the way of bandharas /weir on the rivers, which are storing 564.7 MCM of water which charges the ground water and maintains E- flow in the river. Water quality

		➤ Ground water quality is also monitored, except in the low laying swamp areas in the tidal affected regions which are affected by salinity i.e., 2 well out of 48 wells (4.16 %) rest all the wells are having fresh water chlorides are in permissible limits. Entire Goa state is free from fluoride. <u>Rejuvenation of Water-Bodies</u> ➤ In respect of water-bodies, Water Resources Department (WRD) has classified the same into (a) rivers, (b) Dams / storage schemes, (c) tanks / ponds / lakes and (d) wells ➤ State has constructed 2 nos medium dams namely Salauli and Anjuna , 4 nos minor dams namely Chapoli, Amthane, Panchwadi, Gawane dam harvesting 29365 ha-m of water. ➤ State has one Inter- State project Tillari Dam which provides 11350 ha- m of water for irrigation , water supply to maintain E- flow in the rivers. ➤ State has taken up development of lakes , wells and other water storages structures for rejuvenation of water bodies have implemented over 1500 nos small projects . ➤ The department has implemented over 350 nos of water harvesting structuring by the way of bandharas /weir on the rivers, which are storing 564.7 MCM of water which charges the ground water and maintains E- flow in the river ➤ The State has implemented Goa Ground Water Regulation Act, 2002 . Registrations of wells have been made compulsory. ➤ Ground water is monitored by 43 Nos observation / monitoring wells , where in pre and monsoon levels are monitored for quality and quantity. ➤ Ground water utilisation is utilisation is only 37%. <i>Stage of ground water development is categorised as SAFE by CGWB.</i> ➤ A subsidy scheme – ‘Nital Goem Nital Baim’ has been introduced for rejuvenation of wells where in the well owner is provide financial help upto Rs 50,000/- (max) ➤ Department has established full-fledged water quality lab under hydrology project which monitors water quality pre and post mason. E flow studies have been conducted for the Madei river Basin, and the E-flow recommended is 808.94 MCM.
H	100 Industrial clusters	No industrial cluster / estate in the State has been categorised as ‘critically polluted’.

I	Air pollution including Noise pollution	No city has been categorised as ‘Non- Attainment City’ in the State. However, the GSPCB has been conducting air-quality monitoring through 18 fixed-locations under National Ambient Air-quality Monitoring Programme (NAMP) of the CPCB. In addition, site-specific air-quality monitoring is being conducted by the Board with the help of mobile Online Continuous Ambient Air Quality Monitoring System (CAAQMS). As regard to Noise pollution, the State <i>through the Department of Environment</i>, has notified the ‘Designated Authorities’ as per the provisions of the Noise Rules, 2000 and the issued about noise have been addressed effectively.
J	Rejuvenation of water-bodies	In respect of wetlands, the Goa State Biodiversity Board (GSBB) is the Nodal Agency for Goa State Wetland Authority (GSWA) and is in a process of identification of wetlands in the State through the National Institute of Oceanography (NIO) and the same is proposed to be completed by December 2019. In respect of water-bodies, Water Resources Department (WRD) has classified the same into (a) rivers, (b) dams / storage schemes, (c) tanks / ponds / lakes and (d) wells. The State has implemented Goa Ground Water Regulation Act, 2002 though its utilisation is only 37%. Registrations of wells have been made compulsory and a scheme – ‘<i>Nital Goem Nital Baim</i>’ has been introduced for rejuvenation of wells.

Identification of Open-plots within the Notified Industrial Estates for waste-segregation

No.: GIDC/GM(E)/SWM/2019-20/2999
Date: 13/08/2019
09

To,
The Managing Director,
Goa Waste Management Corporation,
Saligao – Goa, 403 515

Sub: Action taken on the minutes of the 9th meeting held on 11/09/2019.

Sir,

With reference to the minutes of meeting held on 11/09/2019, in the office of the Dy. Collector (DRO-North), North Panaji, it has been directed to furnish the information in regards to the plots earmarked for the segregation center in the various Industrial Estates, along with the name and contact number of the concerned officers to your office, for inspection/feasibility of land for the same. Therefore the list detailed as below.

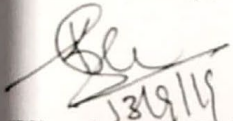
Sr No.	Name Of Industrial Estate	Area	Name of the Officer	Contact Number
1.	Pisurlem Industrial Estate	1000 m ²	Dheeraj Satardekar	9823577909
2.	Honda Industrial Estate	1000 m ²	Dheeraj Satardekar	9823577909
3.	Bicholim Industrial Estate	1000 m ²	Dheeraj Satardekar	9823577909
4.	Colvale Industrial Estate	1000 m ²	Jitendra Gawandalkar	9822486746
5.	Pilerne Industrial Estate	1000 m ²	Raghuraj Shetgaonkar	9423321159
6.	Tuem Industrial Estate	1000 m ²	M. Kaisukar	70383231153/ 9511685119
7.	Kundaim Industrial Estate	1000 m ²	Pooja Naik	9823390806
8.	Madkaim Industrial Estate	870 m ²	H. Manjrekar	9822487407/ 8668960495
9.	Cancona Industrial Estate	600 m ²	Mason Dias	9822165224
10.	Kakoda Industrial Estate	1000 m ²	Jose Barreto	9850791558
11.	Cuncolim Industrial Estate	1000 m ²	Stanley Colaco	9822128948
12.	Margoa Industrial Estate	1000 m ²	Jose Barreto	9850791558
13.	Verna Industrial Estate	1000 m ²	Sanket Faldessai	9822142618

C/326

14.	Sancoale Industrial Estate	1000 m ²	L.G. Costa	9822100800
15.	Sanguem Industrial Estate	1000 m ²	Jose Barreto	9850791558
16.	Shiroda Industrial Estate	1000 m ²	Naresh Dessai	9823883931
17.	Tivim Industrial Estate	800 m ²	M. Kaisukar	70383231153/ 9511685119
18.	Mapusa Industrial Estate	Not Available *	Vinayak Khandeparkar	9822134737
19.	Corlim Industrial Estate	Not Available **	H. Manjrekar	9822487407/ 8668960495
20.	Bethora Industrial Estate	800 m ²	Vibhav Jalmi	9545387565
21.	Panchawadi Industrial Estate	1000m ²	Naresh Dessai	9823883931
*	Garbage will be treated at Tivim Industrial Estate			
**	Garbage will be treated at Kundaim Industrial Estate			

Please take note of the same. We also enclose copy of earlier letter No.: GIDC/MD/SWM/2019-20/2731 dated 23/08/2019 addressed to The Dy. Collector (DRO-North), Office of the Collectorate building from the Managing Director for reference.

Yours Faithfully,



(Kirankumar Naik)
Regional Manager (H.O)

Copy to:

1. The Dy. Collector (DRO-North), Office of the District Collector, Collectorate building, Opp. Municipal garden, Panaji Goa. 403 001
2. Addl. District Magistrate, Office of the Collector & District Magistrate, South Goa District, Magisterial Branch, Matanhy Saldanha Administrative Complex., Near KTC Bus Stand, Margao-Goa.
3. PA to MD
4. All FM's/AM's
5. O/c
6. Guard file
7. Outward guard file

ANNEXURE - B

Official Gazette Notifying the Ban on single-use plastic in Goa

OFFICIAL GAZETTE — GOVT. OF GOA (EXTRAORDINARY)	
SERIES I No. 25	23RD SEPTEMBER, 2019
Notification 7/12/2019-LA	
The Goa Non-Biodegradable Garbage (Control) (Amendment) Act, 2019 (Goa Act 13 of 2019), which has been passed by the Legislative Assembly of Goa on 09-08-2019 and assented to by the Governor of Goa on 17-09-2019, is hereby published for the general information of the public.	fitness clubs, retail stores, banks, financial institutions, supermarkets, auto and boat dealerships, etc. and other such establishments;"
D. S. Raut Dessai, Joint Secretary (Law). Porvorim, 23rd September, 2019.	(ii) after clause (b), the following clause shall be inserted, namely:— (ba) "inert waste" means waste which is neither chemically nor biologically reactive and will not decompose; (iii) after clause (n), the following clauses shall be inserted, namely:— (o) "plastic" means material which contains as an essential ingredient a high polymer such as polyethylene (PE), polycarbonates (PC), high density polyethylene, vinyl, low density polyethylene, polypropylene, polystyrene (PS Styrofoam/Thermocol) resins, multi-materials like Acrylonitrile Butadiene Styrene (ABS), Polyphenylene Oxide, Polycarbonate, Polyvinyl Chloride, Acetal, Acrylic, Cellulose Acetate, Cellulose Acetate Butyrate, Nylon, Polybutylene terephthalate and shall also include Non Woven Polypropylene, Multilayered co-extruder Polyterephthalate (PT), Polyamindes, Polymethylmethacrylate, Plastic microbeads. (p) "plastic carry bags" means bags made from plastic material with or without handles used for the purpose of carrying or dispensing commodities but do not include bags that constitute or form an integral part of the packaging in which goods are sealed prior to use; (q) "Styrofoam" is a type of expanded polystyrene used especially for making food containers and packing materials.
The Goa Non-Biodegradable Garbage (Control) (Amendment) Act, 2019 (Goa Act 13 of 2019) [17-09-2019] AN ACT	
further to amend the Goa Non Biodegradable Garbage (Control) Act, 1996 (Goa Act 5 of 1997).	
Be it enacted by the Legislative Assembly of Goa in the Seventieth Year of the Republic of India as follows:—	
1. Short title and commencement.— (1) This Act may be called the Goa Non-Biodegradable Garbage (Control) (Amendment) Act, 2019.	
(2) It shall come into force at once.	
2. Amendment of section 2.— In section 2 of the Goa Non-Biodegradable Garbage (Control) Act, 1996 (Goa Act 5 of 1997) (hereinafter referred to as the "principal Act"),	
(i) after clause (a), the following clause shall be inserted, namely:— "(aa) "commercial establishment" means an establishment used for commercial purposes, such as, bars, shacks, restaurants, private offices,	
892	3. Insertion of new section 3A.— After section 3 of the principal Act, the following section shall be inserted, namely:—

OFFICIAL GAZETTE — GOVT. OF GOA	
SERIES I No. 25	(EXTRAORDINARY) 23RD SEPTEMBER, 2019
3(A). <i>Prohibition on use of plastic carry bags, etc.—</i> (1) No person shall manufacture, import, store, transport or sell plastic carry bags or items made up of plastic/ styrofoam such as, cups, straws, lids, cutlery, cello and poly film, metalised film, plastic cellophane paper and such other items as specified by the Government, by notification in the Official Gazette. (2) No person including commercial establishment shall use or throw or cause to be thrown plastic carry bags and items specified in sub-section (1), in a public place. (3) No person shall burn non-biodegradable garbage in public place. Provided that provisions of this section shall not apply to export oriented units or units in special economic zones, notified by the Central Government, manufacturing their products against an order for exports. Such export oriented units shall not allow their products for sale and usage within the State of Goa." 4. <i>Insertion of new section 5B.—</i> After section 5A of the principal Act, the following section shall be inserted, namely:— "5B. <i>Penalty for contravening provisions of section 3A.—</i> (1) whoever contravenes provisions of sub-section (1) of section 3A shall be punishable with a fine of Rs. 50,000/- (Rupees fifty thousand) for the first offence, Rs. 1,00,000/- (Rupees one lakh) for the second offence and Rs. 3,00,000/- (Rupees three lakhs), or with imprisonment which may extend to three months or with both for every subsequent offence. (2) Whoever contravenes provisions of sub-section (2) of section 3A shall be punishable with,—	(i) a fine of Rs. 2,500/- (Rupees two thousand five hundred) for the first offence, Rs. 3,500 (Rupees three thousand five hundred) for the second offence and Rs. 5,000/- (Rupees five thousand), or with imprisonment which may extend to five days, or with both, for every subsequent offence, when the offence is in relation to an individual; (ii) a fine of Rs. 10,000/- (Rupees ten thousand) for the first offence, Rs. 20,000/- (Rupees twenty thousand) for the second offence and Rs. 50,000/- (Rupees fifty thousand), or with imprisonment which may extend to one month or with both, for every subsequent offence, when offence is in relation to commercial establishment; (3) Whoever contravenes provisions of sub-section (3) of section 3A shall be punishable with a fine of Rs. 5,000/- (Rupees five thousand) in case of simple burning, Rs. 25,000 (Rupees twenty five thousand) in case of bulk burning, for the first offence and for subsequent offences Rs. 10,000/- (Rupees ten thousand) for simple burning and Rs. 50,000 (Rupees fifty thousand) for bulk burning or with imprisonment which may extend upto a period of five days or with both. (5) <i>Amendment of Schedule.—</i> In the Schedule to the principal Act, after item at serial No. (11), the following items shall be inserted, namely:— "(12) Styrofoam; (13) Inert Waste;" Secretariat, Porvorim, Goa. Dated: 23-09-2019. CHOKHA RAM GARG Secretary to the Government of Goa, Law Department (Legal Affairs).

ANNEXURE - C

Follow-up action initiated by the Urban Local Bodies for non-compliance to Notices issued for discharge / release of untreated sewage into water-bodies

Sr. No./Name of ULBs	Total No. of individuals/ establishments found responsible initially	Total No. to whom notices have been issued	Total No. who have complied	Total No. still found non complying after notice period	Total No. against whom action has been taken	Remarks
1. CCP (status as on 13/09/2019)	156 Nos. of residents.	Notices to 156 Nos. of residents were issued.	84 Nos. of residents have given reply, out of which 2 Nos. of residents have provided septic tank/ soak pit.	72 Nos. of residents had not replied. Now 3 Nos. of residents have replied, out of which 1 No. of resident has given reply that his work is under process. Further, 2 Nos. of residents have replied that it is difficult by them to provide septic tank/ soak pit because of getting water level and financial problem.	The list of 84 Nos. of residents who have replied and 72 Nos. of resident who have not replied have been forwarded to Urban Health Centre Panaji to take action under the Health Act against who have not replied. Out of 84 Nos. of residents who have replied, 2 Nos. of residents have complied. 82 Nos. of residents action is under process.	The UHC, Panaji vide letter dated 04/10/2019 has submitted the Action Taken Report.
2. Valpoi MC (status as on 12/09/2019)	13	13	02	11	Nil	None of the 11 rivers listed in the Order of NGT passes through the jurisdiction of Valpoi Municipal Council, hence the Council do not come under purview of the said Order. However, Final Notice will be issued to the defaulters.

3. Margao MC (status as on 19/09/2019)	116	116	Nil	Notice period is not completed	Not applicable	-
4. Sankhali MC (status as on 13/09/2019)	1. Shri. Madhukar Gawas 2. Shri. Nilesh Kanekar 3. Shri. Shriram Chandrakant Naik 4. Shri. Sameer Karpe	No. SMC/TECH/MS W/River/Notice/ 2019-20/449 dated 04/06/2019 No. SMC/TECH/MS W/River/Notice/ 2019-20/450 dated 04/06/2019 No. SMC/TECH/MS W/River/Notice/ 2019-20/451 dated 04/06/2019 No. SMC/TECH/MS W/River/Notice/ 2019-20/775 dated 04/06/2019	Complied the instructions. Complied the instructions Complied the instructions Complied the instructions	-	-	All the Four Violators have complied to the directions issued by the CHC, Sankhali & the Council.
5. Mormugao MC (status as on	Survey is under progress	156	-	156	The Council is in process of taking further action in the matter.	Survey is under progress to detect source of discharge of waste water from individual/

11/09/2019)						establishments
6. Sanguem MC (status as on 27/09/2019)	1. Altaf G. Shaikh, Muslimwada, Sanguem 2. Hidayat Shaikh, Muslimwada, Sanguem 3. Mr. Khalil, C/o Smt. Malika Bi Shaikh, Muslimwada, Sanguem 4. Shafi Jagindar, C/o Smt. Malika Bi Shaikh, Muslimwada, Sanguem 5. Rafiq, C/o Smt. Malika Bi Shaikh, Muslimwada, Sanguem	5 Nos.	5 Nos.	Nil	Not Applicable	The Council has issued notices to all 5 individuals who were found discharging sewerages into the Municipal drains which flows into water bodies. After issuing notices they have stopped to allow sewerage water into drain and same is confirmed by officials of PHC, Sanguem & the Council.
7. Pernem MC (status as on 11/09/2019)	1 No. (individual)	01 no.	01 no.	Nil	Nil	
8. Mapusa MC (status as on 09/10/2019)	As replied by Mapusa MC, that none of the Rivers mentioned in the Order Ref. No.DMA/ENGG/GEN(RS)/2018-19/F.26/401 dated 13/05/2019 are flowing within the territorial limit of Mapusa Municipal Council, hence the reply may be treated as “Not Applicable”					
9. CCMC (status as on 10/10/2019)	Total 46 Establishments were jointly inspected and notices were issued by Health. Out of 46, 4 are Commercial and 42 are Domestic Households. As per the latest reports 4 Commercial Establishment and 26 Domestic Households have complied with the instructions and remaining 16 Final Notices will be issued by the Health Dept.					
10. Canacona MC	Portion of Talpona River flows through Canacona Municipal jurisdiction. Notice was issued to 13 households who were discharging into the water body. All 13 households have now complied with the directions and stopped discharge.					

<i>(status as on 10/10/2019)</i>						
11. Quepem MC <i>(status as on 10/10/2019)</i>	12 Nos.	12 Nos.	12 Nos.	Nil	Nil	As per the Notice all of them have replied that they constructed the soak pit and connected the waste water in the soak pit. Accordingly, the Health as well as the Quepem Mun. Council verified and found satisfactorily.
12. Bicholim MC <i>(status as on 10/10/2019)</i>	Commercial - 19 Nos.	19	11	8	8	Trade License Suspended.
	Household – 200 Nos.	200	24	176	-	1. Action for disconnection of water & power will be initiated at the Municipal Level. 2. Some households have given undertaking to complete construction of soak pit after rains subside. 3. Some households have identified the sites to construct a sewage treatment plant jointly.
13. Ponda MC	As per information from Ponda Municipal Council none of the 11 identified rivers are flowing through its jurisdiction. Hence, Not Applicable					
14. Cuncolim MC	As per information from Cuncolim Municipal Council none of the 11 identified rivers are flowing through its jurisdiction. Hence, Not Applicable.					

ANNEXURE - D

Follow-up action initiated by the Directorate of Panchayats for non-compliance to Notices issued for discharge / release of untreated sewage into water-bodies

Sr. No.	Polluted river stretch	Name of the village / town	Responsible Officer with Name and Designation	Number of household discharging direct sewage	Current Status	Timeline proposed
1	Sal river – Priority-III <i>(from Mobor to Khareband),</i>	1. Nuvem 2. Seraulim 3. Margao 4. Khareband 5. Sirvodem 6. Sirlim (Telaulim) 7. Kankanamoddi (Pazorconi). 8. Navelim 9. Talaulim 10. Cana-Benaulim 11. Varca 12. Orlim 13. Carmona 14. Assolna 15. Cavelossim 16. Velim 17. Mobor 18. Cutbona	1. Amitesh A. Shirvoikar (BDO) Salcete. 2. Prasidh Naik (BDO), Mormugao V.P. Secretaries 1.Mohan Goankar V.P Aquem-Biaxo 2.Joaquim Rodrigues V.P Navelim 3.Sunita Dessai V.P Chinchinim Deussa 4.Shrisail Pattanshetti V.P Ambelim 5.Krishna Dessai V.P Assolna 6.Allaudin Maniyar V.P Cavelossim	78	Notices issued between 09/08/2019 to 12/08/2019	Follow-up action initiated

2.	Talpona river – Priority-IV (from Talpona to Gokarn math)	1. Canacona 2. Talpona 3. Poinguinim	1. Vaman Gaonkar, BDO, Canacona V.P. Secretary 1. Rajiv Naik Gaonkar V.P. Poinguinim	11	Notices issued between 09/08/2019 to 12/08/2019	Follow-up action initiated
3	Mandovi river – Priority- IV (from Panjim to Volvoi)	1. City Corporation of Panaji (CCP). 2. Betqui-Khandola 3. Marcem-Tivrem-Orgaon 4. Amona 5. Navelim 6. Candola-Volvoi 7. St.Istevam 8. Se Old-Goa. 9. Salvador-do-Mondo 10. Penha-de-France 11. Reis-Magos 12. Nerul	1. Anil Dhumaskar, BDO-II, Bardez 2. Deepak P. Vaigankar, BDO-II, Bardez 3. Shrikant Pednekar, BDO, Bicholim 4. Milind G. Velip, BDO, Ponda 5.Prajakta D. Goltekar, BDO, Tiswadi V.P. Secretaries 1.Pravisha Bhonsle V.P. Aldona 2.Rupesh Halarnkar V.P. Penha- De- Franca 3.Premanand Mandrekar V.P. Reis Magos 4.Avinash Palni Salvador- Do- Mundo 5.Avelino V.P. Pomburpa Olaulim 6.Satish Gauns V.P. Amona 7.Raghunath Naik, Betqui Candola 8.Vinod Shetkar V.P. Bhoma Adcolna 9.Sushant Naik V.P. Tivrem Orgao 10.Prasad Naik V.P. Verem Vaghurme 11.Prasad Naik V.P. Volvoi 12.Lancy Dias Juliao V.P. Chimbel 13.Ramita K. Murgaonkar V.P. Cumbarjua 14.Jenu Naik V.P. Sao-Matias 15.Ashish Naik V.P. Se Old Goa 16.Tukaram Naik V.P. Goltim Navelim 17.Rajesh Naik V.P. Santa Cruz	2145	Notices issued between 09/08/2019 to 12/08/2019	Follow-up action initiated

			18.Shrishkumar G. Tari V.P.St.Estevam 19.Orville Valles V.P.Merces			
4.	Chapora river – Priority V (from Alorna Fort to Morjim)	1. Alorna 2. Casarvernem 3. Ozrim 4. Dhargalim 5. Tuem 6. Parcem 7. Agarwada 8. Chopdem 9. Morjim 10. Mencurem 11. Pirna 12. Nandora 13. Rivora 14. Colvale 15. Camurlim 16. Oxel 17. Siolim 18. Assagao 19. Anjuna	1. Ani Dhumaskar, BDO-I, Bardez 2. Deepak P. Vaigankar, BDO-II, Bardez 3. Manish Hari Kedar, BDO, Pernem V.P. Secretaries 1.Dharmendra Govekar V.P. Anjuna Caisua 2.Rajesh Assolkar V.P. Assagao 3.Chandan Chodankar V.P. Oxel 4.Subhash Kambli V.P. Siolim – Marna 5.Ramesh Mandrekar V.P. Agarwada-Chopdem 6.Vijay Tilve V.P. Morjim 7.Amol Sawant V.P. Ozarim 8.Viraj Kinalkar V.P. Parcem 9.Rajaram Kamat V.P. Tuem	265	Notices issued between 09/08/2019 to 12/08/2019	Follow-up action initiated
5.	Terekhol river – Priority – V (at Terekhol)	1. Pernem Municipal Council 2. Querim-Tiracol 3. Paliem 4. Corgaon 5. Casnem-Amberem-	1. Manish Hari Kedar, BDO, Pernem V.P. Secretaries 1. Abhay Sawant Querim Terekhol	1	Notices issued between 09/08/2019 to 12/08/2019	Follow-up action initiated

		Poroscodem 6. Tamboxem- Mopa-Uguem 7. Torxem				
6.	Zuari river - Priority – V <i>(from</i> <i>Curchorem to</i> <i>Madkai)</i>	1. Curchorem – Cacora Municipal Council 2. Savordem 3. Panchwadi 4. Shiroda 5. Borim 6. Wadi- Talaulim 7. Durbhat 8. Bandora 9. Madkai 10. Neura 11. St. Lawrence (Agassim) 12. St. Andre (Goa-Velha) 13. Siridao-Pale 14. Macasana 15. Curtorim- Quelossim 16. Sancoale	1. Amitesh A. Shirvoikar (BDO), Salcete. 2. Prasad Naik (BDO), Mormugao 3. Milind G. Velip, BDO, Ponda 4. Prajakta D. Goltekar, BDO, Tiswadi V.P. Secretaries 1.Pradip H. Gaude V.P. Bandora 2.Kapil Naik V.P. Borim 3.Viraj Naik,Dhavli V.P. Cundaim 4.Sarvesh Naik V.P. Durbhat 5.Neetin Bandodkar V.P. Marcaim 6.Mayur Kudalkar V.P. Panchawadi 7.Harichandra Naik V.P. Queula 8.Divya Surlekar V.P. Querim 9.Namita Hazare V.P. Shiroda 10.Jitendra Naik, V.P. Vaze Wadi Talaulim 11.Dinkar Kossambe V.P. Veling Priol Cuncolem 12.Rajendra Gawas V.P. Curca Bambolim & Talaulim, 13.Ramita K. Murgaonkar V.P. Cumbarjua 14.Rajesh Naik. V.P. Santa Cruz 15.Peter Martins V.P. Taleigao 16.Basilo Pires V.P.St. Lawrence (Agassaim) 17.Dinesh Amonkar V.P Loutulim 18.Nilesh Shirodkar V.P Rachol	717	Notices issued between 09/08/2019 to 12/08/2019	Follow-up action initiated

			19.Sachin Naik V.P. Cortalim 20.Narayan Ajgaonkar V. P. Quelossim			
7.	Khandepar river – Priority V (from Opa Ponda & Codli- u/s of Opa Water works)	1. Khandepar 2. Usgaon 3. Kundaim	1. Milind G. Velip, BDO, Ponda V.P. Secretaries 1.Sanjay Naik V.P. Betoda Nirancal Conxem Codar 2.Gokuldas Kudalkar V.P. Curti- Khandepar 3.Prasad Shet V.P.Usgao-Ganjem	3	Notices issued between 09/08/2019 to 12/08/2019	26/08/2019
8	Assonora river – Priority –V (from Assonora to Sirsaim)	1. Assonora 2. Sirsaim-Thivim	1. Anil Dhumaskar, BDO-I, Bardez 2. Deepak P. Vaigankar, BDO-II, Bardez V.P. Secretaries 1.Rajkumar Chodankar V.P. Assonora 2. Dinesh Chodankar V.P. Sirsaim	36	Notices issued between 09/08/2019 to 12/08/2019	26/08/2019
9	Valvanti river – Priority – V (from Poriem to Sanquelim-Bicholim)	1. Sanquelim Municipal Council 2. Poriem 3. Honda 4. Karapur – Sarvona	1. Shrikant Pednekar, BDO, Bicholim 2. Suryajirao Rane, BDO, Sattari V.P. Secretaries 1.Sachin Dhawaskar V.P. Poriem 2.Sujata Morajkar V.P. Morlem 3.Laxman Naik V.P. Querim 4.Honaji Morajkar V.P.Cudnem 5.Mahadev Naik V.P. Karapur- Sarvan	13	Notices issued between 09/08/2019 to 12/08/2019	26/08/2019

			6.Hanumant Borkar V.P.Navelim 7.Resha Govekar V.P.Ona –Maulinguem			
10	Bicholim river - Priority- V (<i>from Bicholim to Curchirem</i>)	1. Bicholim Municipal Council. 2. Curchirem 3. Ona- Maulingem 4. Karapur – Sarvona 5. Amona 6. Pilgaon	1. Shrikant Pednekar, BDO, Bicholim	0		
11	Sinquerim river - Priority- V (<i>from Candolim to Ganesh Temple, Nerul</i>)	1. Pilerne –Marra 2. Candolim 3. Reis-Magos 4. Nerul	1. Anil Dhumaskar, BDO-I, Bardez 2. Deepak P. Vaigankar, BDO-II, Bardez V.P. Secretaries 1.Laurence Rebeiro V.P. Candolim 2.Peter Martins V.P. Pilerne Marra	3		

ANNEXURE – E

Action initiated by the Directorate of Health Services (DHS)

DIRECTORATE OF HEALTH SERVICES
Updated Riverine Stretches Report

Sr. No.	Polluted river stretch	Number of household discharging direct			Current Status of compliance			Disconnection		
		Com	Dom.	Total	Com	Dom.	Total	Com	Dom.	Total
1	Sal	183	150	333	183	141	324	0	3	3
2	Talpona	0	25	25	0	24	24	0	1	1
3	Mandovi	31	2332	2363	15	168	183	16	192	208
4	Chapora	8	283	291	8	104	112	0	28	28
5	Terekhol	0	3	3	0	3	3	0	0	0
6	Zuari	21	861	882	20	554	574	1	81	82
7	Khandepar	0	2	2	0	2	2	0		0
8	Assonora	0	66	66	0	52	52	0	14	14
9	Valvanti	6	12	18	6	12	18	0		0
10	Bicholim	15	239	254	15	67	82	0	172	172
11	Sinquerim	0	3	3	0	3	3	0		0
	TOTAL	264	3976	4240	247	1130	1377	17	491	508

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Minutes of the 17th Meeting of River Rejuvenation Committee (RRC)
held on 22nd November 2019

The eighteenth meeting to the River Rejuvenation Committee (RRC) was held on 10/01/2020 in the conference hall of the Secretariat under the Chairmanship of Principal Secretary, (*Environment*). The following members were present for the meeting:-

1. Mr. Puneet Kumar Goel, IAS, Principal Secretary (*Environment*) / Chairman, (*RRC-Goa*).
2. Dr. Tariq Thomas, IAS, Director for Municipal Administration, DMA
3. Mr. Pramod Badami, Superintending Engineer (S.E.), Water Resources Dept. (WRD).
4. Mr. N. M. Gad, Director, Directorate of Panchayat, Panaji.
5. Mr. Levinson J. Martin, M.D., Goa Waste Management Corporation
6. Ms. Siddhi Halarnekar, Additional Director, Department of Panchayats.
7. Mr. Deepesh Priolkar, Dy. Director, DMA.
8. Dr. Geeta Kanodkar, Dy. Director, PH.
9. Dr. Ananat Palekar, Dy. Director, Directorate of Health Services (DHS).
10. Mr. Nitin Y. S. Neurekar, Exe. Engr., (XVII) (PHE), Porvorim.
11. Mr. Subhash Kavlekar, Assist. Director, Department of Tourism.
12. Mr. Dinesh Gaude, Asst. Engr., Div. (III), PWD.
13. Mr. Vibhav Pai, Tech. Asst., Div.(III), PWD.
14. Ms. Megha S. Kerkar, Directorate of Fisheries.
15. Ms. Nelita Olga Fernandes e'D'Silva, Asst.Geologist, Department of Mines and Geology (DMG).
16. Mr. Ram Asare M. Gupta, H.S. Captain of Ports (CoP) Dept.,
17. Mr. Digvijay Desai, Asst. Managre, GWMC.
18. Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (*RRC-Goa*).

The M. S. (*RRC-Goa*) welcomed the Chairman and other Members of the Committee. Thereafter, Chairman, RRC-Goa / Principal Secretary (*Environment*) proceeded with review in respect of 'follow-up *vis-à-vis* current status' in respect of implementation / execution of the action plan prepared for rejuvenation of three polluted river-stretches (*i.e. Sal river : priority – III / Mandovi & Talpona rivers : priority – IV*) in response to the NGT Order dated

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06th December 2019 in a matter of O.A. 673 of 2018. Accordingly, the matter 173
was taken up for detailed discussion / deliberation as under -:

Sr. No.	Action Strategy	Executing Agency	Villages / Towns / Cities	Time line as submitted to CPCB / NGT in March 2019	Status as on 22 nd November 2019
1. Sal river – Priority- III (From Mobor to Khareband Madgaon)					
1.	Natural treatment (<i>SIBF/Phytorid Beds</i>) will be installed immediately in eighteen months along the banks in order to avoid the pollution	Sewerage Infrastructure Development Corporation of Goa Limited (<i>SIDCGL</i>) / Water Resources Department (<i>WRD</i>)	a. Khareband b. Sirvodem c. Sirlim (<i>Telaullim</i>) d. Kankanmoddi (<i>Panzorconi</i>) The same situation exists at Sirvodem. He has also proposed natural treatment i.e package treated for other areas like Sirlim & Kankanniddi. The work will be taken up by March 2020	18-months	The M.D. SIDGCL informed that there is no space at Khareband for setting up of Phyorid bed and hence, the nallah will be directly connected to the sewerage line and NOC from WRD in this respect is awaited, which the WRD assured that it will be issued by 27 th of November 2019. The SIDGCL informed that the same will be connected by February 2020.
2.	Replacement of the Old Sewerage Network System (SNS), laying of new sewerage system providing House connections to the existing sewerage system.	SIDCGL and Public Works Department (<i>PWD</i>)	Margao town, Navelim and other sub-urban areas around Margao	18-months	MD, SIDCGL informed that 07-km of the existing SNS has to be replaced. The work is already awarded and 50 % is completed, remaining will be ready by May end next-year. Further, he also informed the peripheral line is existing, only the house line connections have to be done and the work is going on. A proposal has been moved to the Government that the same may be done by the Government itself as the people are not willing to connect due to the cost involvement. Principal Secretary (<i>Environment</i>) desired that the list of people who have not connected – i.e. both commercial and domestic be submitted within a week.

Sr. No.	Action Strategy	Executing Agency	Villages / Towns / Cities	Time line as submitted to CPCB / NGT in March 2019	Status as on 22 nd November 2019
3.	Improvement and up gradation of the existing Solid Waste Management Facility including collection system, composting facilities and erection of material recovery facilities / storage shed for non-biodegradable waste at Sonsoddo, Margao.	GSUDA, Margao Municipal Council, Cuncolim Municipal Council and Village Panchayats (<i>V.P.s</i>) concerned	1. Margao Municipal Council. (<i>MMC</i>) 2. Cuncolim Municipal Council (<i>CMC</i>) 3. Navelim 4. Telaulim 5. Cana 6. Benaullim 7. Varca 8. Orlim 9. Carmona 10. Assolna 11. Cavelossim 12. Velim 13. Mobor	06-months	Out of total 333 cases (<i>domestic /commercial</i>) of illegal discharge observed and Notices issued, water / electricity disconnections have executed in 31 cases (<i>domestic</i>) by Directorate of Health Services (DHS). Principal Secretary (<i>Environment</i>) instructed DoP to explore the possibility of installing bio-digester at Talaulim. He further instructed DoP to inspect all panchayat and river stretch falling under polluted river-stretch (<i>as referred in 3rd column</i>) through BDO to see whether the garbage is being taken to the processing facility and submit a report.
4.	De-silting of river Sal	Captain of Ports (<i>CoP</i>)	Telaulim to Varca	12-months	CoP has informed that the National Institute of Oceanography (NIO) has submitted the EIA report and the application has been made to the O/o GCZMA seeking NoC / approval for desilting 18-kms. stretch of Sal-river. The required timeline for the completion of the said works is 24-months from the date of issuance of work-order. Further, Principal Secretary, (<i>Environment</i>) instructed the Director of Department of Environment to make a brief note on the subject and move it to him so as to upraise the Chief Secretary.

Sr. No.	Action Strategy	Executing Agency	Villages / Towns / Cities	Time line as submitted to CPCB / NGT in March 2019	Status as on 22nd November 2019
5.	De-weeding	WRD	Khareband to Navelim	06-months	WRD has informed that the work is tendered and will be opened in 15 days. Further, the work will be completed by March 2020.
6.	Recycling and Reuse of treated sewage from the Sewage treatment plant at Navelim for flushing and maintaining E-flow during dry season.	SIDCGL	Khareband to Navelim	12 months	The M.D., SIDGCL informed that the consent for Colva STP has been received from the GSPCB and the treated waste-water shall be used to maintain an e-flow and flushing in the river Sal. The work order shall be issued by 15 th January 2020 and will be completed by May 2020.
7.	Installation of DO-control measures	WRD	Khareband to Navelim	06-months	WRD may furnish the report in the next RRC meeting

Sr. No.	Action Strategy	Executing Agency	Villages / Towns / Cities	Time line as submitted to CPCB / NGT in March 2019	Status as on 22 nd November 2019
2. Talpona River- Priority- IV (from Talpona to Gokarna Math Poinginium)					
1	Disconnection of direct discharges of domestic sewage into the Talpona River/storm water drains/ Nallahs. Disconnection of the direct discharge into the river/storm water drain/Nallahs. Installation of Bio toilets. Construction of septic tank and soak pits by residential houses.	Directorate of Panchayat (DoP) and Directorate of Health Services (DHS)	a) Talpona b) Poinginium	06-months	Out of 25 cases (<i>domestic / commercial</i>) of illegal discharge observed and Notices issued, water / electricity disconnections have executed in 01 case (<i>domestic</i>) by Directorate of Health Services (DHS).
2	Improvement to collection system, and erection of material recovery facilities / storage shed for non biodegradable waste in the village Panchayat areas along the banks of Talpona River.	Village Panchayat (V.P.s') concerned and Directorate of Panchayat (DoP)	a) Talpona b) Poinginium	12-months	Principal Secretary (<i>Environment</i>) instructed DoP to explore the possibility of installing bio-digester at Talaulim. He further instructed DoP to inspect all panchayat and river stretch falling under polluted river-stretch (<i>as referred in 3rd column</i>) through BDO to see whether the garbage is being taken to the processing facility and submit a report.
3	Providing toilet facilities at Talpona fishing jetty.	Department of Fisheries (DoF)	Fishing jetty at Talpona	06-months	Public Works Department (<i>PWD</i>) has constructed 02-seator toilets

Sr. No.	Action Strategy	Executing Agency	Villages / Towns / Cities	Time line as submitted to CPCB / NGT in March 2019	Status as on 22 nd November 2019
4	Proposed SWM facility at Curchorem having 100-TPD capacity and the estimated cost the work is 190.00 Cr. This facility will be operational in next 18-months.	Goa Waste Management Corporation (GWMC)	Sanguem / Quepem & Canacona taluka	18-months	GSIDC has issued technical sanction for electromechanical on 04/11/2019
5	Proposed construction of Common Bio-Medical Waste Treatment Facility (CBMWTF) at Kundaim Industrial Estate.	GWMC	Entire State	18-months	GWMC has applied for Consent to Establish from GSPCB dated 22/10/2019.
6	The Goa Waste Management Corporation and Producer Responsibility organisation are collecting the E-waste generated throughout the State and the E-waste is there after transported to authorised recyclers in other states.	GWMC	Entire State	18-months	Consultant has submitted a draft E-Waste DPR for the state of Goa and is in the process of preparing development of E-waste Management Plan/tender for the State of Goa

Sr. No.	Action Strategy	Executing Agency	Villages / Towns / Cities	Time line as submitted to CPCB / NGT in March 2019	Status as on 22 nd November 2019
3. Mandovi River – Priority- IV – (from Panjim to Volvoi)					
1	Disconnection of direct discharges of domestic sewage into the Mandovi. River / storm water drains / nallah. Disconnection of the direct discharge into the river or through storm water drain / Nallah. Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains. Initiating action under the Water act including levying of fines for commercial establishment under Polluter- Pay-Principal. (<i>within 01 month</i>).	Directorate of Panchayat (DoP), Directorate of Health Services (DHS)	a) Betqui- Candola b) Marcem - Tivrem- Orgao c) Amona d) Navelim e) Candola-Volvoi f) St. Estevam g) Se-old Goa h) Salvador-Do-Mundo i) Penha de France j) Reis Magos k) Nerul	06-months	Out of 2363 cases (<i>domestic-2332 / commercial-31</i>) of illegal discharge observed and Notices issued, water / electricity disconnections have executed in 306 cases (<i>domestic-283 / commercial-23</i>) by Directorate of Health Services (DHS).

Sr. No.	Action Strategy	Executing Agency	Villages / Towns / Cities	Time line as submitted to CPCB / NGT in March 2019	Status as on 22 nd November 2019 (as per SLC meeting held on 18 th November 2019)
2	a) Improvement to collection system, and ensuring collection of segregated waste. b) Installation of Bio-digester having capacity 100-TPD capacity at Bainguinim by the Goa Waste Management Corporation.	Directorate of Panchayat (DoP), Directorate of Health Services (DHS)	a) Betqui- Candola b) Marcem -Tivrem- Orgao c) Amona d) Navelim e) Candola, Volvoi f) Panchayat St. Estevam g) Se-old Goa. h) Salvador- Do-Mundo i) Penha- De-France j) Reis Magos k) Panchayat Nerul	06-months	Principal Secretary (<i>Environment</i>) instructed DoP to explore the possibility of installing bio-digester at Talaulim. He further instructed DoP to inspect all panchayat and river stretch falling under polluted river-stretch (<i>as referred in 3rd column</i>) through BDO to see whether the garbage is being taken to the processing facility and submit a report. NEERI Nagpur started its additional studies from 07/10/2019 and presented the revised EIA report before Goa-SEAC on 25/10/2019. EC awaited from Goa-SEEIA.

Sr. No.	Action Strategy	Executing Agency	Villages / Towns / Cities	Time line as submitted to CPCB / NGT in March 2019	Status as on 22nd November 2019
3	Providing toilet facility and sanitation facility for fishing Jetty at Volvoi & Marcem	Captain of Port (CoP)	a) Volvoi b) Marcel		CoP has already fitted Bio- toilets at Adpai and is proposed to install 02 at Vashi. Permanent toilets have been constructed at Volvoi, Ribander and Saramanus Ramp.
4	The up-gradation of Sewage Treatment Plant (STP) at Patto, Plaza at Panjim is under progress by PWD, Goa and expected to be completed in one year.	Public Works Department (PWD), Goa	STP at Patto, Panjim.	18-months	The plant will be operational by Dec, 2020.
5	Existing 08 toilets, 07-Bath rooms, 07-urinals at the fisheries complex Malim Betim, Goa managed by Sulabh International Social Service Organization Porvorim, Goa. The 20-seated toilet block is proposed along the waste water treatment plant of 40-KLD capacity. The work is been carried out through Goa State Infrastructure Development Corporation (GSIDC).	Dept. of Fisheries (DoF)	Fishing Jetty at Malim	12-months	DoF has informed that 99% of the work has been completed and schedule to complete the work by 30 th November 2019.

Based on the above-referred status-update, the Principal Secretary (*Environment*) directed the officials from (i) Sewerage Infrastructure Development Corporation of Goa Limited (*SIDCGL*), (ii) Directorate of Municipal Administration (*DMA*), (iii) Directorate of Panchayat (*DoP*), (iii) Directorate of Health Services (*DHS*) and Captain of Ports (*CoP*) to submit river-stretch wise status-update, *as on date*, on the action plan as submitted to the CPCB / NGT during March 2019.

It was decided to convene the next RRC-Goa meeting on 5th December 2019 to review the follow-up progress made by the stakeholder departments in respect of remaining eight (*08 nos.*) polluted river-stretches categorised under priority criteria – V namely (i) Sinquerim river, (ii) Bicholim river, (iii) Valvanti river, (iv) Khandepar river, (v) Zuari river, (vi) Terekhol river, (vii) Chapora river, (viii) Assonora river.

The meeting ended with vote of thanks to the Chair

Sd./-

Dr. Shamila Monteiro,
Member Secretary, Goa-PCB / M. S., (RRC-Goa)

Date : 27th November 2019.

**Minutes of the 18th Meeting of River Rejuvenation Committee (RRC)
held on 10th January 2020**

The eighteenth meeting to the River Rejuvenation Committee (RRC) was held on 10/01/2020 in the conference hall of the Secretariat under the Chairmanship of Principal Secretary, (*Environment*). The following members were present for the meeting:-

1. Mr. Puneet Kumar Goel, IAS, Principal Secretary (*Environment*) / Chairman, (*RRC-Goa*).
2. Dr. Tariq Thomas, IAS, Director for Municipal Administration, DMA
3. Mr. Pramod Badami, Superintending Engineer (S.E.), Water Resources Dept. (WRD).
4. Mr. N. M. Gad, Director, Directorate of Panchayat, Panaji.
5. Mr. Levinson J. Martin, M.D., Goa Waste Management Corporation
6. Ms. Siddhi Halarnekar, Additional Director, Department of Panchayats.
7. Mr. Deepesh Priolkar, Dy. Director, DMA.
8. Dr. Geeta Kanodkar, Dy. Director, PH.
9. Dr. Ananat Palekar, Dy. Director, Directorate of Health Services (DHS).
10. Mr. Nitin Y. S. Neurekar, Exe. Engr., (XVII) (PHE), Porvorim.
11. Mr. Subhash Kavlekar, Assist. Director, Department of Tourism.
12. Mr. Dinesh Gaude, Asst. Engr., Div. (III), PWD.
13. Mr. Vibhav Pai, Tech. Asst., Div.(III), PWD.
14. Ms. Megha S. Kerkar, Directorate of Fisheries.
15. Ms. Nelita Olga Fernandes e'D'Silva, Asst.Geologist, Department of Mines and Geology (DMG).
16. Mr. Ram Asare M. Gupta, H.S. Captain of Ports (CoP) Dept.,
17. Mr. Sanjeev Joglekar, OSD, Department of Environment.
18. Mr. Digvijay Desai, Asst. Manager, GWMC.
19. Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (*RRC-Goa*).

The M. S. (*RRC-Goa*) welcomed the Chairman and other Members of the Committee. Thereafter, Chairman, RRC-Goa / Principal Secretary (*Environment*) proceeded with review in respect of 'follow-up *vis-à-vis* current status' in respect of implementation / execution of the action plan prepared for rejuvenation of three polluted river-stretches (*i.e. Sal river : priority – III /*

Mandovi & Talpona rivers : priority – IV) in response to the (a) NGT Order dated 06th December 2019 in a matter of O.A. 673 of 2018 and (b) observations made by the CPCB during its 9th Task-level meeting held on 27th December 2019 w.r.t. submission of ‘Revised’ action plans for the approval in respect of priority criteria-III and IV only.

Accordingly, the matter was taken up for detailed discussion / deliberation as under -:

A. Action plan for polluted river-stretch in Sal river

- (i) On obtaining the current-status w.r.t. sewerage connectivity and its operationalisation, Chairman, RRC-Goa instructed the Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL) to complete the 1,200 sewerage connections (*covering 6,000 households*) by 15th February 2020 with the assistance from the Directorate of Health Services (DHS).
- (ii) Further, in respect of connection of “Khareband nala” to north-trunk main sewer-line which will discharge into 20-MLD capacity STP, it was also informed that the Water Resources Department (WRD) has granted the NoC to the SIDCGL. Accordingly, the SIDCGL was instructed to submit the final implementation diagram to the WRD by 17th January 2020 for according approval and thereafter work-order to be awarded by 07th February 2020. Further, it was informed that the flow from “Shirvodem nalla” is presently diverted to 20-MLD capacity STP at Shirvodem, Navelim and the work has been completed.
- (iii) It was also informed by the SIDCGL-representative that about 1/3rd of the replacement of the old sewerage network system with new-line has been completed. Remaining work is proposed to be completed by December-end 2020.
- (iv) In respect of improvement and up-gradation of existing solid waste management facility including collection system, composting facilities and erection of Material Recovery Facility (MRF) / storage-shed for non-biodegradable wastes, it was informed that mechanism has been established to collect, transport and treat the non-biodegradable waste through Goa Waste Management

Corporation (GWMC). However, in respect of managing the biodegradable waste, Chairman instructed Director, Panchayats (*Mr. N. M. Gad*) / Director, Municipal Administration (*Dr. Tariq Thomas IAS*) to prioritise the institutional mechanism in 13-villages (*i.e. Verna / Nuvem / Majorda / Seraulim / Navelim / Varca / Cana-Benaulim / Carmona / Assolna / Cavelossim / Ambelim / Orlim / Mobor*) and 02-municipal councils (*i.e. Margao & Cuncolim*), respectively which are located along the polluted river-stretch within a stipulated time-frame.

Director, Directorate of Panchayats proposed to consider the proposal / request to fill-up / reclaim the small-portion of low-lying area with inert material to be utilised as MRF due to unavailability of land for the said facility. Chairman instructed that the matter be discussed / deliberated with the offices of Town and Country Planning (TCP) and Goa Coastal Zone Management Authority (GCZMA) to resolve the same.

- (v) As regard to de-silting of 18-kms. stretch from Telaulim to Varca, Chairman instructed the official from the Captain of Ports (*Mr. Ram Asare M. Gupta- Hydrographic Surveyor*) to submit the Action Plan by Monday – 13th January 2020 with timeline for completion of the said work.
- (vi) Chairman instructed the SIDCGL to make all efforts to operationalise the STP set-up at Colva and progress-report be submitted on regular basis.
- (vii) Mr. Pramod Badami, Superintendent Engineer, WRD informed the RRC that the works related to (a) De-weeding and (b) installation of DO-control measures is proposed to be initiated by Mid-January 2020 and to be completed by end-February 2020.

B. Action plan for polluted river-stretch in Mandovi river

- (i) Representatives of Directorate of Health Services (DHS) / Directorate of Panchayats (DoP) and Public Works Department (PWD) informed that disconnection notices were issued to 1,558 units. Out of which, 178 units have complied-with and 159 units have been disconnected (*totalling to 337 units*) while, 1,221 units

(including 1,085 units located in Chimble village) have not yet complied-with. Chairman instructed the PWD-officials to prioritise and initiate follow-up action against the 136 non-complying units within 01-month which are located outside the jurisdiction of Chimbél village and simultaneously, prepare executable action plan for the said village jointly with the PWD for its timely execution / implementation.

Dr. (Mrs.) Shamila Monteiro, Member Secretary, GSPCB also informed that the Board has issued Show Cause Notices (SCNs') and well as 'Directions' under the Polluter-Pay-Principal (PPP) to commercial establishments (*which mandate consent under the provisions of the Water/Air acts*) which are discharging untreated sewage and/or operating without valid consent of the Board. Subsequently, based on the response received, the Board has proposed to initiate closure-directions against non-complying units. In addition, the Board, *through M/s TUV*, has conducted 'Water Audit' of six casinos operating in the Mandovi river in January 2020 which is being perused.

- (ii) In respect of improvement and up-gradation of existing solid waste management facility including collection system, composting facilities and erection of Material Recovery Facility (MRF) / storage-shed for non-biodegradable wastes, it was informed that mechanism has been established to collect, transport and treat the non-biodegradable waste through Goa Waste Management Corporation (GWMC). However, in respect of managing the biodegradable waste, Chairman instructed Director, Panchayats (*Mr. N. M. Gad*) to prioritise the institutional mechanism in 11-villages (*i.e. Betqui-Candola / Marcem-Tivrem-Orgao / Amona / Navelim / Candola-Volvoi / St.Estevam / Se-old Goa / Salvador-do-Mundo / Penha-de-France / Reis-Magos / Nerul*) which are located along the river-stretch within a stipulated time-frame.
- (iii) Captain of Ports (CoP) and Department of Fisheries informed that toilet and sanitation facility at fishing jetties located (i) Volvoi, (ii) Marcel and (iii) Malim has been completed.

- (iv) In respect of up-gradation of STP at Patto, Panaji, representative of the PWD informed that the work is in-progress and it will be made operational by December-end 2020.
- (v) Mr. Levinson J. Martins, Director, Department of Science & Technology and Waste Management / Managing Director, Goa Waste Management Corporation (GWMC) appraised about the (i) setting up of Common Bio-medical wastes treatment facility at Kundaim industrial estate, (ii) Common Hazardous waste treatment facility at Pissurlem industrial estate, (iii) Construction and Demolition waste treatment facility at Bicholim and (iv) E-waste treatment facility.

C. Action plan for polluted river-stretch in Talpona river

- (i) Representatives of Directorate of Health Services (DHS) / Directorate of Panchayats (DoP) and Public Works Department (PWD) informed that disconnection notices were issued to 25-defaulters / units. Out of which, 24 units have complied-with while, issuance of disconnection against 01 unit is in-process.
- (ii) In respect of improvement and up-gradation of existing solid waste management facility including collection system, composting facilities and erection of Material Recovery Facility (MRF) / storage-shed for non-biodegradable wastes, it was informed that mechanism has been established to collect, transport and treat the non-biodegradable waste through Goa Waste Management Corporation (GWMC). However, in respect of managing the biodegradable waste, Chairman instructed Director, Panchayats (*Mr. N. M. Gad*) to prioritise the institutional mechanism in 02-villages (*i.e. Talpona and Poinguinim*) which are located along the river-stretch within a stipulated time-frame.

Dr. (Mrs.) Shamila Monteiro, Member Secretary, GSPCB informed that the water-quality analysed / monitored by the Board for a period from January 2019 till October 2019 indicate that all the parameters (*i.e. pH/ Dissolved Oxygen (DO) / Biochemical Oxygen Demand (BOD) / Total-coliform*) are well within CPCB-prescribed limits.

Based on the above and as the water-quality has improved since January 2019, the Talpona river-stretch does not qualify to be under any priority criteria, as per the CPCB-categorisation (*i.e. Criteria for Priority IV - monitoring locations having BOD between 6-10 mg/l*). Thus, it is proposed to ‘remove’ Talpona river-stretch from polluted river-stretches applicable in the State of Goa.

Accordingly, Chairman, RRC-Goa has approved the above-referred ‘revised’ action plans and accordingly has instructed **M/s Unity I.E.**, to incorporate the above-referred status-update in respect of Sal, Mandovi and Talpona rivers and submit a “Revised” action plan by early next-week for onward submission to the CPCB for its approval as per the NGT Order dated 06th December 2019 in a matter of O.A. 673 of 2018. Further, it was also decided to appraise the status to State Level Committee (SLC-GOA), constituted by the State in compliance to the NGT Order in a matter of O.A. 606 of 2018.

The meeting ended with vote of thanks to the Chair

Sd./-

Dr. Shamila Monteiro,
Member Secretary, Goa-PCB / M. S., (RRC-Goa)

Date : 17th January 2020.

Restoration of Polluted River Stretches - O.A. NO 673/2018-Goa

Gap Analysis and the Proposed Action Points as per Action Plans submitted (Mandovi, Sal & Talpona)					
Details	Generation	Existing Capacity	Gap	Proposed Treatment Facilities	Proposed Timelines for Compliance
Sewage Management	Details not provided	61.75 MLD (5 STPs)	-	STPs- 4 (22.4 MLD) Septic tanks & Soak pits	
Industrial Effluent Management	Details not provided				
Solid Waste Management	Details not provided	2 No. of Integrated Solid Waste Management Facility at Saligao and Baiguinim, Capacity 250 TPD each	-	10 TPD Material Recovery Facility 10 TPD Bio digester proposed SWM facility at Curchorem having 100 TPD 100 TPD Integrated Solid Waste Management Facility at Cacora	

Restoration of Polluted River Stretches - O.A. NO 673/2018-Goa**Gap Analysis and the Proposed Action Points as per Action Plans submitted for P-V Polluted River Stretches (08 Nos)**

Details	Generation	Existing Capacity	Gap	Proposed Treatment Facilities	Proposed Timelines for Compliance
Sewage Management					
Industrial Effluent Management					
Solid Waste Management					

**Minutes of the 21st Meeting of River Rejuvenation Committee (RRC)
held on 04th August 2020**

The twenty-first meeting of the River Rejuvenation Committee (RRC-Goa) was held on 04/08/2020 in the conference hall of the Secretariat under the Chairmanship of Secretary, (*Environment*). The following members were present for the meeting:-

1. Mr. Amit Satija IAS, Secretary (*Environment*) / Chairman, (*RRC-Goa*).
2. Dr. Tariq Thomas, IAS, Director for Municipal Administration, DMA.
3. Mr. Pramod Badami, Superintending Engineer (S.E.), Water Resources Dept. (WRD).
4. Mr. N. M. Gad, Director, Directorate of Panchayat, Panaji.
5. Mr. Levinson J. Martin, Director. Dept. of Science & Technology (S & T) / M.D., Goa Waste Management Corporation (GWMC).
6. Mr. Johnson B. Fernandes, Director, Dept. of Environment.
7. Dr. Ananat Palekar, Dy. Director, Directorate of Health Services (DHS).
8. Mr. M. U. Jamadar, E.E. – XX, PWD, Margao.
9. Mr. Abhir Hede, Dy. Director – II, Department of Mines and Geology (DMG).
10. Mr. Ram Asare M. Gupta, H.S. Captain of Ports (CoP) Dept.,
11. Shri. Santosh Mhape. Superintending Engineer, JICA, PWD.
12. Shri. Dilip Dhavlikar, Chief General Manager (CGM), SIDCGL.
13. Shri. Satish V. Gaonkar, Ind. Officer, Directorate of Industries, Trade & Commerce (DITC).
14. Shri. Jude A. D. Carvalho, General Manager (G.M.), GSIDC Ltd.,
15. Mr. Sanket Fal Dessai, Area Manager, GIDC.
16. Shri. G. R. Teli, Department of Tourism.
17. Mr. Bento Thomas, Goa Waste Management Corporation (GWMC).

18. Mr. Ulhas Kerkar, S.E. (V), Public Works Department (PWD).
19. Mr. N. P. Parsekar, E.E. (III), PWD.
20. Mr. Joaquim A. F'des, E.E. (XXI), PHE.
21. Mr. Cleasby Dias, E.E. (IX), PWD.
22. Mr. V. L. Parab, A.E. (II), XXIV, PWD.
23. Mr. Vibhav Pai, Tech. Asst., Div.(III), PWD.
24. Mr. Rohidas Naik, Tech. Asst., SD-II, XXIV, PWD.
25. Ms. Rashmi Shirodkar, A.E. – III, W.D. – III, WRD.
26. Mr. Sanjeev Joglekar, Env. Engr., Goa-PCB / OSD, Department of Environment.
27. Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (*RRC-Goa*).

The M. S. (*RRC-Goa*) welcomed the Chairman and other Members of the Committee. Thereafter and as per the instructions of the Chairman, RRC-Goa / Secretary (*Environment*), Dr. Mohan R. Girap (*Scientist – C. Goa-PCB*) briefed the Committee about the discussions / deliberations held during the last RRC-Goa meeting held on 2nd July 2020 *vis-à-vis* 4th Central Monitoring Committee (CMC) meeting held on 30th July 2020 and follow-up initiated thereafter. It was also informed that during two previous RRC-Goa meetings (*i.e. 20th held on 02nd July 2020 and 19th held on 12th March 2020*) as the members were appraised about the requirement to incorporate the 'department-specific data-gaps' in respect of action-plans prepared for individual river-stretches, they have not been minuted.

Further, it was informed that based on (i) Task Team Meeting convened by the Central Pollution Control Board (CPCB) through video conferencing during May 2020 and (ii) Central Monitoring Committee (CMC) meeting convened thereafter by the National Mission for Clean Ganga, Ministry of Jal

Shakti, Dept. of Water Resources, through video conferencing during July 2020, relevant inputs / information in respect of suggested data-gaps (*i.e. name of villages located along respective river-stretches / total population / total waste-water generation / existing treatment mechanism*) as well as status of Sewage Treatment Plants vis-à-vis treatment capacities in the State (*i.e. STPs' in the State – operational / proposed / being-constructed*) along with other polluted river-stretch wise ancillary information was sought from line-departments concerned (*i.e. SIDCGL / DMA / DoP / DHS / CoP / WRD*) and accordingly Action Plan Strategies, *as referred in respective action plan of every polluted river-stretch*, was revised / updated. Further, it was impressed upon that these revised action-plans need to be approved by the RRC-Goa prior to its onward submission to the CPCB for approval.

Based on the above backdrop, river-stretch specific presentation was made during the meeting to review the progress made so-far by implementing agencies / departments concerned in respect of action plan strategies *vis-à-vis* timelines proposed. Chairman (RRC-Goa) instructed the departments concerned (*i.e. SIDCGL / DMA / DoP / DHS / CoP / WRD*) to re-work / re-asertain the contents referred in action plan strategies of all polluted river-stretch in respect of (i) proposed time-lines, (ii) proposed estimated cost involved, (iii) proposed technical invention *vis-a-vis* its modification / change in scope, if any, and submit the revised updates latest by early next-week. Accordingly, he reiterated to discuss these interventions with the departments concerned independently in due course of time thereafter. In case of financial difficulties, the Secy. (Env.) called upon the Departments / Executing Agencies to escalate the matter by highlighting the timelines fixed by Hon'ble NGT failing which we might end-up paying penalties.

Accordingly, it was also decided to share the polluted river-stretch wise action plan strategies as well as sewage / STP-related data with all the RRC-Goa members concerned by e-mail with instructions to re-submit the details for further incorporation in respective action plans.

The meeting ended with vote of thanks to the Chair.

Dr. Shamila Monteiro,
Member Secretary, Goa-PCB / M. S., (RRC-Goa)

Date : 6th August 2020.

Minutes of the 22nd Meeting (*Virtual*) of River Rejuvenation Committee (RRC) held on 22nd September 2020

The twenty-second meeting of the River Rejuvenation Committee (RRC-Goa) was held on 22/09/2020 through Video Conference (*i.e. Google-meet*) under the Chairmanship of Mr. Kunal, Secretary, (*Environment*).

At the outset, it was informed to Members (who joined / attended) that this is the first time that RRC meeting is being held virtually through Google-meet. Subsequently and with the permission of the Chair, Dr. Mohan R. Girap – Sci.-C of the Goa-PCB made a brief power-point presentation on current status of the matter (*i.e. O.A. 673 of 2018*) in light of NGT Order dated 29th June 2020 and elaborated on the Action Plan Strategies (APS) proposed by various stakeholder departments and as enumerated in the Action Plan prepared towards rejuvenation of eleven polluted river-stretches with emphasis on respective time-lines proposed.

Subsequently, Chairman, RRC-Goa desired that the current status *vis-a-vis* these APS, *in respect of respective polluted river-stretches*, be mailed to all the respective RRC-Goa members with instruction to department-heads concerned to re-visit these interventions with specific reference to its timelines proposed.

Accordingly, it was decided that the RRC-Goa would review the progress by early next-week to suitably appraise the Central Monitoring Committee (CMC) during its meeting to be scheduled by the Ministry of Jal Shakti by last-week of September 2020.

The meeting ended with thanks to the Chair.

Date : 23rd September 2020

Sd./-
Dr. (Mrs.) Shamila Monteiro
M.S. RRC-Goa / M.S. Goa-PCB

DRAFT for APPROVAL

Minutes of the 23rd Meeting (*Virtual*) of River Rejuvenation Committee (RRC) held on 29th September 2020

The twenty-third meeting of the River Rejuvenation Committee (RRC-Goa) was held on 29th September through Video Conference (*i.e. Google-meet*) under the Chairmanship of Mr. Kunal, Secretary, (*Environment*). Majority of the members could join / attend the said meeting.

At the outset and as decided during the last meeting (*i.e. 22nd*) held on 22nd September 2020 *vis-a-vis* follow-up of the discussions / deliberations held on 24th September 2020 by Secy., (Env.) with the officials of the Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL), Water Resources Department (WRD), Public Works Department (PWD), Department of Environment (DoE), Mr. P. B. Seldarkar - Managing Director, SIDCGL made a power-point presentation on Action Plan for Sewage and Septage Management in the State of Goa as well as details of STPs' which are (i) operational, (ii) under-construction and (iii) proposed *vis-a-vis* timelines for its completion / operationalisation.

Subsequently and based on discussion / deliberations on the action plan referred-above, it has been decided to approve the said Sewage and Septage Management Plan. However, Chairman, RRC-Goa directed M.D. (SIDCGL) to put-up the same for consideration of Chief Secretary as well as approval of Government prior to its onward submission to the CPCB / Ministry of Jal Shakti.

Further, Chairman informed that the follow-up review in respect of Action Plan Strategies (APS), *as per the decision taken during the last RRC-Goa meeting*, will be discussed, deliberated and finalised during the next meeting to be scheduled shortly. It was informed to the members that the State

has submitted the Monthly Progress Report (MPR) for the month ending August 2020. It was also noted that the Central Monitoring Committee (CMC) has convened its 6th meeting on 30th September through Google-meet wherein State-specific matter in respect of Sewage generation and status of STPs' will be reviewed by the Ministry of Jal Shakti.

The meeting ended with thanks to the Chair.

Date : 30th September 2020

Sd./-
Dr. (Mrs.) Shamila Monteiro
M.S. RRC-Goa / M.S. Goa-PCB

Legal/OA673/2018/NMCG/2019
National Mission for Clean Ganga
Department of Water Resources, River Development
& Ganga Rejuvenation, Ministry of Jal Shakti

1st Floor,
Major Dhyan Chand National Stadium
India Gate, New Delhi-110002
Dated: 17th November 2020

OFFICE MEMORANDUM

Subject: Minutes of the 7th meeting of Central Monitoring Committee in the NGT Matter OA No.673 of 2018 held on 09.11.2020 from 10.00 AM on-wards

A copy of Minutes of the 7th Meeting of Central Monitoring Committee in the NGT matter O.A. No. 673 of 2018 held through Video Conferencing on 09.11.2020 from 10.00 AM on-wards, under the Chairmanship of Secretary, Ministry of Jal Shakti is forwarded herewith for information/ necessary action.


(D. P. Mathuria) 17.11.2020

Executive Director-Technical, NMCG

Encl: As above.

To,

1. Chief Secretary, Government of Andhra Pradesh, Ist Block, A.P Secretariat Office, Velagapudi – 522503
2. Chief Secretary, Government of Assam, Block- C, 3rd Floor, Assam Sachivalaya, Dispur - 781006, Guwahati
3. Chief Secretary, Government of Bihar, Main Secretariat, Patna – 800015
4. Chief Secretary, Government of Chhattisgarh, Mahanadi Bhawan, Mantralaya, Naya, Raipur – 492002
5. Chief Secretary, Government of Goa, Secretariat, Porviroim, Bardez, Goa – 403521
6. Chief Secretary, Government of Gujarat, 1st Block, 5th Floor, Sachivalaya, Gandhinagar – 382010
7. Chief Secretary, Government of Haryana, 4th Floor, Haryana Civil Secretariat, Sector-1, Chandigarh – 160019
8. Chief Secretary, Government of Himachal Pradesh, H P Secretariat, Shimla – 171002
9. Chief Secretary, Government of Jammu & Kashmir, R. No. 2/7, 2nd Floor, Main Building, Civil Secretariat, Jammu -180001
10. Chief Secretary, Government of Jharkhand, 1st Floor, Project Building, Dhurwa, Ranchi- 834004

11. Chief Secretary, Government of Karnataka, Room No. 320, 3rd Floor, Vidhana Soudha, Bengaluru -560001
12. Chief Secretary, Government of Kerala, Secretariat, Thiruvananthapuram -695001
13. Chief Secretary, Government of Madhya Pradesh, MP Mantralaya, Vallabh Bhavan, Bhopal – 462004
14. Chief Secretary, Government of Maharashtra, CS office main Building, Mantralaya, 6th floor, Madame Cama Road, Mumbai – 400032
15. Chief Secretary, Government of Manipur, South Block, Old Secretariat, Imphal – 795001
16. Chief Secretary, Government of Meghalaya, Main Secretariat Building, Room no 316, Shillong – 793001
17. Chief Secretary, Government of Mizoram, New Secretariat Complex, Aizwal – 796001
18. Chief Secretary, Government of Nagaland, Civil Secretariat, Kohima – 797004
19. Chief Secretary, Government of Odisha, General Administration Department, Odisha Secretariat, Bhubaneswar – 751001
20. Chief Secretary, Government of Punjab, Chandigarh – 160001
21. Chief Secretary, Government of Rajasthan, Secretariat, Jaipur – 302005
22. Chief Secretary, Government of Sikkim, New Secretariat, Gangtok – 737101
23. Chief Secretary, Government of Tamil Nadu, Secretariat, Chennai-600009
24. Chief Secretary, Government of Telangana, Block C, 3rd floor, Telangana Secretariat Khairatabad, Hyderabad, Telangana
25. Chief Secretary, Government of Tripura, New Secretariat Complex Secretariat – 799010, Agartala, West Tripura
26. Chief Secretary, Government of Uttar Pradesh, 1st floor, Room No. 110, Lal bahadur Sastri Bhawan, Uttar Pradesh Secretariat, Lucknow – 226001
27. Chief Secretary, Government of Uttarakhand, 4 Subhash Road, Uttarakhand, Secretariat Dehradun – 248001
28. Chief Secretary, Government of West Bengal, Nabanna, 13th Floor, 325, Sarat Chatterjee Road, Mandirtala, Shibpur, Howrah – 711102
29. Administrator, Daman & Diu and Dadra and Nagar Haveli, Secretariat, Moti, Daman -396220
30. Chief Secretary, Govt. of NCT of Delhi, Delhi Secretariat, IP Estate, New Delhi – 110002
31. Chief Secretary, Govt. of Puducherry, Main Building, Chief Secretariat, Puducherry-605001
32. Chief Secretary, Andaman & Nicobar, Secretariat, Port Blair
33. Administrator, Lakshadweep

Copy To:

1. Secretary, Department of Forest, Ecology & Environment, J&K, Room no. 2/33-34, Main Building, Civil Secretariat, J&K, Jammu.
2. Secretary, Department of Environment, Science and Technology Paryavaran Bhawan, Near US Club, Shimla, Himachal Pradesh-171001
3. Principal Secretary, MGSIPA Complex, Sector-26, adjacent Sacred Heart School, Chandigarh, 160019

4. Additional Chief Secretary to Govt. of Haryana, Environment Department of Environment & Climate Change, R.No. 108, 7th Floor, Main Secretariat Sec16, Chandigarh 160017
5. Principal Secretary, Department of Environment, U.P., Room No. 601, Babu Bhawan Secretariat, Vidhan Sabha Marg, Lucknow – 226001.
6. Special Chief Secretary, Department of Environment, Forest, Science & technology, 4th Block, Ground Floor, Room No:268, A.P Secretariat Office, Velagapudi
7. Secretary, Department of Environment and Forest, H-Block, 2nd Floor Janata Bhawan, Dispur, Guwahati 781006, Assam
8. Principal Secretary, Department of Environment, Forest and Climate Change, Van Vibhag Rd, Nehru Nagar, Patliputra Colony, Patna, Bihar 800013
9. Additional Chief Secretary (Forests & Environment), Forests & Environment Department, Block 14, 8 th floor, Sachivalaya, Gandhinagar - 382 010 Gujarat.
10. Principal Secretary, Department of Environment, Room No. S-2/23, Mahanadi bhawan, Mantralaya, Nava Raipur, Atal Nagar, Raipur - 492001
11. Additional Chief Secretary to Government, Forest, Environment and Ecology, Department, Karnataka Government Secretariat, Room No. 447, 4th Floor, Gate no. 2, Multi-storey Building, Bangalore-560001.
12. Principal Secretary, Department of Environment, Room No. 406 4th Floor Annex II, Secretariat, Kerala Thiruvananthapuram, Kerala, PIN- 695001
13. Principal Secretary, Department of Housing and Environment, Government of Madhya Pradesh, Paryavaran Parisar, E- 5, Arera Colony, Bhopal, Madhya Pradesh, 462016
14. Principal Secretary, Environment Department, Maharashtra 15th Floor, New Administrative Building, Madam Cama Road, Mantralaya, Mumbai – 400032
15. Additional Secretary, Forests & Environment Deptt, Secretariat Building, North Range, Forest Colony, Khasi Hills, Shillong, Meghalaya 793001
16. Deputy Conservator of Forest (Headquarters) Environment, Forests & Climate Change Department Tuikhuahtlang, Aizawl Mizoram.
17. Principal Secretary, Department of Environment, Forest & Climate Change, New Secretariat, Kohima, Nagaland Tel.- 0370-2243025
18. Additional Chief Secretary, State Silvicultural garden, Khandagiri, Bhubaneswar, Odisha 751003
19. Principal Secretary, Forest and Environment Department, Rajasthan 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur, Rajasthan 302004
20. Principal Secretary, Chief Project Director (SBFP-JICA), Forests, Environment & Wildlife Management Department, Government of Sikkim
21. Principal Secretary, Namakkal Kavignar Maaligai, Fort St. George, Chennai 600 009
22. Secretary, Department of Science, Technology & Environment, Vigyan Prajukti O Paribesh Bhawan, P.N. Complex, Gorkhabasti, Agartala, West Tripura, PIN-799006
23. Special. Chief Secretary, TSCOST, 4th Floor, Aranya Bhavan, Saifabad, Hyderabad, Telangana State, Pin – 500004
24. Deputy Conservator of Forests, (Territorial Division), Department of Environment & Forest Office of the Deputy Conservator of Forest, Daman, Fort Area, Post Office Moti Daman Daman & Diu (U.T.)

25. Deputy Conservator of Forests, (Territorial Division), Van Bhavan, Dadra and Nagar Haveli
26. Secretary, Department of Environment, Govt. of NCT of Delhi, 6th Floor, Delhi Secretariat, IP Estate, New Delhi 110002
27. Secretary, Environment & Forest, Govt. of Uttarakhand, 4 Subhash Road, Secretariat, Forth Floor, New Building Dehradun, Pin code-248001
28. Joint Secretary, Department of Science, Technology & Environment, 1st Floor, Pandit Deendayal Upadhyay Bhavan, Behind Pundalik Devasthan, Near Sanjay School, Porvorim, Bardez - Goa
29. Secretary, Environment, Office of Environment, Chief Secretariat, Goubert Avenue, Puducherry 605001
30. Principal Secretary, Department of Environment, 5th Floor, Pranisampad Bhawan, Block LB-II, Salt Lake, Sector III, Bidhannagar, Kolkata – 700 106
31. Additional Chief Secretary Forest, Environment & Climate Change Deptt., Nepal House, Doranda, Ranchi-834002, Jharkhand
32. Additional Chief Secretary, Forest and Environment Department, Government of Manipur, Secretariat, Imphal- 705001
33. The Member Secretary, Assam Pollution Control Board, Bamunimaidam, Guwahati – 781021
34. The Member Secretary, Andhra Pradesh Pollution Control Board D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada – 520 010
35. The Member Secretary, Bihar State Pollution Control Board, Parivesh Bhawan, Plot No. NS-B/2 Paliputra Industrial Area, Patliputra, Patna (Bihar) - 800 010
36. The Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas Bhavan, North Block Sector-19, Atal Nagar Dist- Raipur (C.G.) 492002
37. The Member Secretary, Delhi Pollution Control Committee, Government of N.C.T. Delhi 4th Floor, ISBT Building, Kashmere Gate, Delhi-110006
38. The Member Secretary, Daman, Diu & Dadra Nagar Haveli Pollution Control Committee, Office of the Deputy Conservator of Forests, Fort Area, Court Compound, Moti Daman, Daman – 396220
39. The Member Secretary, Goa State Pollution Control Board, 1st Floor, Dempo Tower, EDC Patto Plaza, Panaji, Goa-403 001
40. The Member Secretary, Gujarat Pollution Control Board Paryavan Bhavan, Sector 10- A, Gandhinagar – 382 043
41. The Member Secretary, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula-134109, Haryana
42. The Member Secretary, Himachal Pradesh Pollution Control Board, Him Parivesh, Phase-III, New Shimla, Himachal Pradesh 171009
43. The Member Secretary, Jammu & Kashmir State Pollution Control Board, Parivesh Bhawan, Forest Complex, Gladni, Narwal, transport Nagar, Jammu, Jammu and Kashmir 180004
44. The Member Secretary, Jammu & Kashmir State Pollution Control Board, Shiekh-ul-Campus, behind Govt. Silk Factory, Raj Bagh, Srinagar (J&K)

45. The Member Secretary, Jharkhand Pollution Control Board, T.A Building, HEC, P.O. Dhurwa, Ranchi – 834004
46. The Member Secretary, Karnataka State Pollution Control Board, Parisara Bhavan, 4th & 5th Floor, # 49, Church St., Bengaluru-560 001
47. The Member Secretary, Kerala State Pollution Control Board, Plamoodu Jn., Pattom Palace P.O. Thiruvananthapuram - 695 004
48. The Member Secretary, Manipur Pollution Control Board, Lamphelpat, Imphal West D.C. Office Complex Imphal– 795004
49. The Member Secretary, Meghalaya Pollution Control Board Arden- Lumpyngngad Shillong: 793014
50. The Member Secretary, Nagaland Pollution Control Board, Signal Point, Dimapur Nagaland – 797112
51. The Member Secretary, Madhya Pradesh Pollution Control Board, E-5, Arera Colony, Paryavaran Parisar, Bhopal - 462 016, Madhya Pradesh
52. The Member Secretary, Maharashtra Pollution Control Board, Kalpataru Point, 2nd – 4th Floor Opp. Cine Planet Cinema, Nr. Sion Circle, Sion (E) Mumbai – 400 022
53. The Member Secretary, Mizoram Pollution Control Board, New Secretariat Complex, Khatla Thlanmual Peng, Khatla, Aizawl, Mizoram: 796001
54. The Member Secretary, Puducherry Pollution Control Committee, Housing Board Complex, Anna Nagar, Puducherry -600 005
55. The Member Secretary, Punjab Pollution Control Board, Vatavaran Bhawan, Nabha Road, Patiala, Punjab 147001
56. The Member Secretary, Odisha Pollution Control Board, A-118, Nilakanta Nagar, Unit – VIII, Bhubaneswar – 751012
57. The Member Secretary, Rajasthan Pollution Control Board, 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur (Rajasthan) - 302 004
58. The Member Secretary, Sikkim State Pollution Control Board, Department of Forest, Environment & Wildlife Management Government of Sikkim, Deorali, Gangtok, - 737102
59. The Member Secretary, Telangana State Pollution Control Board, Paryavaran Bhawan, A-3, I.E. Sanath Nagar, Hyderabad-500 018
60. The Member Secretary, Tripura Pollution Control Board, Vigyan Bhawan, Pandit Nehru Complex, Gorkhabasti, PO: Kunjaban Agartala – 799006
61. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032
62. The Member Secretary, Uttarakhand Environmental Protection & Pollution Control Board, 29/20, Nemi Road, Dehradun, Uttarakhand – 248001
63. The Member Secretary, Uttar Pradesh Pollution Control Board, Building.No. TC-12V, Vibhuti Khand, Gomti Nagar, Lucknow-226 010
64. The Member Secretary, West Bengal Pollution Control Board, Paribesh Bhavan, 10A, Block-L.A., Sector III, Salt Lake City, Kolkata - 700 106
65. The Member Secretary, Andaman & Nicobar Islands Pollution Control Committee, Department of Science & Technology, Dollygunj Van Sadan, Haddo P.O., Port Blair – 744102

66. The Member Secretary, Lakshadweep Pollution Control Committee, Department of Science, Technology & Environment, Kavarati-682555

Copy for kind information:

1. PPS to Secretary, Department of Water Resources, RD&GR, Ministry of Jal Shakti, Shram Shakti Bhavan, Rafi Marg, Sansad Marg Area, New Delhi- 110001
2. PS to Director General, NMCG cum Project Director NRCD
3. Additional Secretary, Ministry of Housing and Urban Affairs, Nirman Bhawan, Maulana Azad Road, New Delhi – 110011.
4. Joint Secretary, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jorbagh Road, New Delhi – 110003
5. Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032
6. PS to ED (/Project/ Finance), NMCG
7. Adviser, NRCD

Minutes of the 7th meeting of the Central Monitoring Committee held on 09.11.2020 through Video Conferencing regarding 351 polluted river stretches based on the directions of Hon'ble NGT in the matter OA No. 673 of 2018

The 7th meeting of the Central Monitoring Committee (CMC) constituted by Hon'ble NGT in the matter OA No. 673 of 2018 was held through video conferencing with the States on 09.11.2020 from 10.00 AM onwards in Conference Room, NMCG under the Chairmanship of Secretary, Ministry of Jal Shakti. The list of participants of NMCG, NRCD, MoHUA and CPCB present at the meeting is at ***Annexure-I***.

II. Director General, NMCG welcomed all participants. It was informed that in compliance to the 6th meeting of CMC, separate review meetings were held under his Chairmanship with the States/ UT of J&K and Rajasthan. Further, NMCG had organized a webinar on '*Municipal Solid Waste Management*' on 06.11.2020, for informing the State Governments/ UT Administrations on different successful approaches and models that can be adopted for management of municipal solid waste. In the webinar, presentations were made by MoEF&CC with regard to the Solid Waste Management Rules'2016 and MoHUA on the status of various initiatives being undertaken in India and the success of *Swach Bharat Mission*. States of Odisha, Chhattisgarh and Goa shared their experiences with regard to some of the successful approaches being adopted by them.

Secretary, Ministry of Jal Shakti remarked that during the earlier meetings of CMC, it has been observed that not much progress is being made by States in a months-time. For realistic discussions of the progress in respect of various initiatives take by States, it needs to be seen whether the meetings for discussions on a particular subject could be held after a gap of more than a month. However, since monthly monitoring framework has been as per directions of NGT, it would make better sense if from next meeting onwards, specific focus on incremental progress is maintained. Further, since general sewerage profile of State is now available and repetition of same may not make much sense, therefore, henceforth STP wise discussions underlining bottlenecks, specific areas to catalyze progress, as well as utilization of existing assets should remain the core of discussions. States should accordingly prepare for these points and keep the Secretariat of CMC informed of the status well in advance.

III. Subsequently, State-wise discussions held are as follows:

Executive Director Technical (ED Tech), NMCG through a presentation briefed about the issues related to sewage, industrial and solid waste management in the States, as per the information submitted in MPR. **It was also informed that a revised format has been circulated with the minutes of the 6th meeting of CMC (attached with the mail) and States/UTs must ensure submission in the new format, clearly indicating the incremental progress made by the States in the respective month against each component.**

1. Delhi

Secretary, Ministry of Jal Shakti highlighted that a review meeting was held under the Chairmanship of Hon'ble Minister of Jal Shakti with Chief Minister of Delhi, in first week of October 2020, wherein the projects were reviewed in detail and the issues were flagged at highest level.

ED Tech, NMCG informed that 35 STPs of 597 MGD are operational in Delhi, of which only 8 STPs are reported to be complying and remaining 27 STPs are reported to be non-complying with the discharge norms of BOD - 10mg/l, TSS - 10 mg/l and COD-50mg/l, based on the monthly monitoring of STPs carried out by DPCC. Of the 13 CETPs operational in Delhi, only 3 CETPs are complying with the norms. With regard to the Solid Waste Management, it was informed that Delhi generates 11144 TPD of solid waste, have processing facility of 5497.175 TPD, of which 5259 TPD is processed and 5885 TPD is disposed in landfill site. Compliance of the existing STPs and CETPs and slow progress of the on-going STP projects remains major issue. It was highlighted that in the latest MPR, completion timeline of STP at Coronation Pillar has been extended from March 2021 to June 2021.

Additional Chief Secretary (Urban Development), Delhi attended the meeting along with other State government officials. CEO, Delhi Jal Board informed that 70 MGD of treated water from the STPs are achieving the discharge norms of BOD – 10mg/l, TSS - 10 mg/l and COD-50mg/l and the remaining operational STPs which are old, and have been designed for old discharge norms, may not be able to achieve the stringent norms. Further, it was informed that upgradation/

rehabilitation of the existing STPs of 279 MGD are under progress and shall be completed as per timeline indicated in the MPR. Further for 348 MGD of existing STPs, rehabilitation is yet to be commenced and funding is being tied out. 98% of the Interceptor Sewer Project (ISP) has been completed and the drains shall be trapped by December 2020. 158 MGD of the trapped flow is being treated in the STPs. The treatment capacity for ISP shall be completed in phased manner by 2022. With regard to Coronation Pillar, it was informed that 50% of the project shall be completed by December 2020 and remaining 50% of the project shall be completed by June 2021. It was informed that payments for all the projects are being made regularly. With regard to tree cutting permission for the STPs at Kondli (Phase-I & III), it was informed that permissions have been obtained for 492 trees and the STP shall be completed by September 2021. For Kondli Phase-II, application for tree cutting has been submitted and lands for compensatory afforestation have been approved by DDA.

Secretary, Ministry of Jal Shakti suggested that it may be ensured that Coronation Pillar is made 50% operational by March 2021. It was suggested to conduct joint inspection of the 13 CETPs in Delhi, flow being intercepted as well as the STPs which are receiving flow from the Interceptor Sewer Projects to verify the flow, status of treatment and the amount of effluent being treated. Further, the State was requested to resolve the tree cutting issue at the earliest as the project timelines are being inordinately delayed.

Principal Secretary, Environment & Forest, Delhi informed that permission for tree cutting was given in December 2019 and also in September 2020. For Rithala (Phase-II) and Okhla, recommendations have been made to the Minister and early clearance shall be given to these projects. For compensatory forestation at Kondli Phase-II, land available is insufficient and the same has been intimated. For Maharani Bagh, response has been received and the same shall be put up before the Minister.

ED Tech, NMCG informed that status with regard to the 2000 TPD Integrated Solid Waste Management Plant proposed at Ghonda Gujran may also be apprised as the plant is being built on active floodplain of the River Yamuna, which was previously deferred by the Principal Committee of NGT considering the environment impacts on the River. Further, it was informed

that DDA has demarcated active floodplain of the River Yamuna by physical markings both on left and right bank.

Official from EDMC informed that as per the reports of DDA, the location of the plant is outside floodplain of River Yamuna. The ISWM facility is being implemented by EDMC and NTPC, tenders have been received and approval from Environment Ministry is under process.

2. Punjab:

ED Tech, NMCG informed that the State generates 2111 MLD of sewage, for which 116 STPs of 1628.5 MLD capacity exists. Out of 116 STPs, 115 are operational and has utilization capacity of 80%. 79 STPs are reported to be complying with the norms. There are 1764 ETPs of 418 MLD existing in industrial area, of which 1654 are complying. 4 CETPs of 20.535 MLD are existing, of which 2 CETPs are complying, 1 CETP is closed down and 1 CETP is non-complying. The State generates municipal solid waste of 4100 TPD and has processing facility of 2800 TPD. Further State was requested to provide status with regard to the issues highlighted in the previous meeting viz., progress of two ongoing CETPs in Ludhiana for textile cluster, implementation of work under Buddha Nala project for I&D of 14 drains as well as shifting of dairy complexes.

Chief Secretary, Punjab attended the meeting along with other State government officials. Principal Secretary, (Science, Technology & Environment), Punjab informed that work is in progress with regard to the two CETPs at Ludhiana, 50 MLD CETP has achieved 72% of physical progress and 40 MLD CETP has achieved 83% progress. Only electrical and mechanical works are remaining and the both CETP shall be completed by end of December'2020. Regarding Buddha Nala project, it was informed that tenders for STPs have been received and technical & financial evaluation for the same has been completed. The work shall be awarded by end of November, 2020.

With regard to the shifting of dairies, it was informed that installation of 2 ETPs of 5 MLD and 10 MLD capacities for dairy complexes are part of the comprehensive Buddha nala project for which tenders have already been invited and work will be allotted after completion of tendering process. For utilization of solid waste from dairy complexes, one bio-gas plant of 1 MW is

existing for Habowal dairy complex and Tajpur dairy complex. Punjab Energy Development Agency has been given 2.5 acre of land to install a plant for energy generation from cow-dung and shall be completed in next 30 months.

For long term solution for pollution abatement of Buddha nala, State is working on shifting of dairy complex and for which consultation at District level with all stake holders is going on. Government is also identifying the suitable land for shifting of dairy complexes. There is a gap of 650 MLD in sewage treatment capacity for which a number of STPs are proposed by the State Government and a detailed time line has already been submitted to the Ministry. The work is in progress and being monitored by the State Apex Committee chaired by Chief Secretary. Work for 5 STPs have been allotted and will start soon on site. There were land issues in 7 towns along the polluted river stretches. Out of 7 places, land issues at 2 places have been resolved and for rest 5 places, efforts are being made to resolve the issue.

Secretary, Ministry of Jal Shakti appreciated the efforts of State Government in implementation of Action Plan. He requested the State official to rigorously monitor the implementation of Buddha nala project, especially the CETP work for which December, 2020 is the scheduled completion date.

Member Secretary, Punjab Pollution Control Board informed that Central Share for the 40 MLD CETP has not been received.

With regard to the Ghaggar River pollution and recent orders of NGT, Secretary, Ministry of Jal Shakti, directed NMCG to collect the status from the States, before conveying a separate meeting with the States.

3. Haryana

ED Tech, NMCG informed that the State has more sewage treatment capacity than its sewage generation. As reported by the State, trapping of 110 drains in Leg-I, II and III were expected to be completed by December 2020. However, as per the latest MPR, drain diversion works shall be completed by December 2021. Out of the 59 STPs of 514 MLD capacity in Ghaggar basin, 58 STPs are not-complying with Faecal Coliform norms. Similarly, out of 58 STPs of 1052.2 MLD

capacity in Yamuna basin, only 9 STPs are complying with the norms. In Ghaggar basin, most of the STP projects are due for completion, therefore the State must ensure that the projects are completed within the committed timeframe.

Additional Chief Secretary (Environment), Haryana informed that a meeting under the Chairmanship of Chief Secretary Haryana is scheduled to sort out the issues of non-compliance of the STPs with regard to the Faecal Coliform norms and sought assistance, if necessary, from the Ministry. Review meeting of Ghaggar Monitoring Committee of NGT is regularly being conducted with concerned departments and updated report shall be submitted to the Ministry also. Sewer network laying works are in progress. Out of 2138 kms, 1502 kms of sewer lines have been laid and with commissioning of the networks, the utilization capacity of the existing STPs shall improve. In Faridabad, there is a sewage treatment gap of 165 MLD, for which work of 2 new STPs of 100 and 80 MLD has started and shall be completed within 18 months. Further for bridging the gap, a 50 MLD CETP and a 65 MLD WWTP has been proposed for which administrative approval has been granted and tender will be floated immediately. For, solid waste management, 14 clusters are to be developed for which 13 sites have been identified.

Secretary, Ministry of Jal Shakti directed NMCG officials to discuss with the State with regard to non-compliance of the STPs with regard to fecal coliform. Further, NMCG officials may visit the STP sites at Faridabad. State was directed to ensure improvement in water quality of the rivers and better utilization of the capacity of the STPs.

4. Himachal Pradesh

ED Tech, NMCG informed that the State needs to submit MPR in the revised format.

Joint Secretary (Environment) Himachal Pradesh informed that Chief Secretary, Himachal Pradesh is regularly monitoring the progress and information is being compiled with respect to the revised MPR format. Chief Engineer informed that 5 new STPs (of 8.14 MLD) are under construction and 5 existing STPs are under upgradation (5.42 MLD). These STPs shall be completed by September 2021 and the State has applied for extension of completion timelines. Member Secretary, HPPCB informed that up-gradation works of Baddi CETP is in progress and 3 new CETPs at Ponta Sahib, Kala Amb (5 MLD) and Kangda are planned. Special Purpose

Vehicle has been constituted for Kala Amb, tenders have been awarded for first phase of the project (2.5 MLD), discharge norms shall be finalized shortly and the project is expected to be completed within March 2021. Environment Clearance for the CETPs at Ponta Sahib and Kangda have been obtained and are in initial stages of proposals.

Secretary, Ministry of Jal Shakti suggested that as the 10 STPs are of small capacity therefore the State must ensure early completion of the projects and not to extend the projects beyond June 2021. NMCG was directed to obtain physical and financial progress of the 10 STPs under construction/ upgradation from the State.

5. Jammu & Kashmir

ED Tech, NMCG raised the issue of under-utilization of STPs in Jammu. It was informed that against the present treatment capacity of 67 MLD only 29 MLD of wastewater is being treated. This is attributed to the slow progress in house connection works. State may provide progress of all the bioremediation projects and status of treatment of legacy waste at Jammu. The issue of non-submission of comments from Jammu & Kashmir to IIT Roorkee's observation on DPR for project of pollution abatement of river Banganga at Katra was also highlighted.

Secretary, Ministry of Jal Shakti expressed serious concern over the response of the UT with regard to solid and liquid waste management, poor utilization of the existing infrastructure and the slow progress of Devika river project sanctioned under NRCP. It was requested that UT must give clear status of sewage generation and treatment at Jammu as well as future plans for other towns.

Director General, NMCG informed that review meeting with the officials of J&K was held on 16th October 2020, which was attended by Principal Secretary (Housing and Urban Development Department) Jammu & Kashmir. It was informed that J&K was requested to resolve the issue of design and land acquisition of 2 STPs in Devika river project at the earliest.

Principal Secretary (HUDD), J&K informed that after the review meeting with DG, NMCG a detailed note on sewage and solid waste management has been prepared, the deficiencies pointed out shall be taken care in consultation with Pollution Control Board and the same shall be

submitted. It was informed that comments on the queries made by IIT Roorkee on the Banganga River proposed under NRCP shall be submitted by the UT to NRCD shortly and that the land issues have been resolved. DPRs amounting to about Rs. 760 crore for other 7 polluted river stretches (excluding river Devika and Banganga) have been prepared. It was further informed that 81 MLD of sewage is generated in Jammu, for which treatment facility of 67 MLD exists. For treatment of remaining 14 MLD sewage, proposal has already been prepared. Presently only 27 MLD of sewage is being treated in Jammu, which is attributed to various issues including the non-availability of house sewer connections, design issues etc. The project being implemented by NBCC is expected to be over by March, 2021. Tenders for intercepting 13 nalas will be awarded soon and work shall be completed within one year. Other issues related to under utilization shall also be resolved in consultation with NBCC. Bioremediation projects could not be awarded and efforts are being put in to award the work by November'2020 end.

6. Sikkim

ED Tech, NMCG informed that there are 7 STPs of 20.5 MLD in the State and their capacity utilization is 16 MLD. 3 STPs of 6.25 MLD capacity are under construction while 2 STPs of 5.53 MLD capacity are also proposed. There is no CETP in the State. State generates total solid waste generation of 74.9 TPD against which 50.8 TPD treatment facilities exists. It was informed that the 3 under construction STPS are almost complete and are to be commissioned and State has to resolve the land issues for proposed STPs at Jorhang and Namchi.

Secretary, Ministry of Jal Shakti informed that these issues have also been highlighted during the meeting Hon'ble Minister of MoJS and Hon'ble C.M. of Sikkim held on subject of Jal Jeevan Mission. It was informed that one project for Gangtok has recently been sanctioned under NRCP and requested State to provide updated status.

Secretary (PHED), Sikkim informed that with the sanction of new project under NRCP, left out area of Gangtok will now be covered with sewer lines and all the sewage generated in Gangtok will be reaching the existing STPs. With regard to the land issues for Jorhang and Namchi, it was informed that land has been identified for STPs at both the places and negotiation process has been initiated. STPs at Rangpo and Zone-II Gangtok shall be completed by end of

December, 2020. It was further informed that the State shall install online effluent monitoring system within next 2 months in STPs at Gangtok.

Secretary (UDD), Sikkim informed that total solid waste generation is 74.7 TPD out of which 12.56% of waste is being processed and 30% of the recyclable waste is recovered and is being sent for recycling.

7. Telangana

Secretary, Ministry of Jal Shakti highlighted that there is a huge gap in sewage generation and treatment in the State.

ED Tech, NMCG informed that comparative analysis for the higher cost of in-situ remediation of drains as reported in the previous meeting of the Committee is to be provided by the State. It was informed that tenders for 17 STPs in 3 packages for Musi river have been invited under HAM in September 2020, 12 STPs of 367 MLD capacity are to be sanctioned for River Nakkavagu and Manjeera, DPRs have been prepared for other river reaches of Maneru, Karakavagu, Kinnerasani, Godavari and Krishna. As per the directions of the NGT, State needs to identify model river to be adopted by the State. State to provide operational details and compliance status of existing STPs and CETPs. State was requested to provide further progress.

Managing Director, Hyderabad Metropolitan Board informed that DPR has been prepared for the gap in sewage treatment of 1178 MLD for Hyderabad. Tenders have been floated for Package 3 (drainage into Hussain Sagar Lake) and the river front development, which is likely to be started upon completion of tendering within 25 days. Other two packages of 883 MLD STP capacity are under sanction stage. Capacity utilization of the existing STPs is 772.3 MLD (about 90%) and the decrease in utilization capacity is due to heavy rain and damage to the pipe. The OCeMs will be tendered with revised tender qualifications. The cost of bio-remediation is high as per the 5 DPRs submitted by NEERI for the 5 drains and tendering is likely to be completed by this month. For intermediate treatment processes, 3 FSTPs are likely to be completed by January, 2021.

Secretary, Ministry of Jal Shakti, appreciated State for adopting HAM model for STPs, as it will ensure better performance of the STPs. With regard to bioremediation projects, it was suggested

that for interim measures cost effective treatment measures should be adopted as bio-remediation are not permanent measures and therefore funds may be utilized for permanent works.

Member Secretary, Telangana Pollution Control Board informed that for other river stretches, 72 STPs of 315 MLD capacity are proposed. DPRs have been prepared for 59 STPs and are submitted to Municipal Administration for approval and sanction of funds. DPRs for 13 STPs are under preparation. It was informed that after commissioning of new STPs, improvement in the water quality and flow in the Rivers Godavari and Krishna has been observed and accordingly State is planning to revise the number of STPs proposed for these rivers.

Secretary, Ministry of Jal Shakti, suggested that before revising the actions proposed for these rivers, water flow and quality of the rivers in the non-monsoon season may also be considered. Further, the State was directed to submit the update status to the Ministry and a separate detailed meeting may be convened by NRCD in this regard.

8. Assam:

ED Tech, NMCG informed that at present there is no STP existing in the State and for the proposed sewerage project at Guwahati assistance from JICA has been finalized and land for 14 STPs has also been finalized. As an interim measure, the work for desiltation and cleaning of beels/ water bodies has also been started by the State Governments and State was requested to provide the latest status of the work. State was also requested to provide status of DPR preparation as well as availability of land in other towns for polluted river stretches of Bega, Barak, Kolong, Bhogdoi and Mora Bhoroli. The latest status of funding for setting up of Integrated Solid Waste Management Plant at Byarnihat and the removal of legacy waste at Boragaon dumping site in the catchment area of Deepor Beel (Ramsar Site) was also requested. It was informed that there are 22 industries operating without consent in Bharalu river catchment and 13 industries operating in Borosola catchment. Repetitive information has been observed in the MPR and concerned officials may ensure that the reports are duly checked before submission to CMC.

Secretary, Ministry of Jal Shakti emphasized that State should also explore the other low cost effective sewage treatment options.

Principal Secretary (Environment and Forests), Assam informed that bio-remediation as well as cleaning and de-silting of water bodies in and around Guwahati is regularly being carried out by GMC and GMDA. It was informed that land for all 14 decentralized STPs in Guwahati has been secured and DPR is being revised with help of consultant and the DPR shall be finalized within 4 months. With regard to 5 STPs proposed outside Guwahati, it was informed that land for 3 STPs at Mangaldhoi, Jorhat and Tezpur has already been identified, DPRs have been finalized and administrative approval is being issued. It was informed that tenders for these 3 shall be floated within 15 days. Land for STP in Naugaon has been identified and due to some problems at Mizoram- Silchar border, land acquisition for STP at Silchar is taking time. It was assured that in next 30-40 days, tenders for STPs in these 2 towns shall also be floated.

Director General, NMCG requested State officials to revise the Action Plan based on the changes proposed by the State Government and NRCD to review the same.

9. Manipur:

ED Tech, NMCG informed that the State generates 115.05 MLD of sewage, 1 STP of 27 MLD is existing, which is treating only 9 MLD of sewage. There are 2 STPs of 17 MLD under construction, 1 STP of 49 MLD is proposed and State plans to treat 16.75 MLD of sewage through bioremediation and FSSM for which DPR is under preparation. As reported by the State, there are 989 industries operational in the State, however these are non-water polluting industries and State has adopted Nambul River as the model river for treatment.

Secretary, Ministry of Jal Shakti highlighted that the State may also indicate efforts put in to increase the utilization capacity of the existing 27 MLD STP, the status of the 2 on-going STPs of 17 MLD and the estimated project cost of the new proposed 49 MLD STP, which seemed be at higher side.

Additional Chief Secretary (Environment & Forest) Manipur informed that the under-utilization of the existing 27 MLD STP is due to incomplete house service connection which have been delayed on account of funding issues. The issue has now been resolved and the remaining connections shall be completed by January 2021. With regard to 49 MLD STP, it was informed

that the proposal is being reviewed and suggestion to split the proposal into two parts, one to be funded under EAP and the other under NRCP is under consideration.

With regard to the existing 125 TPD waste processing plant at Lamdeng, it was informed that currently utilization of the plant is 30 TPD, which shall be gradually increased in next year and the plant shall be fully utilized by December 2021. For treatment of Bio-medical waste, DPR has been submitted to the Union Government to avail financial assistance in the 75:25 ratio funding pattern.

10. Andhra Pradesh:

ED Tech, NMCG informed that the details of each existing STPs installed in the stated locations of the State in MPR to be provided. All the STPs are said to be operational in MPR, yet the capacity utilization is 321.81 MLD against 515.85 MLD of existing capacity. Total effluent discharged by industries is 4494.33 MLD and seems to be high. Treatment capacity of 1069 ETPs has not been provided. Capacity utilization of the 7 installed CETPs is found to be poor, which is only 10 MLD against the installed capacity of 31 MLD (only 32%). It is mentioned in the MPR that 63 solid waste processing plants are in progress while 54 more are proposed, however capacity of these proposed/ in progress facilities is not mentioned. Model river adopted by the State is to be specified in the MPR.

Secretary, Ministry of Jal Shakti expressed his displeasure over absence of designated State officials in the meeting, which reflects lack of seriousness on part of State in following up directions of NGT. The State should be represented by the nodal Principal Secretary appointed by the Chief Secretary or at least the Member Secretary of the Pollution Control Board. It was remarked that it is incomprehensible why designated officials from State cannot spare an hour for such an important issue when Secretary, Ministry of Jal Shakti can spare full day for the same. Accordingly, State officials were directed to convey the direction to Chief Secretary of State and declined permission to submit their views.

11. Daman Diu Dadra Nagar Haveli:

Secretary, Ministry of Jal Shakti requested UT to provide status of sewer line connections for the 13 MLD STP at Silvassa and the status of 2 new proposed STPs at Nani Daman and Diu.

Member Secretary, Pollution Control Committee informed that 13.5% of the house service connections have been completed and the same is being monitored regularly. The progress of work in the last 4-5 months has been affected due to election and Covid-19 pandemic. However, the UT Administration has deployed 8 cesspool vehicles to collect the septage from the remaining households for treatment in the STP. The proposed 7 MLD STP at Diu was reported to be taken under SMART city and tenders will be floated in 10-15 days. It was also informed that the 16 MLD STP proposed at Nani Daman under World Bank ENCORE Project, has been submitted to GOI for approval.

12. Goa:

ED Tech, NMCG highlighted the issues of the State with regard to the poor capacity utilization of the existing 9 STPs which is only 37%, the considerable delay in the initiation of the household connections and the delay with regard to the on-going STP works. Status of the DPRs as reported by the State in the 6th CMC of meeting, was not found in the MPR. State has to provide the status of the STPs and the information regarding drains discharging into the river stretches and status of in-situ bioremediation project as an interim measure. There is considerable gap in treatment of municipal solid waste with only 100 TPD of SWM facility existing against 766 TPD generation. State has proposed increment of 250 TPD in processing facility, the action proposed for treatment of the gap of around 450 TPD of solid waste needs to be worked out and status to be provided.

Principal Secretary (Environment), Goa informed that sewage generation of 112.5 MLD is based on the census figures of the urban towns. Out of 5 under construction STPs, 2 STPs have made considerable progress and remaining 3 STPs are under JICA assistance, which are also progressing. There is an issue of higher water table in Goa due to which construction works related to sewer networks are facing difficulties, however it was assured that all pending

connection works shall be completed by next year. With regard to solid waste management, it was informed that works are in progress and State shall ensure that the targets are met as per the timelines provided.

Secretary, Ministry of Jal Shakti recommended that Goa should become ideal State, wherein no untreated sewage is discharged into the rivers and should ensure proper management of municipal solid waste in urban as well as in rural areas.

13. Karnataka:

ED Tech, NMCG informed that the State needs to provide incremental progress made and compliance status of CETPs/ STPs in the MPR. As reported in the MPR, 72 MLD STP at Chikkodi Taluk is under-repair and present status of the STP is to be provided in the MPR. Land issues are to be resolved at the earliest for the proposed 4.14 MLD STP at Kamaje and 0.22 MLD STP at Kaikunje. Large number of projects are under DPR preparation, which needs to be expedited and detailed completion timeline to be provided. Action proposed for enhancing the treatment capacity with regard to the solid waste needs to be provided. 16 drains have been identified and monitored along the polluted river stretches from Thippagondanahalli reservoir to Kanakapura town. The effluent in the drains are having high BOD & TC count, therefore in-situ treatments proposed for these drains needs to be provided.

Member Secretary, Karnataka Pollution Control Board informed that the State generates 3356.5 MLD of sewage, there are 146 STPs of 2561 MLD and there exists a gap of 795 MLD. To bridge the gap in treatment, 151 different projects are proposed in the State including STP and 48 FSTPs, details of which have been provided in the MPR. It was informed that 17000 industries exist in the State having industrial discharge of 663 MLD, 4158 industries have ETPs and 733 industries are connected to the 10 existing CETPs. Inflow and outflow monitoring data of the CETPs are now being uploaded on daily basis, which helps in monitoring the performance of the plants. GPS are installed in vehicles for transportation of hazardous industrial waste and biomedical waste and control command centres have been installed. 44 industries were found to be non-complying against which directions have been issued and legal charges have been insisted against 2 industries.

It was informed that the State generates 12,258.2 TPD of solid waste, 9824.5 TPD is collected and 5106.3 TPD is processed. It was informed that various initiatives have been proposed in the State such as two decentralized plants of 50 TPD which have been planned by BBM, which shall be completed by 31st December 2021. Similarly, 40 TPD capacity wet waste processing plants (within 6 months) and setting up of Bio-CNG units for processing waste at Kalika Kendra (within 3 months) shall be completed. There are 13 bio – methanation plants existing in the State, of which 7 plants are non-functional. Actions have been taken to upgrade these 7 by 31st March 2021. 7 Waste to Energy plants have been proposed and under Shubra Bengaluru, two aggregator centres of 50 TPD have been planned. These centres will help to stack all the non-reusable, non-recyclable, RDF material, which would be further sent to waste to energy plants or to cement factories to be used as fuel. 100 TPD C&D waste processing plant of M/S. Rock Crystals at Chikkajala has been established and another 750 TPD C & D waste processing plant of M/s. Rubble Revival Pvt. Ltd is coming up.

Secretary, Ministry of Jal Shakti appreciated the State of Art Centre established by the State to monitor the effluent treatment and directed the State to share the details with the Ministry for incorporation in the report being submitted to NGT as a part of the best practices being adopted in the States.

14. Kerala:

ED Tech NMCG informed that as reported by the State in the latest MPR, estimated sewage generation in the State is 3759 MLD and Urban Local Bodies generates 1058 MLD of the sewage. There exists 12 STPs of 124 MLD in the State. State is to provide MPRs in revised format from next submission onwards. Conveyance system proposed in Thiruvanthapuram for 107 MLD has shown no progress. The details of non-functional FSTPs are not being reported. Most of the STP projects have been re-tendered. There is a huge gap in solid waste generation and treatment and the data related to generation appears to be very high. State was directed to review and verify the same.

Member Secretary, Kerala Pollution Control Board informed that as per the Dossier prepared by the State, the total sewage generation in the State is 1192 MLD. The sewage generated in the urban area is 317 MLD. For treatment of the sewage generation, 310 STPs are functioning. The industrial effluent generation in the State is 213 MLD for which ETPs have been installed. With regard to the 21 polluted river stretches, it was informed that 3 STPs of 10 KLD each have been completed, work has been awarded for 2 STPs, 3 STPs have been tendered and 2 STPs are at DPR stage. With regard to the solid waste, it was informed that the State generates 11,499 TPD of solid waste, treatment capacity of 8,468 exists and 8 Waste to Energy plants have been planned, of which 2 have been constructed. Bio-mining activities is in progress for the legacy waste. State has bio-medical waste generation of 43 TPD, CBMWTF of 55 TPD is existing and 2 CBMWTF have been planned for 16 and 14 TPD respectively.

Director General NMCG directed State to prepare ULB wise details of sewage generation and treatment in the State.

Secretary, Ministry of Jal Shakti remarked that sewage generation in urban areas appears to be too low and needs separate review. It was suggested that a separate meeting may be convened by DG, NMCG with the State to sort out the discrepancies in the data being reported by the State.

15. Maharashtra:

ED Tech, NMCG informed that total sewage generation of the State is 9757 ML. However, the same seems to be on the higher side compared to the urban population provided in the MPR. Further, the existing and ongoing capacities of STPs with respect to capacity utilization is inconsistent. The compliance/ non-compliance status and details of the existing STP are still pending from State. The status of incremental progress of all works (I&D Works, STP projects under construction, completion schedule, timelines etc., have not been indicated in the MPR) are also pending from State as per the last discussion during the 6th CMC meeting. The compliance and non-compliance status of the CETPs needs to be indicated in the MPR. There exists inconsistency in the number of the CETPs provided in the MPR and in the Annexure.

Performance evaluation of the 13 FSTPs in terms of reduction in pollution load has not been included in the MPR as per decision taken in last CMC meeting.

Secretary, Ministry of Jal Shakti highlighted that Maharashtra is an important State, in terms of population, large number of cities with high figures of sewage generation and also highest number of treatment plants.

Member Secretary, Maharashtra Pollution Control Board informed that sewage generation of 9757 MLD for the State is verified figure, majority (around 35% to 40%) of the sewage generation of the State is attributed to the Mumbai city which generates 2500 MLD of sewage. There are 137 STPs of 7747 MLD existing of which capacity utilization is 4123 MLD, which is mainly due to connectivity issues. The connectivity issues are being addressed by the ULBs and thereafter the STPs shall be utilized to the fullest capacities. With regard to the polluted river stretches, it was informed that the sewage generation is 2728 MLD, of which 1961 MLD is being treated and the gap in treatment is 767 MLD. To bridge the gap in treatment in polluted river stretches, State has proposed 77 new STPs of 1300 MLD capacity, which are at different stages of execution. 15 STPs of 245 MLD are under construction, few are at tender stages, for 10 STPs funds have been sanctioned, 19 STPs are at DPR preparation stage, 5 STP projects are at technical sanction stage and administrative approval for additional 14 STPs are awaited.

Further, it was informed that there is a gap of about 2000 MLD in sewage treatment in the State, out of which 700 MLD is in Mumbai. Capacity augmentation of the sewage treatment capacity for the Mumbai city has been initiated. Out of 137 STPs operational in the State, 19 are non-complying and the State is taking initiatives to make the STPs comply with the prescribed norms. It was informed that State generates 23000 TPD of solid waste, of which 16000 TPD is being treated by different methods. Out of 398 ULBs, 337 do have a composting plants and waste processing facilities and 82 ULBs have vermi-composting facilities, 62 ULBs have bio-methanation plant, 1 Waste to Energy plant and 26 RDF plants are installed. In 4 cities, the processing facilities shall be augmented. State has taken *Namami Chandrabhaga* mission to maintain minimum continuous flow of water in the river, construct weirs in the river bed to maintain the water level and set up STPs in the cities along the banks of Chandrabhaga. State has also launched Mazi Vasundhara Abhiyan for Urban and rural areas on 2nd October and the

program shall be completed by 31st May 2021. The program emphasized to increase the green cover, bio-diversity, SWM and other management initiatives etc. Promotion of the use of renewable energy sources, solar lamps/ LED lamps, bio-gas resources, solar pumps installation in the agriculture sectors, increasing number of green building and promotion of electric mobility has been included. With respect to water conservation, rain water harvesting has been taken up in Municipal councils and Gram panchayat and with respect to air quality, State has incorporated air quality monitoring standards by augmenting different techniques. Further, it was informed that efforts are being made to make the non-operational STPs and CETPs functional.

Director General NMCG directed the State to resolve the land issue with regard to the Mula-Mutha STP project at the earliest due to which floating of tenders of the project is held up.

16. Odisha:

ED Tech, NMCG informed that the State has issue regarding the amount of sewage generation for the State. CPCB has reported 1273 MLD of sewage generation, whereas State has provided a figure of 4200 MLD and it was agreed that this will be reviewed by State with respect to sewage generation and septage treatment facility. 9 STPs of 288 MLD are under construction and the progress needs to be expedited. The compliance status with regard to the operational FSTPs and ETPs needs to be provided. State is requested to provide all the details along with the information with reference to CEQMS and adoption of ZLDs. Model River being adopted by the State to be identified and specified in the MPR.

Principal Secretary (Urban Development Department), Odisha informed that the STPs under construction are in progress and all the plants will be commissioned between the period from March 2021 to June 2021. Apart from the 10 functional septage plant, State has shortlisted 30 Septage Treatment Plant across 30 cities and these plants will be completed before March 2021. Further, 52 Septage Treatment plants are under various stages of development and all will be completed between June 2021 to December 2021. Every city will have minimum one number Septage treatment plant. STPs at Bhubaneshwar will be completed by June 2021. STP at Cuttack plant has already been commissioned and is operational. With regard to SWM, it was informed that out of 242 targeted plants, 112 solid waste treatment plants are already in function

and out of 235 targeted material recovery facility, 84 recovery facilities have already started functioning, remaining balance will be completed before 31st December 2020. Management of Plastic waste is going on in all the ULBs. With regard to the industrial pollution, it was informed that there are 6972 industries in State, of which the water polluting industries are 1030. The total waste generated from the industries is 886 MLD. All the 1030 industries have their own ETPs and no CETP exists. 10 industries were found to be non-complying and show-cause notices have been issued to them. The total biomedical waste generation in State is about 14.5 TPD, from 3398 health care units and there are 4 common biomedical treatment and waste disposal facility with a treatment capacity of 14TPD.

17. Puducherry:

ED Tech, NMCG informed that there are 5 STPs of 56 MLD existing and operational, which have utilization capacity of 35 MLD. There are 2 new STPs of 3 MLD each in tendering stage. State has adopted River Sankarabarani as the model river. All the 5 existing STPs are indicated as non-complying to the discharge norms. State has to provide individual capacity of each of the 5 STPs. Against 93 existing ETPs, 86 ETPs are compliant while remaining 7 are non-complying. State has to provide details of action taken towards non-complying ETPs. Details of MSW treatment facilities, dumpsites and sanitary landfills needs are to be provided. As per the MPR, total MSW generated in 5 ULBs is 406 TPD against which only 61 TPD is processed. Action plan for the gap in MSW processing facilities is to be provided.

Secretary (Environment), Puducherry informed that the issues are being regularly monitored by Chief Secretary of UT to bridge the gap in treatment, progress in house sewer connections works. Notices have been issued to all the 5 non-complying STPs. With respect to competitive bidding for installation of 3 MLD STP by PWD in Villianur along Chunnambar river and Arasalar in Karaikal, financial bid has been opened on 19.10.2020. After the approval of the Government, work order will be issued to the selected bidder. With respect to legacy waste, financial bid was opened on 29.10.2020 and its under finalization.

18. Tamil Nadu:

Additional Chief Secretary (Environment), Tamil Nadu informed that the ULBs in the State generates sewage of 2542.7 MLD. There are 76 STPs of 1639.96 MLD existing out of which 66 STPs are operational and 2 of which are reported as non-complying. For bridging the gap in treatment capacity, 39 STPs are under construction and 80 STPs are proposed, which have combined capacity of 471.1 MLD. Efforts are being put in to increase the utilization capacity of the existing STPs including house sewer line connections. In the 6 polluted river stretches, sewage generation is 260.8 MLD, 12 STPs of 115.7 MLD exists, 9 STPs under construction shall be completed by March 2021 and 31 STPs are proposed. There are 36 CETPs existing in the State with a capacity of 1497 MLD. Out of these 36 CETPs, 33 CETPs are in operation, 1 has been closed and 2 are non-complying for which the notice has been issued. Along the polluted river stretches no CETP is existing. However, 10 CETPs of 41 MLD are proposed for dyeing units which will be completed by 2024 as it is under proposal stage.

13,726 TPD of solid waste is generated in the State, of which about 12,000 TPD is treated through various means. There is a gap of 1726 TPD. Along the polluted river stretches, solid waste generation is 1531.75 TPD and 1379 TPD (roughly 90%) is treated, there is a plan for treatment of 152 TPD gap. Bio mining is being taken up in 15 ULBs, in 2 ULBS work have been completed and work is in progress in 13 ULBs, which will be completed by June 2021. 24573 health care units in the State generates 71 TPD of biomedical waste, for which 12 bio-medical waste treatment facilities are operational, wherein 100% of the biomedical waste is treated and disposed. Hazardous waste of 1947 TPD is generated in the polluted river stretches, 100% of which is treated. There is plastic waste generation of 1182 TPD in the State and action is being taken for 100% treatment. Bhavani River is the model river stretch taken for consideration. With regard to the coastal pollution, as per the directions in the NGT order dated 22nd September 2020, 46 nos of stretches have been identified in 14 district along the coastal stretch as polluted, for which action plan is under preparation and will be completed within 2 months. An app for daily capacity utilization of STPs and monitoring the performance of the plant is under development. A 50 acre biodiversity park is under proposal stage near Nangmanglam. State

Wetland Authority is preparing action plan on the polluted water bodies and the same will be shared subsequently for approval.

Additional Chief Secretary (Municipal Administration), Tamil Nadu informed that all the new STP projects include house sewer connections in order to keep the utilization capacity of the STP optimum. Further, it was informed that in 144 ULBs, bio-mining projects have been sanctioned to clear the legacy waste laying in the dumping sites. This will help in recovering 800 acres of land area. Decentralized micro compost centres are being developed in the State, 700 micro compost centres have already been developed, each micro compost centres can handle 5 tons of waste every day, where waste is accordingly segregated. Wet waste is converted to compost and is sold to the farmers so there is a gap of 1700 MT for which 250 micro compost centres are to be constructed which will be handling 1200 MT of wet waste and for the remaining 500 MT of wet waste it will get covered in 6 to 9 months. 60 FSTPs are to be constructed all over the State, mainly in smaller ULBs, where the sludge will be brought to existing STPs via lorries/ pipelines. Tamil Nadu has come up with 'Reuse of Treated Water Policy', 2 Tertiary Treatment plants of 90 MLD have been installed and the treated water is supplied to the industries.

Director General, NMCG appreciated the initiatives adopted by the State and further requested to share the documents with regard to innovative best practices of monitoring, bio-mining and reuse of treated water policy being adopted by the State.

19. Gujarat:

Member Secretary, Gujarat Pollution Control Board informed that not much progress has been made by the State since the last meeting of CMC and the status of land allotment remains the same. However, it was assured, the same shall be resolved at the earliest as per the directions of Chief Secretary of the State. With regard to the deep sea disposal pipeline project, it was informed that tenders for the pipelines for Jetpur & Ahmedabad have been already floated and requested Ministry to take the matter with CPCB for finalization of norms so that the project can be expedited.

ED Tech, NMCG wanted the State to upgrade the existing STPs which are not meeting with the norms. Director General NMCG directed the State to resolve the land issues for the STPs under Tapi Suddhikaran Projects as per plans conveyed during last meeting of CMC.

20. West Bengal

ED Tech, NMCG informed that 2758 MLD of sewage is being generated, 43 STPs of 671 MLD are existing with capacity utilization of 526 MLD. 30 STPs are operational of which 7 are reported to be complying with the norms. River Karola has been adopted as the Model River. As reported in the MPR, tenders for rejuvenation of STPs at Baidyabati, Bhadreswar, Konnagar Champadani and Serampore has been invited (Bid due date 02/11/2020). It was corrected that these are contracts and not tenders, this may be corrected in the next submissions. Hon'ble High Court, Calcutta has passed the order dated. 21.10.2020 to stay the cancellation of the work order. NMCG has already sought the action taken report from WBSPMG/KMDA. This entire process was done without informing to NMCG, despite the 100% funding by NMCG. NMCG has provided support for preparation of DPR for KMC area only under EAP funding. Final DPR is yet to be prepared by KMC's consultant. Once DPR is finalised, KMC has to explore funding sources for these. NMCG has not committed any funds for the works proposed in these DPR as these are primarily sewer network DPR. This has been informed many times but the status in MPR of the State remains same. State government has sanctioned a sewerage project for rejuvenating the Churni river at Ranaghat municipal area. The status of the project is not given in the MPR.

Principal Secretary (Environment), West Bengal informed that the work order for the renovation of the STP at Hooghly was cancelled immediately without due intimation/ permission of NMCG due to irregularities of the concerned Superintended Engineer and huge gap in scope of work. It was assured that permission from NMCG shall be sought from next time onwards. It was informed that in principle approval for draft DPR for wastewater treatment plant under KMC has been given by NMCG and DPR for the same shall be prepared by February 2021. In Kolkata, bid opening for Tolly's Nallah project has been extended to 18th November 2020. Rejuvenation of oxidation pond at Jiaganj, civil work estimates have been submitted and estimates for electro-

mechanical works are to be finalized. With regard to installation of OCEMS and labs in the STPs, KMDA has prepared a plan, which is yet to be approved by the Committee. Model River Karola is to be rejuvenated by December 2020. The State RRC has approved action plans for 8 Priority-V Rivers. There are 2 units of FSTP of 50 MLD each planned, of which 1 is functional and 1 shall be functional by January 2021. For treatment of legacy waste, plants are already operational, further work order have been given for 5 tenders and 12 tenders have been matured. With regard to solid waste management in 125 ULBs, tenders for 32 projects to be revised and are to be floated again, tenders for 37 are to be floated after Diwali and for 40 projects RFP completed, land yet to be finalized. About 11,930 TPD of processing waste capacity is proposed to be developed. With regard to the industries, it was informed that 16259 industries are existing in the State of which 454 are water polluting industries, having industrial discharge of 1360.64 MLD. All 454 have individual ETPs, 20 MLD CETP is operational in leather complex and another 20 MLD CETP is under construction, which shall be completed by late 2021- mid 2022.

Executive Director Project NMCG clarified that NMCG has given in principle approval for the cost of preparation of DPR and not the project.

Director General NMCG emphasized some old STPs constructed in GAP-I, are not complying at present and the water quality in the stretch is poor, projects were sanctioned in 2019 by NMCG and works have not gained much momentum, therefore it was directed that the works should be taken up priority. If not, regulatory actions will be taken up against the non-complying STPs as environment laws are being violated.

21. Uttarakhand

ED Tech, NMCG informed that 329.33 MLD of sewage is generated in the State and 61 STPs of 379 MLD capacity are existing, which have utilization capacity of 227.5 MLD. All the 61 STPs are operational and complying. There are 9 STPs of 60.775 MLD under construction and 17 new STPs are proposed. 3 CETPs of 13.2 MLD are existing and all 3 are complying, 3 new CETPs of 18 MLD are proposed. 1639.005 MTPD of municipal solid waste is generated and 2 CSWTF of 550 MTD operational. State needs to identify the Model River. It was highlighted that all new 17 STPs proposed are for the polluted river stretches except River Ganga. Proposals for the STPs

have been reviewed at NMCG and observations have been intimated to the State. Proposal for bio-remediation of 42 drains in these river stretches have also been submitted. The State to re-ascertain the flow for the proposed STPs.

Secretary, Ministry of Jal Shakti suggested that State should emphasis on utilization of their own funds as a number of projects have already been funded by NMCG. State should consider whether installation of STPs are required for these river stretches accounting the utilization of the river and should explore alternate treatment technology. It was suggested that Urban Local Bodies in the State should ensure O&M of the STP through collection of sewerage charges. With regard to CETPs, construction and operation & maintenance of the plant should be responsibility of the industries based on the Polluter Pay Principle.

Principal Secretary (Forest & Environment), Uttarakhand informed that SOP for septage management is in progress. It was informed that CETPs are under proposal stage as industrial estate yet to be developed. With regard to solid waste management in polluted river stretches, it was informed that 3 projects have been approved by the State and the same have been submitted to Swachh Bharat Mission for approval.

22. Uttar Pradesh

Senior Solid Waste Management Specialist NMCG informed that there are 106 STPs of 3370.87 MLD capacity which have utilization capacity of 2630.58 MLD. Of this, 100 STPs are operational and only 77 are reported to be complying with the norms. 38 STPs having 954 MLD are under construction and 24 STPs with 568.10 MLD capacity. For 32 FSTPs, tenders have been awarded. There are 1648 water polluting industries in the State, having industrial discharge of 850.5 MLD, 7 CETPs of 58.55 MLD are existing and are reported to be complying. 3 CETPs of 26.65 MLD are under construction. State generates 14000 TPD of solid waste and 15 waste processing plant having capacity 5395 TPD (38.53% of waste generation) are functional.

Secretary, Ministry of Jal Shakti raised concern over the non-functional 6 STPs in the State and directed State to provide status of 23 non-complying STPs and the status of on-going STP projects in UP. The State was directed to provide details of capacity utilization of the existing solid waste management plants and initiatives proposed to bridge the gap in treatment capacity.

Secretary (Urban Development) Uttar Pradesh informed that 6 STPs at Loni, Banda, Firozabad, Moradabad and Ghaziabad are non-operational due to financial constraints of the respective ULBs to which the STPs were handed over for maintenance. State has tied up funds for these STPs and these shall be made operational at the earliest possible. For bridging the gap in solid waste management, detailed gap analysis has been made, DPR has been prepared, sites have been identified, funding has been tied up and work are to be awarded for solid waste processing plants, which shall be completed by March 2021. Through this 60 processing plants shall be made functional including 37 new plants. It was also informed that the SW processing plant existing at Kanpur has been improved. The State has sanctioned a total of 55 FSTP projects, to manage the liquid waste, which shall be completed within 6-9 months. It was also informed that the State is finding it difficult to arrange funds for the bio-remediation projects and is trying to sort the issue.

Managing Director, UP Jal Nigam informed that 5 MLD STP at Kanpur reported as non-functional is functional and is under-rehabilitation, 4 MLD STP at Banda and 30 MLD STP at Loni shall be made operational within 4-5 months, 67 MLD STP at Firozabad has been completed and is under testing and is yet to be commissioned, 20 MLD STP at Moradabad and 56 MLD STP at Ghaziabad are under Development Authority. Further, it was informed that out of the 23 non-complying STPs, 13 STPs are now complying with the norms, 8 are under rehabilitation and shall be complying with the norms by February- April 2021 and 2 STPs are under Development Authority. It was informed that 32 STPs are under construction, of which 2 STP projects are not progressing as per the timeline of Namami Gange. Bids have been opened for STPs at Mirzapur and Ghazipur, these are under tendering, for Bareilly STPs land issue has been resolved and is under tendering, for STPs at Agra and Meerut, tender document yet to be received from World Bank, decisions yet to be taken for Farrukhabad - Fathepur regarding revised AA&ES.

23. Rajasthan

Senior Solid Waste Management Specialist NMCG informed that there is lag in communication with the State and no proper information is being received from the State. State dossier is still

awaited from the State of Rajasthan. Issues of Poor capacity utilization and compliance status of the existing STPs were highlighted. 2 STPs have been completed and made operational which sums up the existing STPs in the State to 72. It was informed that even during the review meeting held under the Chairmanship of Director General, NMCG, proper representation from the State was not made. State needs to provide MPR in revised format, clearly indicating incremental progress made by the State.

Chief Engineer, Rajasthan Pollution Control Board informed that there are 13 CETPs operational in the State, of which 7 CETPs are being upgraded into ZLD and the remaining CETPs shall also be upgraded to ZLD. Out of 13 CETPs, 11 are complying with norms.

Chief Engineer, Local Self Group, Rajasthan informed that there are 72 STPs of 979.18 MLD existing in the State and 72 STPs of 522.70 MLD are under construction. With regard to the non-compliance of the STPs, 14 existing STPs are being upgraded and have applied for CTO. To monitoring the inlet and outlet flow and parameters, an online system is being developed by the State, which shall be functional within 2-3 months.

Secretary, Ministry of Jal Shakti took serious concern of no proper representation at senior level officials from the State for the meeting and non-submission of State profile to the Ministry.

Director General NMCG directed that one nodal officer not below the rank of Principal Secretary well versed with the information should attend the next meetings of the Committee. The State was directed to submit State profiles at the earliest, if required a separate meeting shall be convened by NMCG with the State to resolve the issues.

24. Madhya Pradesh

ED Tech, NMCG informed that bio-remediation projects were proposed for River Chambal at Nagda (from Nagda to Rajgarh, stretch) and for River Betwa (from Mandideep to Vidisha stretch), the status of the projects are same as being reported since February 2020 and the projects are yet to be sanctioned. As reported in the MPR, some STP projects have been completed, however completion dates have not been indicated. Few completed projects shown as completed in the MPR (eg. Burhanpur STP, annexure-A point no. 7 of MPR) but the same STP is reported as non-functional. Such completed but non-functional STPs may help in justifying the

gap in STP capacity but doesn't help in river rejuvenation. Further, the State needs to provide MPR in revised format, clearly indicating incremental progress made by the State.

Principal Secretary (Urban Development), Madhya Pradesh informed that 24 STPs are existing in the State, of which 20 STPs are operational at present and efforts are being put in to make the remaining 4 non-functional STPs, functional. There are 80 STPs under construction in the State, details have been provided to NMCG and 13 STPs are under tendering and the tender shall be approved within 2 months. In polluted river stretches, 5 STPs are under construction, 2 STPs are about to be completed and commissioned, remaining 3 STPs shall be completed between March – June 2021. With regard to the bioremediation projects, it was informed that work has been awarded for Nagda stretch and work is to be awarded for Mandideep stretch. STPs have been proposed for rivers in Priority V, however, implementation of cost effective treatment technologies are being explored for these stretches.

Secretary, Ministry of Jal Shakti highlighted that large number of STPs are under construction, therefore State should closely monitor the on-going projects so that they are completed within proposed timeframe. Further, it was suggested that online monitoring system be installed for monitoring the operational status and performance of the existing STPs and CETPs in the State.

Principal Secretary (Environment), Madhya Pradesh informed that utilization capacity of the existing STPs are being closely monitored by the State.

25. Meghalaya

ED Tech, NMCG informed that as reported by the State estimated sewage generation for urban areas is 75 MLD against which 6 STPs of 1.77 MLD exists, having utilization capacity of 1.3 MLD. Against the total sewage generation of 49 MLD in Shillong city, there is only one existing STP of 0.05 MLD capacity which is yet to be commissioned and a septage treatment plant of 0.115 MLD is under construction which is expected to be commissioned in March, 2021. Similarly, 7 STPs of capacity varying from 0.3 to 1.2 MLD are proposed for Myntdu River. It was informed that the State generates 245 TPD of municipal solid waste, 257 TPD of processing facilities are existing in the State, however capacity utilization of the processing facility is low,

8.27 TPD only, State needs to enhance the utilization capacity. Further, 9 plants of 166 TPD are proposed.

Joint Director, Urban Development Department, Meghalaya informed that 5 STPs of 13.24 MLD are proposed for Shillong, of which 2 STPs are to be tendered by end of November 2020 and land for remaining 3 STPs are yet to be finalized. As an interim measure, bio-remediation works are being taken up and DPR for the same has been approved by State-RRC. A FSSM plant of 0.35 MLD is to be tendered with the 2 STPs by November end. 115 KLD Seepage plant is expected to be completed soon. Due to land allotment issues for the 7 proposed STPs for Myntdu River, the department is seeking permission from the State government for approving FSSM plants instead. With regard to the solid waste, it was informed that 170 TPD plant shall be commissioned by end of December 2020.

26. Nagaland

ED Tech, NMCG informed that as reported by the State previously the 25.43 MLD STP at Dimapur was 100% complete, the same was communicated to NGT, however in the latest MPR it has been reported that the STP is 95% complete. The sewer network connection works is 54% complete and the works are expected to be completed by June 2021. It was informed that 304.3 TPD of municipal solid waste is being generated in the State, of which 132.05 TPD of waste is being processed, 50 TPD capacity processing plant and a plastic recycling unit is also installed at the same site. State proposes to develop Chathe River as the Model River. Status of bio-remediation works proposed to be provided.

Official from State informed that in the 25.43 MLD STP, screen chamber, grit chamber, parshal flume and security fencing works which are associated with the ponds are yet to be completed, hence it was now reported to be 95% completed and the laying of sewer is 54% completed.

Director General NMCG directed NRCD official to have discussions with the State and clarify the issues.

27. Mizoram

ED Tech, NMCG informed that against the estimated sewage generation of 104 MLD in the State, no sewage treatment facility exists in the State. 10 MLD STP at Aizawl was reported to be complete; however, it could not be made operational as yet due to pending sewer lines and house service connections. State plans to set up bio-digesters in rural areas. All the industries are equipped with ETPs and there are no CETP in the State yet. 28% progress has been achieved in the insitu grey water management plan being taken for urban and rural areas under Swachh Bharat Mission 2.

Secretary (Irrigation & Water Resource), Mizoram informed that work of sewer network connections is in progress and the STP is expected to be operational by end of December, 2020. Work is in progress in 309 villages for grey water management system under Swachh Bharat Mission and 430 units of bio digesters have been set up. It was informed that water quality in all the 9 rivers in Mizoram have improved and the rivers are achieving bathing quality standards.

Director General, NMCG emphasized that the 10 MLD STP should be made operational at the earliest and the sewage being brought by the already placed sewer network should be treated in the STPs. Further, it was informed that de-listing of river stretches is being taken up by CPCB and the State needs to provide details to CPCB.

28. Tripura

ED Tech, NMCG informed that as reported the State generates 82.4 MLD of sewage, one STP of 8 MLD capacity is existing, which is operating at 3 MLD and is complying with the norms, co-treatment of 0.72 MLD Faecal sludge is being taken up and there is a gap of 74.4 MLD in sewage treatment. A 8 MLD STP is under construction with completion by 2022. 15 ULBs shall be adopting FSTPs in their jurisdiction and in-situ bio-remediation shall be done. 1 CETP of 500 KLD in Agartala has been installed for the industries and there are 18 water polluted industries, which generates 14.4 MLD of effluent. Solid waste generation of 411.32 TPD have been indicated with existing processing capacity of 250 TPD and 6 TPD and decentralized processing capacity of SW for 17 ULBs. State to expedite the progress of the proposed 15 FSTPs of 600

KLD and 8 MLD under construction STP and status of the bio-remediation of the 210 drains to be provided by the State.

Secretary (Urban Development) Tripura informed that only 12000 sewerage connections completed however, State is in progress to utilize the full capacity of the existing STP by connecting the north zone and central zone. One more STP is under construction and work order has been provided and with respect to Fecal Sludge management, State has already identified the sites in 19 urban local bodies and tendering process shall be initiated. With respect to Bio-remediation, five major drains have been identified in Agartala, and technology selection for the process have already been identified and is in the process of tendering. State intimated that by mid of December the work order of the Bio-remediation for the five drains shall be completed. Other 210 drains in the other local bodies are in the process of surveying. Tendering process pertaining new technologies for 210 drains shall be done in December 2020. With regard to the solid waste management, it was informed that tendering work for the SWM works has been initiated. 450 door to door collection SWM system is there in Agartala and the same is streamlined at present, secondary centres for segregation, two are mainly functional in Agartala, all the secondary processing centres of SWM shall be functional in December 2020. For tertiary treatment SWM, sites have been identified and the process is under tendering and State indicated that by March 2021, all the Tertiary centres will be made operational.

Secretary (Urban Development) Tripura informed that Chief Secretary is regularly monitoring the progress and all the 6 stretches are in Priority – V and as per the one year water quality monitoring data, BOD levels in these rivers have come down from 3 mg/l and the same has been intimated to CPCB for exclusion of the river stretches.

Director General, NMCG appreciated the efforts made by State to improve the water quality in the rivers, however it was highlighted that NGT has also directed to maintain the river water quality, therefore consistent efforts to maintain the quality should also be put in by the State. Further, it was recommended the State should identify one river as Model River which should be rejuvenated in first instance and works in other rivers should follow.

29. Chhattisgarh

Senior Environment Specialist, NMCG informed that in Chhattisgarh the estimated sewage generation is 600 MLD, 73.1 MLD of treatment capacity is existing, 620 MLD of STPs are proposed. In the polluted river stretches, 272 is sewage generation, 238 MLD of STPs are under construction and DPR is under preparation for 75.58 MLD. Effluent treatment plant has been provided and zero discharge condition outside plant premises is being maintained by the respective industries. All the municipal solid waste generated in the State is being processed. Further, it was informed that the status of approval of DPR for Korba town from NTPC is to be provided by the State, previously it was informed that the observations raised by NTPC have been rectified by the State Government. State to provide status of the revised action plan for the priority III and IV river stretches from CPCB to be provided, status of administrative approval and expenditure sanction for the rest of 3 DPRs namely Kanker , Dhamtiri and Simga, tendering status of the 2 DPRs namely Nawapara and Rajim. MPR needs to be provided in revised format indicating the incremental progress made.

Special Secretary (Housing & Environment) Chhattisgarh informed that approvals have been received from CPCB with regard to the Action Plans for Priority III and IV rivers. Further, it was informed that for 3 DPRs, bid is to be awarded this month. With regard to the Korba STP, it was informed that discussions are going on with NTPC as the DPR is being revised with regard to the tertiary treatment component and as per the policy of Power Ministry, incentives to be provided for utilization of treated water by the Thermal Power. Further, it was informed that State is seeking for time extension for the 5 new projects for which bids have been opened recently and may not be completed within June 2021.

Director General NMCG directed State to provide one page note on the issue with the STP proposed at Korba. If required discussion with NTPC shall be taken up at NMCG level. Further, with regard to extension of timeline it was suggested that affidavit may be filed in Hon'ble NGT by the State.

30. Jharkhand

Senior Environment Specialist, NMCG informed that I&D with STP scheme for Phusro has been approved in the 30th EC of NMCG held on 29th October 2020. With regard to the proposed STPs at Dhanbad and Ramgarh, State was suggested to explore other funding options from Coal India Limited or DVC Bokaro and status of tendering for the bio-remediation projects are to be provided. As reported by the State, River Swarnrekha is being adopted as Model River.

Director, SUDA informed that 14 STPs are operational with utilization capacity of 74%. 4 STPs are under construction, Rajmahal STP to be completed by December 2020, Ranchi and Adityapur STP to be completed by December 2021. Fund for STP at Bokaro is being tied up under DMFT fund and funding for STP at Jamshedpur is being sought from Tata Steel under CSR. For ULBs having population below 50000, it has been decided to adopt FSTPs for treatment of liquid waste, work has been awarded for 2 FSTPs. With regard to solid waste management, it was informed that the State generates 2188 TPD of solid waste, 1132 TPD is being treated, 11 projects are under construction and projects are under tendering of 25 ULBs for managing the gap in treatment.

Director General, NMCG appreciated the efforts put in by the State during Ganga Utsav held in 1st week of November 2020, which also helped in sensitizing the public with regard to the rivers.

31. Bihar

Senior Environment Specialist, NMCG informed that out of the 25 STP projects proposed for Bihar, 2 STPs have been completed, 13 projects are ongoing, 3 projects have been awarded, 1 project is being awarded and 6 projects are under tendering. State to provide details as per revised MPR format. Further, it was informed that the State has awarded work for insitu bioremediation. There are 213 water polluting industries in the State having 211 ETPs and there are no CETPs. In polluted river stretches other than River Ganga and Fathua, DPRs are yet to be sanctioned and funds are to be tied up by State government. Out of the 4 remaining towns along River Ganga, DPRs for FSSM have been received for 3 namely Dighwara, Manihari and Teghra, Quality of DPR is an issue which needs to be sorted out by the State, the same is being reviewed by CSE and initial observation has been forwarded to State for consideration. Status of

submission of Technical Bid Evaluation report for Munger is pending for more than two month, handing over of land is pending for some of the STP projects and SPS due to issue of NOC.

Secretary, Ministry of Jal Shakti highlighted that 651.5 MLD of sewage generation indicated in the State is incorrect and the same would be sewage generation of the Ganga town. This may be verified. A number of projects have been sanctioned by NMCG for the main Ganga stretches, for other river stretches State may explore other funding options. The STP projects shall be completed however the State must put in efforts to make these STPs functional by ensuring that the sewer network works are being completed timely.

Secretary (Urban Development Department) Bihar informed that regular weekly review meeting has helped in resolving the issues arising in the STP projects. State has sanctioned bio-remediation projects with its own funds and is exploring funds for STP projects in remaining river stretches.

Managing Director BUDICO informed that sewer network projects are in progress and Saidpur STP shall be completed within a month. Work was held up for some time as road cutting permission was not received due to pandemic, flooding and State elections but the work has now been revived. All STP projects in Patna except Digha and Kankarbagh shall be completed by March 2021. Digha and Kankarbagh STP works are yet to be started. Project for Bhagalpur STP is excepted to be approved in the Board meeting scheduled for 12.11.2020. Timelines have been revised as per NGT's orders. Bids have been received for Barahiya and Kahalgaon STP projects, and for STP at Khagaria no bid was received and the same shall be re-tendered. For Buxar STP project, some clarification is to be received from NMCG. A report has been submitted to SPMG Bihar for NOC from World Bank.

Secretary, Ministry of Jal Shakti suggested that BUDICO should closely monitor the progress of the projects. It was directed to ensure that the Bhagalpur project is approved by the Board in the upcoming meeting. Further, it was directed that the issues of proposed STP projects of Munger and Buxar be resolved at the earliest, as these towns are located on the banks of the river Ganga. Bids received for Barahiya and Kahalgaon STP projects may also be finalized at the earliest. For non-Ganga rivers, State to decide whether STPs or low cost treatment technology are to be adopted.

32. Andaman & Nicobar

ED Tech, NMCG presented UT's profile as reported by CPCB in its report dated 11.03.2020 submitted in the NGT Matter OA No. 829/2019. Andaman & Nicobar generates 14.17 MLD of sewage, there are 86 STPs of 1.7 MLD in coastal areas and 12.45 MLD of gap is present in treatment capacity. Utilization capacity of the 86 STPs is 100%, 22 STPs are complying with the norms, 3 STPs are under construction. There are 491 industries existing in the UT with negligible effluent generation and 17 industries have ETPs. 43,800 MTA of solid waste is generated, for which 5 compost yards and 2 dry waste resources centres for segregation and transportation to mainland for mixing are existing. The UT was requested to provide details of the UT in the MPR format being circulated with the minutes of the meeting. As per the directions of NGT, Action Plan for addressing the coastal zone pollution of the UT needs to be prepared and submitted to CPCB. Further, implementation of the Action Plan shall be monitored by CMC.

Secretary (Environment), Andaman & Nicobar informed that there are 4 rivers in the notified forest area and no industry is polluting in the rivers. Solid and liquid waste management is being taken up under Swachh Bharat Mission, in rural areas treatment through septic tanks is being done, in urban areas, door to door collection of solid waste is being carried out, the UT is adopting zero waste concept, 42 KLD FSTP is under construction and the same shall be completed by March 2021, a 10 MLD STP is proposed. There is a complete ban of single use and manufacturing of plastic waste in the UT. 21 water ATMs have been installed. The biggest problem of the UT was highlighted to be the floating garbage being received through South East Asian countries at the islands from the international waters. Huge chunks of waste of foreign origin are being washed off and piled up degrading the biosphere, as the UT does not have expertise in treating and managing the waste.

Director General, NMCG suggested that the issues may be communicated to NMCG in writing so that the matter could be taken up with MoEF&CC or any other institution.

33. Lakshadweep

ED Tech, NMCG presented UT's profile as reported by CPCB in its report dated 11.03.2020 submitted in the NGT Matter OA No. 829/2019. Lakshadweep generates 7 MLD of sewage,

there is 1 STP of 0.008 MLD and 6.99 MLD of gap is present in treatment capacity. The STP is complying with the norms and has 100% utilization. No STP is under construction. There are no industries existing in the UT. 12,00 MTA of solid waste is generated, for which 1 Count leaf Shredder, 1 Bio Composter machine and 36 Bio gas plants are existing and the non-biodegradable waste are collected, segregated and transported to mainland for treatment.

Official from Lakshadweep informed that there is one STP existing in the UT, no industry is operational, water level is high, no rivers are there, household sewer connections cannot be taken up due to gradient issue, treatment of household waste through FSTP is under consideration, RFP has been called and technical work given to NIT Calicut and tender have been called for bio-toilets to be established in individual households.

The UT was requested to provide details of the UT in the MPR format being circulated with the minutes of the meeting. As per the directions of NGT, Action Plan for addressing the coastal zone pollution of the UT needs to be prepared and submitted to CPCB. Further, implementation of the Action Plan shall be monitored by CMC.

The meeting ended with thanks to the Chair.

List of participants:**Annexure-I**

1. Shri U. P. Singh, Secretary, Ministry of Jal Shakti – *in Chair*
2. Shri Rajiv Ranjan Mishra, Director General, NMCG cum Project Director, NRCD
3. Shri Ashok Kumar Singh, Executive Director (Projects), NMCG
4. Shri D.P.Mathuria, Executive Director (Technical), NMCG
5. Shri Rohit Kakkar, Deputy Adviser, MoHUA
6. Shri J B Ravinder, Joint Adviser, MoHUA
7. Shri Brijesh Sikka, Senior Consultant, NMCG
8. Shri. B.B. Barman, Advisor, NRCD
9. Shri A. Sudhakar, Scientist E, CPCB
10. Shri Ishwer Singh, Consultant (Legal) NMCG
11. Shri S.K. Srivastava, Director, NRCD
12. Shri S.K. Singh, Deputy Director, NRCD
13. Shri A.P. Singh, Scientist E, NRCD
14. Dr. Sabita Madhvi Singh, Joint Director, NRCD
15. Shri Rajat Gupta, Senior Solid Waste Management Specialist, NMCG
16. Shri Saumya Mukhopadhyay, Senior Environmental Specialist, NMCG
17. Dr. P.N.Rymbai, Scientist B, NRCD
18. Shri Manish Kumar, Sewage Treatment and Wastewater Expert, NMCG
19. Shri Vijay Kumar, Assistant Civil Engineer, NMCG
20. Shri Rachit Andley, Project Manager, NMCG
21. Shri Avshesh Chauhan, Assistant System Analyst, NMCG
22. Shri Kumar Ajitabh, Project Officer Legal, NMCG
23. Mrs. Ruby Raju, Project Engineer, NMCG
24. Shri Kallol Choudhary, Industrial Process Expert, NMCG

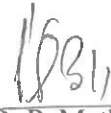
Legal/OA673/2018/NMCG/2019
National Mission for Clean Ganga
Department of Water Resources, River Development
& Ganga Rejuvenation, Ministry of Jal Shakti

1st Floor,
Major Dhyan Chand National Stadium
India Gate, New Delhi-110002
Dated: 14th January 2021

OFFICE MEMORANDUM

Subject: Minutes of the 8th meeting of Central Monitoring Committee in the NGT Matter OA No.673 of 2018 held on 05.01.2021 from 10.00 AM on-wards

A copy of Minutes of the 8th Meeting of Central Monitoring Committee in the NGT matter O.A. No. 673 of 2018 held through Video Conferencing on 05.01.2021 from 10.00 AM on-wards, under the Chairmanship of Secretary, Ministry of Jal Shakti is forwarded herewith for information/ necessary action.


(D. P. Mathuria) 14.1.2021
Executive Director-Technical, NMCG
uyrb-mowr@nic.in

Encl: As above.

To,

1. Chief Secretary, Government of Andhra Pradesh, 1st Block, A.P Secretariat Office, Velagapudi – 522503
2. Chief Secretary, Government of Assam, Block- C, 3rd Floor, Assam Sachivalaya, Dispur - 781006, Guwahati
3. Chief Secretary, Government of Bihar, Main Secretariat, Patna – 800015
4. Chief Secretary, Government of Chhattisgarh, Mahanadi Bhawan, Mantralaya, Naya, Raipur – 492002
5. Chief Secretary, Government of Goa, Secretariat, Porviroim, Bardez, Goa – 403521
6. Chief Secretary, Government of Gujarat, 1st Block, 5th Floor, Sachivalaya, Gandhinagar – 382010
7. Chief Secretary, Government of Haryana, 4th Floor, Haryana Civil Secretariat, Sector-1, Chandigarh – 160019
8. Chief Secretary, Government of Himachal Pradesh, H P Secretariat, Shimla –171002
9. Chief Secretary, Government of Jammu & Kashmir, R. No. 2/7, 2nd Floor, Main Building, Civil Secretariat, Jammu -180001
10. Chief Secretary, Government of Jharkhand, 1st Floor, Project Building, Dhurwa, Ranchi- 834004

11. Chief Secretary, Government of Karnataka, Room No. 320, 3rd Floor, Vidhana Soudha, Bengaluru -560001
12. Chief Secretary, Government of Kerala, Secretariat, Thiruvananthapuram -695001
13. Chief Secretary, Government of Madhya Pradesh, MP Mantralaya, Vallabh Bhavan, Bhopal – 462004
14. Chief Secretary, Government of Maharashtra, CS office main Building, Mantralaya, 6th floor, Madame Cama Road, Mumbai – 400032
15. Chief Secretary, Government of Manipur, South Block, Old Secretariat, Imphal – 795001
16. Chief Secretary, Government of Meghalaya, Main Secretariat Building, Room no 316, Shillong – 793001
17. Chief Secretary, Government of Mizoram, New Secretariat Complex, Aizwal – 796001
18. Chief Secretary, Government of Nagaland, Civil Secretariat, Kohima – 797004
19. Chief Secretary, Government of Odisha, General Administration Department, Odisha Secretariat, Bhubaneswar – 751001
20. Chief Secretary, Government of Punjab, Chandigarh – 160001
21. Chief Secretary, Government of Rajasthan, Secretariat, Jaipur – 302005
22. Chief Secretary, Government of Sikkim, New Secretariat, Gangtok – 737101
23. Chief Secretary, Government of Tamil Nadu, Secretariat, Chennai-600009
24. Chief Secretary, Government of Telangana, Block C, 3rd floor, Telangana Secretariat Khairatabad, Hyderabad, Telangana
25. Chief Secretary, Government of Tripura, New Secretariat Complex Secretariat – 799010, Agartala, West Tripura
26. Chief Secretary, Government of Uttar Pradesh, 1st floor, Room No. 110, Lal bahadur Sastri Bhawan, Uttar Pradesh Secretariat, Lucknow – 226001
27. Chief Secretary, Government of Uttarakhand, 4 Subhash Road, Uttarakhand, Secretariat Dehradun – 248001
28. Chief Secretary, Government of West Bengal, Nabanna, 13th Floor, 325, Sarat Chatterjee Road, Mandirtala, Shibpur, Howrah – 711102
29. Administrator, Daman & Diu and Dadra and Nagar Haveli, Secretariat, Moti, Daman -396220
30. Chief Secretary, Govt. of NCT of Delhi, Delhi Secretariat, IP Estate, New Delhi – 110002
31. Chief Secretary, Govt. of Puducherry, Main Building, Chief Secretariat, Puducherry-605001
32. Chief Secretary, Andaman & Nicobar, Secretariat, Port Blair
33. Administrator, Lakshadweep

Copy To:

1. Secretary, Department of Forest, Ecology & Environment, J&K, Room no. 2/33-34, Main Building, Civil Secretariat, J&K, Jammu.
2. Secretary, Department of Environment, Science and Technology Paryavaran Bhawan, Near US Club, Shimla, Himachal Pradesh-171001
3. Principal Secretary, MGSIPA Complex, Sector-26, adjacent Sacred Heart School, Chandigarh, 160019

4. Additional Chief Secretary to Govt. of Haryana, Environment Department of Environment & Climate Change, R.No. 108, 7th Floor, Main Secretariat Sec16, Chandigarh 160017
5. Principal Secretary, Department of Environment, U.P., Room No. 601, Babu Bhawan Secretariat, Vidhan Sabha Marg, Lucknow – 226001.
6. Special Chief Secretary, Department of Environment, Forest, Science & technology, 4th Block, Ground Floor, Room No:268, A.P Secretariat Office, Velagapudi
7. Secretary, Department of Environment and Forest, H-Block, 2nd Floor Janata Bhawan, Dispur, Guwahati 781006, Assam
8. Principal Secretary, Department of Environment, Forest and Climate Change, Van Vibhag Rd, Nehru Nagar, Patliputra Colony, Patna, Bihar 800013
9. Additional Chief Secretary (Forests & Environment), Forests & Environment Department, Block 14, 8 th floor, Sachivalaya, Gandhinagar - 382 010 Gujarat.
10. Principal Secretary, Department of Environment, Room No. S-2/23, Mahanadi bhawan, Mantralaya, Nava Raipur, Atal Nagar, Raipur - 492001
11. Additional Chief Secretary to Government, Forest, Environment and Ecology, Department, Karnataka Government Secretariat, Room No. 447, 4th Floor, Gate no. 2, Multi-storey Building, Bangalore-560001.
12. Principal Secretary, Department of Environment, Room No. 406 4th Floor Annex II, Secretariat, Kerala Thiruvananthapuram, Kerala, PIN- 695001
13. Principal Secretary, Department of Housing and Environment, Government of Madhya Pradesh, Paryavaran Parisar, E- 5, Arera Colony, Bhopal, Madhya Pradesh, 462016
14. Principal Secretary, Environment Department, Maharashtra 15th Floor, New Administrative Building, Madam Cama Road, Mantralaya, Mumbai – 400032
15. Additional Secretary, Forests & Environment Deptt, Secretariat Building, North Range, Forest Colony, Khasi Hills, Shillong, Meghalaya 793001
16. Deputy Conservator of Forest (Headquarters) Environment, Forests & Climate Change Department Tuikhuahtlang, Aizawl Mizoram.
17. Principal Secretary, Department of Environment, Forest & Climate Change, New Secretariat, Kohima, Nagaland Tel.- 0370-2243025
18. Additional Chief Secretary, State Silvicultural garden, Khandagiri, Bhubaneswar, Odisha 751003
19. Principal Secretary, Forest and Environment Department, Rajasthan 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur, Rajasthan 302004
20. Principal Secretary, Chief Project Director (SBFP-JICA), Forests, Environment & Wildlife Management Department, Government of Sikkim
21. Principal Secretary, Namakkal Kavignar Maaligai, Fort St. George, Chennai 600 009
22. Secretary, Department of Science, Technology & Environment, Vigyan Prajukti O Paribesh Bhawan, P.N. Complex, Gorkhabasti, Agartala, West Tripura, PIN-799006
23. Special. Chief Secretary, TSCOST, 4th Floor, Aranya Bhavan, Saifabad, Hyderabad, Telangana State, Pin – 500004
24. Deputy Conservator of Forests, (Territorial Division), Department of Environment & Forest Office of the Deputy Conservator of Forest, Daman, Fort Area, Post Office Moti Daman Daman cz

25. Deputy Conservator of Forests, (Territorial Division), Van Bhavan, Dadra and Nagar Haveli
26. Secretary, Department of Environment, Govt. of NCT of Delhi, 6th Floor, Delhi Secretariat, IP Estate, New Delhi 110002
27. Secretary, Environment & Forest, Govt. of Uttarakhand, 4 Subhash Road, Secretariat, Forth Floor, New Building Dehradun, Pin code-248001
28. Joint Secretary, Department of Science, Technology & Environment, 1st Floor, Pandit Deendayal Upadhyay Bhavan, Behind Pundalik Devasthan, Near Sanjay School, Porvorim, Bardez - Goa
29. Secretary, Environment, Office of Environment, Chief Secretariat, Goubert Avenue, Puducherry 605001
30. Principal Secretary, Department of Environment, 5th Floor, Pranisampad Bhawan, Block LB-II, Salt Lake, Sector III, Bidhannagar, Kolkata – 700 106
31. Additional Chief Secretary Forest, Environment & Climate Change Deptt., Nepal House, Doranda, Ranchi-834002, Jharkhand
32. Additional Chief Secretary, Forest and Environment Department, Government of Manipur, Secretariat, Imphal- 705001
33. The Member Secretary, Assam Pollution Control Board, Bamunimaidam, Guwahati – 781021
34. The Member Secretary, Andhra Pradesh Pollution Control Board D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada – 520 010
35. The Member Secretary, Bihar State Pollution Control Board, Parivesh Bhawan, Plot No. NS-B/2 Paliputra Industrial Area, Patliputra, Patna (Bihar) - 800 010
36. The Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas Bhavan, North Block Sector-19, Atal Nagar Dist- Raipur (C.G.) 492002
37. The Member Secretary, Delhi Pollution Control Committee, Government of N.C.T. Delhi 4th Floor, ISBT Building, Kashmere Gate, Delhi-110006
38. The Member Secretary, Daman, Diu & Dadra Nagar Haveli Pollution Control Committee, Office of the Deputy Conservator of Forests, Fort Area, Court Compound, Moti Daman, Daman – 396220
39. The Member Secretary, Goa State Pollution Control Board, 1st Floor, Dempo Tower, EDC Patto Plaza, Panaji, Goa-403 001
40. The Member Secretary, Gujarat Pollution Control Board Paryavan Bhavan, Sector 10- A, Gandhinagar – 382 043
41. The Member Secretary, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula-134109, Haryana
42. The Member Secretary, Himachal Pradesh Pollution Control Board, Him Parivesh, Phase-III, New Shimla, Himachal Pradesh 171009
43. The Member Secretary, Jammu & Kashmir State Pollution Control Board, Parivesh Bhawan, Forest Complex, Gladni, Narwal, transport Nagar, Jammu, Jammu and Kashmir 180004
44. The Member Secretary, Jammu & Kashmir State Pollution Control Board, Shiekh-ul-Campus, behind Govt. Silk Factory, Raj Bagh, Srinagar (J&K)

45. The Member Secretary, Jharkhand Pollution Control Board, T.A Building, HEC, P.O. Dhurwa, Ranchi – 834004
46. The Member Secretary, Karnataka State Pollution Control Board, Parisara Bhavan, 4th & 5th Floor, # 49, Church St., Bengaluru-560 001
47. The Member Secretary, Kerala State Pollution Control Board, Plamoodu Jn., Pattom Palace P.O. Thiruvananthapuram - 695 004
48. The Member Secretary, Manipur Pollution Control Board, Lamphelpat, Imphal West D.C. Office Complex Imphal– 795004
49. The Member Secretary, Meghalaya Pollution Control Board Arden- Lumpyngngad Shillong: 793014
50. The Member Secretary, Nagaland Pollution Control Board, Signal Point, Dimapur Nagaland – 797112
51. The Member Secretary, Madhya Pradesh Pollution Control Board, E-5, Arera Colony, Paryavaran Parisar, Bhopal - 462 016, Madhya Pradesh
52. The Member Secretary, Maharashtra Pollution Control Board, Kalpataru Point, 2nd – 4th Floor Opp. Cine Planet Cinema, Nr. Sion Circle, Sion (E) Mumbai – 400 022
53. The Member Secretary, Mizoram Pollution Control Board, New Secretariat Complex, Khatla Thlanmual Peng, Khatla, Aizawl, Mizoram: 796001
54. The Member Secretary, Puducherry Pollution Control Committee, Housing Board Complex, Anna Nagar, Puducherry -600 005
55. The Member Secretary, Punjab Pollution Control Board, Vatavaran Bhawan, Nabha Road, Patiala, Punjab 147001
56. The Member Secretary, Odisha Pollution Control Board, A-118, Nilakanta Nagar, Unit – VIII, Bhubaneswar – 751012
57. The Member Secretary, Rajasthan Pollution Control Board, 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur (Rajasthan) - 302 004
58. The Member Secretary, Sikkim State Pollution Control Board, Department of Forest, Environment & Wildlife Management Government of Sikkim, Deorali, Gangtok, - 737102
59. The Member Secretary, Telangana State Pollution Control Board, Paryavaran Bhawan, A-3, I.E. Sanath Nagar, Hyderabad-500 018
60. The Member Secretary, Tripura Pollution Control Board, Vigyan Bhawan, Pandit Nehru Complex, Gorkhabasti, PO: Kunjaban Agartala – 799006
61. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032
62. The Member Secretary, Uttarakhand Environmental Protection & Pollution Control Board, 29/20, Nemi Road, Dehradun, Uttarakhand – 248001
63. The Member Secretary, Uttar Pradesh Pollution Control Board, Building.No. TC-12V, Vibhuti Khand, Gomti Nagar, Lucknow-226 010
64. The Member Secretary, West Bengal Pollution Control Board, Paribesh Bhavan, 10A, Block-L.A., Sector III, Salt Lake City, Kolkata - 700 106
65. The Member Secretary, Andaman & Nicobar Islands Pollution Control Committee, Department of Science & Technology, Dollygunj Van Sadan, Haddo P.O., Port Blair – 744102

66. The Member Secretary, Lakshadweep Pollution Control Committee, Department of Science, Technology & Environment, Kavarati-682555

Copy for kind information:

1. PPS to Secretary, Department of Water Resources, RD&GR, Ministry of Jal Shakti, Shram Shakti Bhavan, Rafi Marg, Sansad Marg Area, New Delhi- 110001
2. PS to Director General, NMCG cum Project Director NRCD
3. PS to Additional Secretary, Ministry of Housing and Urban Affairs, Nirman Bhawan, Maulana Azad Road, New Delhi – 110011.
4. Joint Secretary, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jorbagh Road, New Delhi – 110003
5. Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032
6. PS to ED (Project/ Finance), NMCG
7. Adviser, NRCD

Minutes of the 8th meeting of the Central Monitoring Committee held on 05.01.2021 through Video Conferencing regarding 351 polluted river stretches based on the directions of Hon'ble NGT in the matter OA No. 673 of 2018

The 8th meeting of the Central Monitoring Committee (CMC) constituted by Hon'ble NGT in the matter OA No. 673 of 2018 was held through video conferencing with the States on 05.01.2021 from 10.00 AM onwards in Conference Room, NMCG under the Chairmanship of Secretary, Ministry of Jal Shakti. The list of participants of NMCG, NRCD, MoHUA and CPCB present at the meeting is at ***Annexure-I***.

II. Secretary, Ministry of Jal Shakti welcomed all participants and highlighted that it has been observed that not much progress is being made by States since the last meeting of CMC. The States need to provide correct and adequate details in their MPR, as it may not be possible to discuss the progress made on all the actionable points in the meetings. Further, based on the information provided by the States, the 3rd Quarterly Report is to be submitted to NGT by end of January, 2021. Incremental progress made by the State needs to be highlighted in the MPRs. Secretary also directed that the presentation made by the Ministry may be shared with the States for submission of inputs for incorporation in the Quarterly Report.

III. Subsequently, State-wise discussions held are as follows:

Executive Director Technical (ED Tech), NMCG through a presentation briefed about the progress made by the States and highlighted the issues related to sewage, industrial and solid waste management in the States based on the information submitted in MPR. It was informed that in compliance to NGT's order dated 26.09.2020, 13 Coastal States were supposed to submit Action Plan with regard to Coastal Pollution Management to CPCB by November, 2020 and as informed by CPCB, Action Plan has only been submitted by Andhra Pradesh recently. Therefore, the remaining Coastal States were directed to ensure compliance to NGT orders.

1. Punjab

ED Tech, NMCG informed that State has 116 STPs existing, of which 37 STPs were reported to be non-complying previously, but as per the latest reports 42 STPs are now reported to be non-complying. However, as reasons for non-compliance and proposed measures taken for correcting

the defects have only been provided for 28 STPs, the State may provide details for the remaining 14 STPs. Out of 28 non-complying STPs, 14 have major technological issues and rest are non-compliant w.r.t. faecal coliform. Similarly, there is 1 CETP which is constantly non-compliant. It was flagged that as per the MPR, the progress of the 2 CETPs of 40 and 50 MLD at Ludhiana remains stagnant and 1 STP of 48 MLD at Ludhiana is found to be non-operational. It was further informed that 36 STPs of 339 MLD are under construction, of which 5 STPs of 84.5 MLD have been recently completed and are under stabilization and 6 STPs of 28 MLD are to be completed by March, 2021. There are 96 STPs proposed and work orders for none of them have been issued so far. The State needs to provide status of award of the works for Budha Nallah project which was scheduled in November / December, 2020 and also to provide the status of under construction STPs for Ghaggar river. On comparing the progress made by the State in the on-going STP projects from September-November 2020, it was found that progress have only been made in only 2 projects out of 36 indicating that either not much progress has been made by the State or the same has not been reflected in the MPR.

Chief Secretary, Punjab informed that work for Budha Nallah has already been awarded. Further, Principal Secretary, Department of Local Government, Punjab informed that 25 STPs were found to be non-complying in the month of November, 2020, out of which 15 STPs are based on old technology and 10 are based on SBR/MBBR technology for which efforts are being made to achieve the prescribed standards. It was informed that work for Budha Nallah project in Ludhiana has already been awarded on 02.12.2020 to M/s KIPL-GVPR (JV) for Rs. 839.79 crore, which includes capital works and 10 years of O&M. The capital works includes construction of STPs having total treatment capacity of 285 MLD (225+60), these works will replace the defunct 48 MLD STP at Jamalpur. The STPs at Ferozpur and Jaito as well as STPs in non-river towns of Barnala, Sahkot, Tarantaran and Amritsar (South) have been completed. Works on other ongoing STPs is progressing and is expected to be completed on scheduled timelines. Regarding land issues, it was informed that presently there are only 3 cases in PRS towns, out of which cases of Dhuri and Bassi Pathana have been resolved and are in final stage of acquisition. Land issue only at Sangrur is pending for which efforts are being made by the State.

Secretary, Environment, Punjab informed that work of 40 MLD CETP has been completed and trial run is in progress and the plant expected to be fully operational by end of February, 2021. The work of 50 MLD CETP got delayed due to non-availability of some mechanical equipment, which is expected to arrive shortly and it is scheduled to start the trial run of this CETP by end of February, 2021. 15 MLD existing CETP is non-complying as the same is under stabilization and efforts are being put in to improve the plant.

Secretary, Ministry of Jal Shakti stated that there are discrepancies in the data presented during the meeting by the Ministry based on the MPRs and data given in the response by the State, which needs to be reconciled. It was directed that henceforth, copy of the issues to be discussed during the CMC meeting should be provided to all the States / UTs in advance so that they can respond properly during the discussions.

2. Assam

ED Tech, NMCG informed that total sewage generation in the State is reported to be about 824.07 KLD, which appears to be incorrect and needs to be reconciled. In the MPR, details of implementation of works in Guwahati have not been provided. He also informed that tenders for 5 STPs at Naugaon, Silchar, Mangaldoi, Jorhat and Tezpur were scheduled to be floated in November / December, 2020 and the State needs to provide the latest status on award of these works. 10 industries in catchment area of Bharalu river and 12 in catchment of Borsola Beel are reported to be operating without consent and State is to provide updated status on the above issues. Hazardous waste of 43 TPD is generated with no treatment facility/ TSDF existing. Status of operation of 50 TPD existing trommel plant for segregation of legacy waste at Boragaon along with status of Integrated Solid Waste Management Plant at Byarnihat needs to be provided. Model River needs to be identified. Inadequate information has been provided in the DPR with regard to ground water regulation, RWH, floodplain and e-flow management, reuse of treated water and development of Biodiversity Parks.

Principal Secretary, Guwahati Development Department (GDD) informed that for JICA assisted sewerage project at Guwahati, survey for revision of DPR is already under progress and inception report shall be submitted shortly by the Consultants. Design work for sewerage network shall also be commenced from mid-January and DPR will be completed by 9th March,

2021. Advertisement to fill up the requisite post in project implementation unit for the sewerage project has already been published by the GDD and will be filled up shortly after interviews on 21st January, 2021. It was informed that the tenders for Boragaon dumping site has already been issued and trommels have already arrived in Guwahati and the work shall commence from 7th January, 2021. There is land issue in respect to setting up of Integrated Solid Waste Management Plant at Byarnihat. However, State has now identified another land at Sonaguli for setting up of the integrated solid waste management plant.

Secretary, UDD, Assam informed that DPR has been prepared for STPs at Naugaon, Mangaldoi, Jorhat and Tezpur, and administrative approval is to be issued. Land has been finalized and DPR is under preparation for STP at Silchar.

Official from Assam Pollution Control Board informed that EOI has been received for establishment of TSDF in Assam and RFP is to be issued.

Principal Secretary, GDD, informed that as per information from State Pollution Control Board all the industries which are not complying have been shut down by them.

Regarding discrepancy in the figure of total sewage generation in the State reported to be 824.07 KLD, a message was received from the State on 6th January, 2021 clarifying that the figure of sewage generation of 824.07 KLD is correct and relates to sewage generation from catchment area of 3 polluted river stretches falling under the jurisdiction of P&RD Department of the State. The figure does not account for total sewage generation of the State. The State was requested to provide the total sewage generation in the State and not separate figures under the jurisdiction of different departments.

Secretary, Ministry of Jal Shakti directed that the presentation made during the CMC meeting should be shared with the States for their response and requested the States to send their response in writing on the issues raised during the meeting.

3. Jammu & Kashmir

ED Tech, NMCG informed that presently J&K has 15 STPs having total treatment capacity of 139.40 MLD, out of which 11 STPs are operational with a treatment capacity of 120 MLD and

having utilization capacity of only 82.9 MLD. It was informed that 27 MLD STP at Jammu is under testing and commissioning since long. Similarly, 10 MLD STP at Jammu is under refurbishment. Efforts are needed to operationalize it on full capacity. STPs at Badami Bagh in Kashmir and Ardhkuwari in Katra are not in operation. Progress of Devika river project is still very slow, and the detailed time line to complete the project by the completion date of March, 2021 has not been provided inspite of repeated requests. Similarly, progress in providing house connections in Jammu is also not progressing well and progress of 4MLD STP is also negligible. Out of 450 water polluting industries, only 239 units are having ETPs and only 199 ETPs are compliant. Incremental progress with regard to on-going STP projects appears to be NIL, State needs to provide the latest status of the progress and also to reconcile the figures of water polluting industries reported in the MPR.

Secretary, Ministry of Jal Shakti expressed serious concern over the slow progress in implementation of works, especially Devika river project which was scheduled to be completed by March, 2021, as well as not taking seriously O&M of the existing assets including lower capacity utilization of available treatment capacity. During the discussions on non-utilization of existing treatment capacity, use of online monitoring system at all the STPs for better monitoring was emphasized. Further, it was directed to provide action plan for bridging the gap to treat about 383 MLD of sewage balance from total sewage generation of 583 MLD in the U.T of J&K.

Principal Secretary, (HUDD), Jammu & Kashmir informed that about 1500 MT/day of MSW is being generated in the U.T, out of which 550 MT is being treated and tenders for treatment of legacy waste of 1.2 lakh MT in Jammu has already awarded in August, 2020 and shall be completed by December, 2021. In addition, work has been awarded to NAFED in January, 2021 to treat 3.0 lakh MT of legacy waste at Kotbhalwal in Jammu and it shall be completed in the next 18 months. For treatment of legacy waste of 8.5 lakh MT in Srinagar, contract is being finalized and is expected to be awarded in January, 2021. It was informed that door to door collection of MSW in UT is about 85% and segregation is about 50%, and efforts are being made to increase it. Regarding waste processing for Jammu, agreement has being finalized with NAFED for bio-gasification of waste and by March, 2022 all the 76 ULBs of UT shall be equipped with the bio- disposal facility for MSW.

Further, it was informed that efforts are being made by the UT Government to operationalize the existing STPs on optimum capacity. Regarding non-operation of STP at Bhagwati Nagar in Jammu, it was acknowledged that there were issues with contractor for which the contract has been amended & the matter has now been resolved and the plant shall be made fully operational by March, 2021. In addition to the house connections in NBCC project in Jammu which are expected to be completed by June 2021, and to further augment the flow to the STPs, a DPR for Jammu has also been submitted to MoJS for funding under NRCP along with other DPRs. Similarly, respective authorities have been requested to operationalize the STPs at Ardhkwari and Badami bagh. DPRs for bio-remediation has been prepared and submitted to U.T. Government for funding. With regard to Devika river project, it was informed that due to Covid-19 as well as other issues like NOC from NHAI, BRO and land issues, works got delayed. All the issues has now been resolved and the sewerage work shall be completed by December, 2021 with works related to ghat development completed by March, 2021.

State was directed to submit details to the Ministry for incorporation in the Quarterly Report for onward submission to Hon'ble NGT.

4. Sikkim

ED Tech, NMCG that there are 7 STPs of 19.5 MLD in the State and their capacity utilization is about 60%, which has been reduced from earlier reported utilization of 84%. 3 STPs of 6.25 MLD capacity are under construction and 7 more STPs of 11.33 MLD capacity are proposed. Total solid waste generation in the State is 77 TPD against which 50.8 TPD treatment facilities is available. Maney Khola is being adopted as Model River. 3 STPs (at Gangtok zone II, Melli and Rangpo) are almost complete but not made operational for quite sometime. State needs to provide latest status on these 3 STPs and also on the issue related to preparation of DPRs for STPs at Namchi, Jorethang, Geyzing, Rabong, Soreng and Mangan, except Chungthang for which DPR was already submitted.

PCE-cum-Secretary, PHED, Govt. of Sikkim informed that the STP at Zone –II shall be commissioned by end of January, 2021 and STP at Rangpo is complete. However, some sewer lines need to be realigned, and therefore the STP shall be commissioned by March, 2021.

Similarly, the STP at Melli will also be made operational by March, 2021. Land acquisition process for Namchi STP is under process and for Jorethang STP, process for land acquisition is also underway, as this land requires diversion from forest land. It was informed that most of the DPRs have been prepared and shall be submitted for funding. Ministry of Jal Shakti was requested to reconsider the funding of Chungthang DPR under NRCP funds.

Secretary, Ministry of Jal Shakti highlighted that State should complete verification and finalize the DPRs first, as the projects are turning to be very costly. Further, as the STPs proposed are in the range of 1-3 MLD capacity, the State was suggested to explore alternate treatment technology such as Faecal Sludge Management.

5. Tripura

ED Tech, NMCG informed that the State generates around 82.4 MLD of sewage with existing treatment capacity of only 8.72 MLD (8 MLD STP & 720 KLD FSTP at Agartala), thus leaving a huge gap in sewage treatment which needs to be addressed urgently by the State. The capacity utilization of the existing STP is low i.e. 3 MLD. House sewer connections to the existing 8 MLD STP, 15 FSTPs of 600 KLD and 8 MLD under construction STP needs to be expedited. Status of the proposed STPs (4 MLD at Bishalgarh, 8 MLD at Udaipur, 8 MLD at middle point between Dharmanagar and Kailasahar) needs to be provided. Status of the in-situ bio-remediation for all identified drains (210 nos) discharging into polluted river stretches needs to be updated. Municipal solid waste processing facility exists for 256 TPD (250 TPD composting plant at Agartala & 6 TPD at District Dhalai) against total waste generation of 411.32 TPD. Compliance with the provisions of the Solid Waste Management Rules, 2016 needs to be made. Request for revising details of polluted river stretches based on water quality monitoring carried out during recent periods has been made to CPCB for their consideration.

Additional Secretary, Science, Technology & Environment, Tripura, informed that Haora river stretch has been identified as a model river. It was informed that to increase the utilization capacity of the 8 MLD STP at Agartala, expansion of sewer network and house service connections are in progress, and are likely to be completed in 18 months. Work has started on 8 MLD STP at Akhaora. For in-situ bio-remediation, survey work is going on for preparation of

baseline information for pollution abatement of 205 drains and tender evaluation for bio-remediation on 5 drains on pilot basis at Agartala has been completed. With regard to bio-remediation of legacy waste, 50% of the work has been completed. To bridge the gap in solid waste management, setting up of 17 Tertiary Processing Plants has been started and all of them shall be made functional by March, 2021. Land has been identified and tendering process has been initiated by the ULBs for the 15 FSTPs of 600 KLD.

Secretary, Ministry of Jal Shakti directed the State to expedite the on-going and proposed projects.

6. Manipur

ED Tech, NMCG informed that the MPR submitted in December, 2020 is a repetition of the MPR submitted for October, 2020. The report does not provide much information on rainwater harvesting, groundwater regulation and flood plain management and other issues. The State has 1 STP of 27 MLD with capacity utilization is only 9 MLD, thus, having a huge gap in treatment. The State has 2 STPs under construction, a 1 MLD STP with hardly any progress and a 16 MLD STP with 10% progress. 1 STP of 49 MLD is proposed at Imphal and the State has plans for bio-remediation and Faecal Sludge and Septage Management (FSSM) of 16.75 MLD for which DPR is being prepared. The State also reported that there are 989 non-polluting industries and 5 industrial units are connected to CETP of 400 KLD which is non-operational. Industries remain non-compliant as per CPCB norms where the CETP is non-operational, and the State needs to take urgent action on the same. There are about 334 automobile industries that produce 1 TPD of hazardous waste, for which the State does not have any treatment facility.

The State official informed that the CETP is operational and requires minor repairs for proper functioning of the plant.

Secretary, Ministry of Jal Shakti highlighted that sewage management is a major concern as the 27 MLD existing STP in the State is being utilized at only 9MLD capacity. Not much progress has been achieved in the under construction STPs of 17 MLD. Also, the cost of proposed 49 MLD STP seems to be very high and suggested that State should reconsider the project and submit details to the Ministry urgently.

7. Meghalaya

ED Tech, NMCG informed that the MPR submitted in December, 2020 is a repetition of the MPR submitted for October, 2020. As reported, the State generates 75 MLD of sewage, against which 8 STPs of 1.85 MLD capacity are existing and about 22.8 MLD of sewage is being treated through septic tank. There is still a gap in treatment of 50.37 MLD. All the STPs are reported to be complying and one septage treatment plant of 115 KLD is under construction with 75% of work having been completed. 245 industries are having ETPs, all of which are complying. State has identified River Nonbah as Model River. With regard to solid waste management, 8 TPD plant remains functional and 65 TPD plant was to be commissioned by December 2020. The State has proposed 10 plants of 166 TPD capacity.

Secretary Ministry of Jal Shakti, highlighted the issue of sewage management as treatment of sewage only through septic tank is not adequate. It was suggested that there should be a plan of either septage management/ Faecal Sludge Treatment Plant or Sewage Treatment Plant. However, this kind of planning remains unclear for Meghalaya. Therefore, the State was directed to submit the detailed plan for sewage management envisaged for the State.

Officials from Meghalaya informed that apart from the one septage treatment plant under construction, tender has been floated for 0.35 MLD FSSM plant and land has been identified for 5 onsite treatment plant of 13.45 MLD.

8. Nagaland

ED Tech, NMCG informed that against the estimated sewage generation of 44.3 MLD in the State, no sewage treatment facility exists. One STP of 25.43 MLD capacity is under construction with 95% progress and 55% progress in case of related sewer network. It is due for completion for June, 2021. In the 7th CMC meeting, State informed that for other areas they are planning for bioremediation as well as septage treatment. However, 2 units of Faecal Sludge Treatment Plant (20 KLD and 90 KLD) are in place and serviced by 13 cesspool vehicles at Dimapur and Kohima respectively. The State has 5 water polluting industries and no CETP, 3 ETPs are operational and complying the norms, while 2 ETPs are under process. With regard to municipal

solid waste, against the generation of 304 TPD, 132 TPD of waste is treated and 50 TPD processing plant is being installed.

Secretary, Ministry of Jal Shakti raised concern over the slow progress of on-going STP and sewerage works which were sanctioned around 15 years ago. State was directed to ensure that rivers in the State are not polluted by adopting appropriate treatment technologies.

9. Mizoram

ED Tech, NMCG informed that the State has 68 MLD of sewage generation. One STP of 10 MLD capacity at Aizwal is under construction, which is 99% complete, while the progress of sewage network is 75%. Earlier State has informed that they will be completing this STP by October, 2020. However the status remains the same from last 6-7 months. State needs to provide updated status in the MPRs as the information will be included in the report and affidavit to be filed in NGT.

Secretary, Ministry of Jal Shakti directed the State to provide updated information in writing to the Ministry immediately.

10. Telangana

ED Tech, NMCG informed that the State has 31 existing STPs of total capacity 888 MLD with utilization of 735 MLD and gap in treatment of 1724 MLD. 31 STPs are operational, although it has been stated in the annexure of MPR that 2 STPs of 3 MLD capacity are non-functional. 29 STPs are complying and 17 STPs of 210 MLD capacity are under construction, with 11 STPs (144 MLD capacity) out of these 17 STPs are yet to be started. 1 STP of Miryalguda was proposed to be completed by December, 2020, and its status of commissioning needs to be provided. 175 STPs of 1574 MLD capacity are proposed, out of which the Package 3 comprising of 17 STPs of 376 MLD (proposed under HAM model) in Hyderabad are under tendering, the date of which has been extended to mid of January due to no response from agencies. There are 2 other packages; Package I and Package II, which are yet to be sanctioned. For all proposed STPs, the projects are yet to be grounded. As reported by the State, out of 2178 water polluting industries, 2110 industries are complying and for remaining non-complying industries, notices/

closure directions have been issued. 4 CETPs of 7 MLD capacity are operational and a 0.5 MLD CETP is under construction. It was further informed that 3720 TPD of solid waste is generated in the State and there exists treatment facilities of 1451 TPD. For the bioremediation works, the State has involved NEERI for conducting pilot project on one of the drains at Kuttapallynala and for the other 4 drains DPRs has been prepared and is under sanctioning stage. It was highlighted that on comparing the progress of on-going projects, the progress reported in December MPR remains same as reported in the October MPR. With regard to the on-going CETP, completion timeline in October MPR was indicated to be March, 2021 and in the December MPR, this has been shifted to June, 2021.

Managing Director, HMWSSB informed that the tenders were called for under 60:40 ratio HAM model. EOI was called for by the State for the 17 smaller STPs and 14 agencies had showed interest, but when the tender called for none of the parties responded. Further, a discussion with the parties was held again and Minister along with Chief Secretary had taken review on the issue. It was highlighted that the agencies were interested in taking up the bigger STP projects of 100 MLD/ 120 MLD on Musi River, which are included in two other packages. As the STP projects shall take 2 more years to be implemented, the State is focusing on setting up of 6 FSTPs on the land identified for STPs. Out of the 6 FSTPs, 2 plants will be completed by the end of January 2021, 1 FSTP under CSR funding is expected to be completed by February, 2021. Further, it was informed that GPS is being put up on the tankers collecting septage from the septic tanks to ensure no pollution is discharged into the water bodies. Decentralized STPs are being put up near to Hussain Sagar lake to address the pollution reaching through one big nallah. Installation of Flow meters and OCEMs is in progress and are expected to be placed by January, 2021.

Secretary, Ministry of Jal Shakti highlighted that though the State fairs pretty well in capacity utilization of the existing STPs still there is a large gap in sewage treatment in the State. For bridging the gap, the State appears to have a plan for establishment of large capacity of STPs. However, an area of concern is that for sanctioned package no company has submitted tender. Therefore, it was suggested that marketing consultation/ discussion with all the companies may be carried out by the State. Further it was suggested that Director General, NMCG may obtain

details of the companies that showed interest in the EOIs floated by the State and clarifications may be sought from the agencies for not responding to the tenders.

Director General, NMCG suggested that it is likely that the companies may consider the other unsanctioned packages which may contain less number of STPs of higher capacity as compared to the sanctioned package. Therefore, the queries raised by the companies needs to be looked upon and the same may be forwarded for a conclusive meeting.

Managing Director, HMWSSB responded that the State followed Namami Gange model wherein 40% of the project cost was to be paid on completion and 60% of the project cost was to be paid in 15 years annuities and O& M was also proposed to be kept for 15 years. The next two packages are also proposed to be sanctioned shortly.

Secretary, Ministry of Jal Shakti highlighted that the HAM model based STPs are seen to have better performance as compared to other STPs. Further, concern was raised with regard to ongoing STPs having NIL progress being reported in the MPRs and State was directed to expedite the ongoing STP projects.

11. Daman Diu and Dadra Nagar Haveli

ED Tech, NMCG informed that there are two existing STPs of 4.2 and 13 MLD capacity at Daman and DNH respectively. The STP at Daman is operational to its full capacity, whereas the STP at DNH is being utilized at only 2 MLD. A STP of 16 MLD at Nani Daman is proposed and 7 MLD STP at Diu has been approved and is under implementation. There are no CETPs and all the industries have ETPs and 100% solid waste generated is processed. Phyto-remediation and bioremediation proposal for the identified drain has been received from NEERI and the same is under process. The drain near Rajiv Gandhi Setu, Daman is being taken up for in-situ treatment on pilot basis. Integrated Coastal Zone Management plan for Daman & Diu is proposed under ENCORE project funded by World Bank and MoEF&CC.

Member Secretary, Pollution Control Committee informed that with regard to Silvassa, number of household connections have increased marginally and work is going on to increase the flow to the STP. Tender will be floated for 7 MLD STP at Diu by January, 2021. For 16 MLD STP proposed at Daman under World Bank ENCORE Project, sanction order is awaited and

accordingly tender will be floated. With regards to preparation of Coastal Management plan, the State has already tied-up with National Centre for Coastal Research, Chennai to take up the study as advised by CPCB after which State will be submitting the plan at the earliest. All the polluting industries have installed the ETPs, and in these ETPs energy meters and flow meters have been installed and these are regularly monitored. For highly polluting industries, online monitoring facility is available where they directly upload the data and on day to day basis it is being monitored by CPCB and PCC.

12. Andhra Pradesh

ED Tech, NMCG informed that there are 43 STPs of 515.85 MLD capacity, and all are reported to be operational and complying. However, in 6 STPs of 36 MLD capacity, inflow is indicated as NIL as either these are under upgradation or rehabilitation. Therefore, State needs to ascertain whether all the STPs are operational. On comparing the progress made in the on-going STP projects from September-November, significant progress has only been made in the STP at Srikakulam and progress in rest of the STPs remains same. Compliance of the existing CETPs needs to be provided by the State. Data with regard to Solid Waste Management needs to be verified by the State. Details on other action plans such as – Action Plan for coastal areas, ground water regulation, RHW, floodplain & efflow management, plantation, biodiversity, mining activity regulation, adoption of Model River and action against defaulters has not been provided in the MPR.

Secretary, Ministry of Jal Shakti expressed serious concern over the absence of senior level officers in the meetings, especially the nodal Principal Secretary, which reflects the lack of seriousness on the part of the State. This has been observed in the previous meetings of CMC as well and has also been highlighted at highest level. On continuation of such behavior, the State shall not be taken up henceforth. If all the STPs are operational and complying, still the utilization capacity is 63%. It was suggested that the nodal department should analyze each and every STP in terms of capacity utilization of individual STPs and this could clarify the reason for lower capacity utilization. Almost no progress of the on-going STP projects in the non-monsoon period is also a matter of serious concern.

Chief Engineer, Andhra Pradesh informed that 75 MLD STP at Nellore has been recently commissioned and flow is yet to be received at the STP, post completion of sewer line connections. It was informed that Commissioner has been requested for HSCs in mass scale and several works of HSCs are in progress. It is expected that within 2 to 3 months all HSCs shall be completed. Other STP works are delayed due to Nivar cyclone in the State. As most of the contractors are from outside State, and due to Covid19 the workforce was demobilized. However, the work is pacing up now and rapid progress is expected to be achieved in 2 to 3 months. Regarding future projects, plan to take up STP works through HAM model for all 16 Municipal corporations in First Phase are being envisaged.

Director General, NMCG suggested detailed briefing is necessary for the matter stated above. For completed STPs, capacity and utilization and action plan for enhancing capacity utilization is to be sent along with strategy for HSCs. For under construction STPs, as per the report it appears all construction work has paused in the State due to COVID19, which is unacceptable. The State's response has been poor in view of the meeting held and needs to be improved. For projects to be sanctioned, detailed specified information STP wise and under which grant it is to be sanctioned is to be reported. It was suggested that if required guidance with regard to HAM model can be provided to the State.

13. Kerala

ED Tech, NMCG informed that a detailed meeting with the State was held under Chairmanship of Director General, NMCG on 21st December, 2020 wherein all the issues were discussed. The State had elaborated on the plans and committed to provide the action plans for coastal zones conservation. However, written information is still awaited. Further, it was informed that the sewage generation in the State remains 1192 MLD including 875 MLD from rural areas, there are 13 common STPs of 124 MLD with capacity utilization of 91 MLD (73%). Out of 3 common FSTPs of 0.21 MLD, 1 FSTP is being made functional shortly. Work has been awarded for 9 STPs of 32.18 MLD and 4 FSTPs/ Septage plants of 0.4 MLD. Further, 26 STPs of 58.26 MLD and 8 FSTPs/ Septage plants of 0.97 MLD are proposed. Many of the projects have been retendered because of various reasons. State had informed that 1 STP of at Muthathara of 107

MLD capacity is operational at 70-80 %. For increasing the utilization capacity of the STP, 116 short term works are being implemented, out of which 72 have been completed and balance are to be completed soon. The State has a larger plan to handle solid waste and liquid waste through FSTP and smaller STPs. Therefore, State was requested to provide the written submissions at the earliest for incorporation in the quarterly report.

Principal Secretaries of Environment, Urban Development and Water Resources Department, Kerala attended the meeting along with other State officials. Member Secretary, Kerala Pollution Control Board informed that a Dossier has been prepared, wherein sewage and sullage in the State have been separately highlighted. It was informed that 13 proposals are in DPR stage, 10 proposals have been tendered, works have been awarded for 5 projects, work has started in 4 projects, technical sanction is yet to be issued for 1 proposal and remaining 6 projects are to be re-tendered. For a large number of residential areas in the State, septic tank and soak pit arrangements have been made and for 69 residential complexes, individual STPs have been installed. Incremental progress have been achieved in 5 STPs. With regard to coastal management action plan, discussions have been held, survey in 6 districts have been completed and is in progress in 10 districts. State has committed to submit the action plan by the week end. With regard to solid waste management, 8 Waste to Energy Plants are planned, there is complete ban on single use plastic and inventories have been made for biomedical waste and hazardous waste. For non-complying industries, directions and penalties have been imposed.

Chief Engineer, Kerala Water Authority reported that sewerage plan for the State is being prepared and after administrative approval is granted for the plan, the remaining gap in sewage treatment shall be taken care of.

Secretary, Ministry of Jal Shakti suggested that the prime focus is river rejuvenation and tackling sewage that is reaching river and water bodies. Focus on capacity utilization of existing plants, early completion of under construction works and the fulfillment of gap is of prime importance.

14. Pudukcherry

ED Tech, NMCG informed that UT has 5 STPs of 56 MLD capacity having utilization of 35 MLD. As reported by the UT, 3 STPs of 51 MLD are operational and non-compliant due to high

BOD levels in effluent, 2 existing STPs of 5 MLD are non-operational as the STPs are not receiving the minimum flow required to run the STPs. Further, 2 new STPs of total 6 MLD are in tendering stage. Out of 96 industries, 95 industries are having ETPs and 87 ETPs are complying.

Secretary, Ministry of Jal Shakti, directed that nodal officers of the Ministry should regularly interact with the State/UTs allocated to them and get details of reasons of STPs not in operation, not complying with the discharge norms, reasons for delay in on-going and proposed STPs.

Secretary (Environment), Puducherry informed that 2 STPs are non-operational due to lack of sewerage connections. Directions have been issued to defaulting industries. Not much progress has been made with regard to solid waste management and municipalities have been issued directions and Environmental Compensation shall be collected from the defaulting industries.

Chief Engineer, PWD, Puducherry informed that house connections are expected to be completed by March, 2021 and the 3 STPs shall be fully functional by June, 2021.

Secretary, Ministry of Jal Shakti directed the UT to provide the requisite details in writing and also highlighted the key issue, which is the low capacity utilization of operational plants. Information regarding tenders for proposed works was sought to which the UT responded that WAPCOS is being perused for providing the Consultancy services.

15. Gujarat

ED Tech, NMCG informed that as reported in the MPR, out of the 73 existing STPs of 3485 MLD, 22 STPs of 1271.46 MLD are non-complying. Further, out 34 existing CETPs, 11 CETPs have been reported to be non-complying. A 53 MLD STP at Surat Gavier commissioned in 2016, is having utilization capacity of only 5.37 MLD. No significant progress has been made with regard to bioremediation of drains. On comparing the progress made in the on-going STP projects in October and November MPR, it was noted that no progress was made in two consecutive months. State was directed to provide details of land issues for the Tapi Shuddhikaran project.

Secretary, Ministry of Jal Shakti pointed out that the officers of appropriate level/rank of the concerned implementing departments/ authorities should remain present along with the Gujarat

Pollution Control Board, a co-coordinating body. Further, the State was directed to provide information only on the issues highlighted. Concern was raised over the slow progress of the ongoing 97 STPs in the State and low utilization of the 53 MLD STP at Surat.

Dy. Chief Environment Engineer, GPCB informed that the officers from Gujarat Urban Development Mission, Gujarat Water Supply & Sewerage Board, Surat Municipal Corporation, Ahmedabad Municipal Corporation, Vadodara Municipal Corporation and Panchayats, Rural Housing and Rural Development Department were attending the meeting. With regard to Tapi Shuddhikaran project, it was informed that out of 53 STPs, land issues in 16 STPs have been sorted out, and in 3 STPs work is in progress.

Additional City Engineer, Ahmedabad Municipal Corporation reported that short & long term planning is under process for up-gradation of existing STPs and to rectify the issues of non-compliance of the STPs.

State was directed to provide the details of the issues highlighted in the meeting in writing to the Ministry for incorporation in the Quarterly report.

16. Karnataka

ED Tech, NMCG informed that the number of existing STPs in the State is reported as 125 of 2242 MLD capacity, whereas earlier it was reported to be 146 STPs. Such type of discrepancies in submission of data creates a problem while submitting the reports to Hon'ble NGT. Compliance status of STPs is yet to be provided and as reported by the State, status is yet to be compiled. There are 10 existing CETPs of 5.8 MLD capacity, of which 1 CETP is non-operational and 6 CETPs are non-compliant, for which the State has initiated actions. With regard to the solid waste management, 11800 TPD is generated and 10198 TPD is collected and 50-58 % is being processed in the State. DPRs for adding 9159 TPD capacity have been approved. State is yet to submit the Action Plan for coastal pollution management. Furthermore, land issues were highlighted for 2 STPs at Kamaje and Kaikunje. The action plan for the Ramdurga Malaprabha River, where 14.51 TPD of waste was dumped and washed away due to floods, is to be made a part of the report.

Secretary, Ministry of Jal Shakti highlighted that the State Pollution Control Board should regularly monitor the STPs and should have data readily available with regard to the compliance status of the existing STPs. Online monitoring of the STPs and CETPs was emphasized. It was directed that progress made by the State with regard to on-going and proposed projects be clearly indicated in the presentation being made in the meeting.

Member Secretary, Karnataka State Pollution Control Board informed that compliance status of CETPs along with action taken by PCB has been provided in the MPR. With regard to compliance status of the existing STPs, status has only been received from 2 regional offices of the KSPCB and further a State level meeting is scheduled for 16th January, 2021 to obtain the status report of all the STPs. The same shall be submitted along with the next MPR. At Chikkodi, while there are 2 STPs of 3.72 MLD STP at Sadalaga village and 5.8 MLD STP in Chikkodi, the STPs are hardly receiving 2 MLD of sewage as UGD is still to be completed. The land procurement issue is yet to be sorted out at Kamaje, and the same is being pursued with the Deputy Commissioner, while the work of UGD at Bantwala in Mangalaru is progressing.

In the 17 polluted river stretches, there are 39 ULBs. In the 33 ULBs managed by KUWSB, STPs have already been commissioned in 5 ULBs, STPs works are ongoing in 5 ULBs, DPRs have been submitted to State Government for 19 ULBs and DPRs for STPs are under preparation for the remaining 4 ULBs. In the 4 ULBs managed by KUID, there are 7 STPs, out of which 3 STPs have been commissioned and 4 STPs are under construction. 2 ULBs are under DMA. With regard to the Solid waste management, the State acknowledged the huge gap of 5810 TPD, and stated out that of 286 ULBs, 219 ULBs have finalized the SWM DPRs with total design capacity of 9159 TPD at an estimated cost of Rs. 1501 crore. For the remaining 67 ULBs, DPR preparation is pending. 14.51 TPD of waste dumped along the Ramdurga Malaprabha River has been cleared.

Further, it was informed that all the CETPs have been equipped with flow meters at inflow and outflow outlet, which are connected with an online database integrated with AI setup to monitor the CETPs. 35 vehicles that carry effluents of CETPs and 26 hazardous waste carrying vehicles have installed GPS to ensure proper disposal of the waste. The data is being displayed on KSPCB website. It was reported that the action plan for coastal pollution management is under consideration at the State head office.

There are 7 Waste to Energy plant in pipeline and recently the State has inaugurated an 11.5 MW WTE plant at Bidabi which has been made operational. Further, a 6 MLD STP has been commissioned in the last one month. With regard the issue of dumping of illegal waste into the Vrishabhavathi Valley, the State has engaged marshals for patrolling to prevent any illegal dumping of sewage/ septage waste. The State assured that strict monitoring of SWM is in track.

Director General, NMCG acknowledging the State's brief on the initiatives taken up and requested the State to send a comprehensive report with details of real time monitoring of CETPs along with other initiatives provided by the State.

17. Tamil Nadu

ED Tech, NMCG informed that there are 66 STPs of 1616 MLD capacity existing, out of these 3 STPs are reported to be non-complying. 40 STPs of capacity 971 MLD are under construction and 37 STPs are proposed. 49 FSTPs are proposed, of which 5 have been completed. River Bhavani has been adopted as the Model River. Out of 36 CETPs, 4 are non-complying and further 10 CETPs of 41 MLD are proposed. 15,666 TPD of municipal solid waste is generated, for which 3229 processing facilities are existing with 7859.2 TPD installed capacity. On comparing the progress of the on-going 40 STPs for the months from September-November 2020, progress appears to be stagnant except for 6 STPs at Sriperumbudur, Vellore, Trichirapalli-STP1, Mettupalayam, Velankanni and Thiruporur. With regard to proposed STPs, it was informed that all projects are in DPR preparation stage or are in approval stage.

Secretary, Ministry of Jal Shakti raised concern over low utilization capacity of the existing STPs and the progress of on-going STP projects.

DG, NMCG mentioned that there is a huge gap between the sewage generation and total capacity created. However, STPs which are under construction and at proposal stage would bridge the large gap between sewage generation and capacity created to a large extent. However, it was observed that capacity utilization of 919 MLD against the installed capacity of 1616 MLD means average utilization of about only 57%, which is not satisfactory. It shouldn't be less than 80%, as these STPs were created 5-10 years back and by this time the corresponding conveyance system should have been completed.

Additional Chief Secretary (Environment), Tamil Nadu informed that the biggest problem in the State is the conveyance system from households to the STP not being strong due which the STPs are not being optimally utilized. Therefore, the State is emphasizing on the improving the conveyance system. With regard to the non-complying 4 CETPs, it was informed that notices have been issued to the concerned CETPs. The slow progress in the on-going projects was attributed to the retreating monsoon and huge rainfall received in the last 2 months. It was informed that the software (OCEMS) is working properly and the entire data is collected from the local bodies which include baseline data, what have been proposed and how they are progressing i.e planning stage, utilization capacity and execution. With the help of this data, the State is able to identify the gap to improve utilization capacity. The Action Plan for Coastal Pollution Management shall be completed by January 2021. PWD has made a very comprehensive plan for rejuvenation of the river Cauvery called Nadanthai Vaazhi-Cauvery, which will also improve the e-flow in the river. Details have been already shared with Ministry of Jal Shakti in this regard. Biomedical Waste and Hazardous waste is being 100% complied with. Plastic waste disposal is also very closely followed up. Plantation activities have been taken up in all the polluted river stretches. Forest Department is doing plantation in those reaches where there is reserve forest, while on other places local bodies & PWD are doing plantation work.

18. Maharashtra

ED Tech, NMCG informed that of the 139 STPs of 7747 MLD existing in the State, 37 STPs of 2538.5 MLD are reported to be non-complying (three STPs of 757 MLD, 240 MLD and 386 MLD in Mumbai are non-complying aggregating to 54% of total non-compliant capacity). State needs to provide the status of 4 STPs of total capacity 83.76 MLD in Ulhasnagar & Akola due for completion by December, 2020. 9 STPs are non-operational, out of which 3 STPs of 112.76 MLD are under commissioning, 2 STPs of 62.02 MLD are awaiting sewer network connections, 2 STPs shall be dismantled and new STPs shall be created, maintenance of 1 STPs is under progress and 1 STP is non-operational. There are 26 CETPs with capacity of 244.85 MLD, of which 2 CETPs are non-complying and 1 CETP is closed. Commissioning of the proposed CETPs (4 nos) needs to be expedited. None of the 81 drains (56 of P-I & 25 of P-II) discharging

untreated sewage into identified river stretches have been provided with in-situ bio-remediation. Out of 14 on-going STP projects, progress of only 4 STP projects due for completion in December, 2020 have been provided. State needs to provide progress of the remaining projects.

Member Secretary, Maharashtra Pollution Control Board (MPCB) confirmed that the total estimated sewage generation in the State is 9757 MLD, which includes nearly 2500 MLD of sewage from Mumbai city. It was informed that in December 2020, 8 MLD STP at Wasim and 20.5 MLD STP at Ulhasnagar was completed. Out of 139 existing STPs, 133 STPs have been made operational. The compliance status of the STPs has also been increased and 121 STPs are now complying. 11 STPs of 1549 MLD are yet to be made compliant. With regard to land issues for STPs, it was informed that land issues will be resolved shortly for STPs at Baner and Warje. It was agreed to provide details of all the proposed STPs. In gram panchayats along the polluted river stretches, funds have been sanctioned for preparation of DPR for abatement of pollution.

Secretary, Ministry of Jal Shakti highlighted that details of low utilization of the STPs should be collected and raised concern over the large number of non-complying STPs in the State. Further, it was directed to provide action being taken by the State to increase the utilization capacity of the existing STPs, and to make non-complying STPs complying. It was suggested that higher officials of State's Urban Development Department or concerned agency dealing with the STPs in the State should attend the meeting henceforth along with Member Secretary PCB for clarifications.

19. Odisha

ED Tech, NMCG informed that 6 STPs of 131 MLD are existing and 7 STPs of 240 MLD are under construction. There are 10 Septage Treatment Plants of 440 KLD, 1 plant of 12 KLD is under trial, 30 plants of 555 KLD are under construction with completion timeline of March, 2021 and 58 plants of 776 KLD are expected to be completed by December, 2021. State needs to provide plans for bioremediation projects and status of preparation of Action Plan for the Coastal Pollution Management.

Principal Secretary, Housing & Urban Development Department, Odisha informed that works of all balance Septage Treatment Plants shall be completed by December, 2021. With regard to

STPs, it was informed that 4 STPs at Bhubaneswar have been successfully tested and formal commissioning of these plants shall be completed by March, 2021. STPs at Cuttack, Sambalpur and Rourkela are also progressing satisfactorily and shall be completed by June, 2021. Further, efforts are being put in to complete the house sewer connections. With regard to solid waste generation, 159 micro composting plants have been completed by December, 2020 in 110 ULBs and remaining 57 sites are in different stages of implementation.

Secretary, Ministry of Jal Shakti suggested that the State needs to improve the utilization capacity of the existing STPs.

20. Goa

ED (Tech), NMCG informed that against total sewage generation of 112.53 MLD, State has 9 existing STPs of 78.35 MLD. All the STPs are reported to be operational and complying. The utilization capacity of the STP remains 29 MLD due to low number of house sewer connections. 5 STPs of 35.5 MLD are under construction, 1-2% increase in progress has been reported from September – November 2020. 3 STPs of 43 MLD are proposed but STP work could not be started due to local issues. State has adopted Septic Tank-Soak Pit arrangement for treatment of the waste. Sal River has been adopted as the Model River. State needs to provide details of preparation of Action Plan with regard to Coastal Pollution Management.

Secretary, Environment, Goa informed that efforts are being made to manage the solid and liquid waste. It was informed that of the 5 STPs under construction, 5.6 MLD STP at Baga Calangute and 7.5 STP at Colva have been completed and trial run is going on. With regard to solid waste management, 150 TPD existing plant is being upgraded to 250 TPD and 600 TPD plants are under various stages of implementation. Action Plan for Coastal Pollution Management is being prepared.

Director General NMCG suggested the State to submit completion timeline for on-going projects and proposed projects.

21. Andaman & Nicobar

ED (Tech), NMCG informed that Monthly Progress Report has not been received from the UT. With regard to the letter received from UT flagging the issue of floating garbage of foreign origin being received at the UT, it was informed that the issue has been communicated to MoEF&CC and Ministry of External Affairs for necessary action. Further, MoEF&CC has directed NCSCM to inspect the site and to look into the matter. UT also needs to provide the status of preparation of Action Plan for Coastal Pollution Management.

Secretary (Environment), Andaman & Nicobar informed that the UT generates estimated sewage of 14.17 MLD and 1.7 MLD is treated and tenders have been called for STPs of 10 MLD. Faecal Sludge Treatment Plants are also being constructed and shall be completed within 3 months.

Due to issues in the audio, Director General, NMCG directed the UT to provide details in the Monthly Progress Report at the earliest, format of which is being circulated with the minutes as the same needs to be incorporated in the Quarterly Report being submitted to NGT.

22. Lakshadweep

ED (Tech), NMCG informed that Monthly Progress Report has not been received from the UT. Further, UT needs to provide the status of preparation of Action Plan for Coastal Pollution Management.

Secretary (Environment), Lakshadweep joined by Secretary (PWD), Lakshadweep informed that 2.8 MLD of sewage is generated and due to high water table STPs are not technically feasible in the UT. 1 STP has been installed in a private resort and 1 STP is existing in Navy area. Lakshadweep is Open Defecation Free and sewage is being managed through septic tanks and bio-toilets. Septage Treatment Plant option is being explored as a pilot project. NCSCM is preparing the Action Plan for Coastal Pollution Management and it shall be submitted shortly. Further, Integrated Island Management Plan has already been prepared and notified by Lakshadweep.

Director General, NMCG directed the UT to provide details in the Monthly Progress Report at the earliest, format of which is being circulated with the minutes as the same needs to be incorporated in the Quarterly Report being submitted to NGT.

23. Delhi

Director Technical, NMCG informed that out of 35 operational STPs, 11 STPs are complying with the standards of BOD -10mg/l, COD -50mg/l & TSS - 10mg/l. Out of 13 CETPs, only 2 CETPs are complying. With regard to on-going STP projects under YAP-III, not much progress has been reported in the last two months and the release of funds to the contractor remains a concern.

Secretary, Ministry of Jal Shakti highlighted that until the adoption of new measures, STPs designed for treating water up to BOD 30 mg/l, would not be able to treat water to the BOD level of 10mg/l. Therefore the remaining 24 STPs may be complying with its design capacity. It was suggested that joint inspection of the CETPs and Interception Projects may be carried out. State was directed to provide status of liquidity to contractors and tree plantation/ cutting permission.

Member Drainage, DJB informed that payment as on 18th December, 2020 has been made to all the contractors. Further, it was informed that 8 STPs were designed for BOD-10 mg/L parameter, 12 STPs are being upgraded and for remaining 15 STPs, budget for upgradation is being sought from the Government. Tree cutting permission for STPs at Okhla and Rithala is pending with the Minister. Further, it was informed that ISP project has been completed and STP at Coronation Pillar shall be completed by June 2021.

Secretary (Environment), Delhi informed that approval for tree cutting permission for 2 STPs from Minister is awaited.

Director Technical, NMCG informed that joint inspection of STPs and drains were planned, but the same could not be conducted and discussions with the contractors were done telephonically. It was informed that delay in projects is attributed to non-release of payment to the contractors by the DJB.

24. Uttar Pradesh

Senior Solid Waste Management Specialist, NMCG informed that as per September, 2020 MPR, there were 9 STPs which were expected to be completed by December, 2020. Out of these 9 STPs only 1 STP at Firozabad is under trial run and remaining 8 STPs (expected completion by December, 2020) and 23 other STPs are under construction. The LoA for Lucknow STP was issued on 17.09.2020 which has gone into sub-judice. The land issue for Moradabad STP is yet to be resolved. There are still 5 STPs which are non-operational, 19 STPs are non-complying to discharge standards (6-7 STPs are non-complying on BOD marginally above the discharge standards). For Farrukhabad project, NOC from NMCG has been given, however the State is to issue LoA. For 4 projects namely Balia, Pratapgarh, Jhansi & Kanpur (Baniyapurwa), no progress has been achieved since September, 2020. With respect to SWM facilities at Jaunpur & Fatehpur, the plants have still not been made operational as against the target date of 31.10.2020. There are land issues for 8 SWM plants at Bareilly, Firozabad, Loni, Nazibabad, Bhadoi, Basti, Gorakhpur & Akbarpur. Noida construction & demolition (C&D) waste management facility has commenced its operation w.e.f. 05.10.2020 as scheduled. 4 C&D facilities at Lucknow, Agra, Varanasi & Prayagraj scheduled for commissioning by 31.12.2020 have not been achieved.

Secretary (Urban Development Department), Uttar Pradesh informed that out of 5 non-operational STPs, the STPs at Loni, Banda & Ghaziabad will be completed by 31.03.2021. With respect to non-compliance of STPs, it was informed that State is trying to bring O&M maintenance of STPs, which are not under the purview of UP Jal Nigam, under centralized agency. For increasing capacity utilization, it was informed that State is taking necessary steps such as increasing house service connections so as to ensure proper utilization of STP capacity. With respect to SWM facility at Jaunpur, it was informed that the construction is almost complete and it will be operational within a week. For Fatepur SWM facility, tenders have been floated. For the land issues for SWM facilities, it was informed that land issues have been resolved and either tenders have been floated or LoA has been issued. For processing of SW in rural & urban areas, State has finalized a policy and plants have been sanctioned. 37 new SW plants have been sanctioned, out of which tenders have been closed for 15, while the remaining are under tendering. State is planning to achieve 100% solid waste processing capacity by

December, 2021. With respect to C&D waste facility, it was informed that at Varanasi & Prayagraj the facilities are operational, Kanpur is under commissioning and for Lucknow bids have been invited thrice but to no success.

Secretary, Ministry of Jal Shakti requested State to indicate whether upgradation of existing STPs, if required, is a part of One City One Operator or not. With respect to Moradabad, it was indicated that 1 STP of 58 MLD has been sanctioned by NMCG in which sanction for laying of network was pending and another STP of 25 MLD capacity has been sanctioned by NMCG for which land issue is pending for long. Secretary (UDD), UP informed that the same has been sanctioned and works are under progress. Secretary, Jal Shakti further indicated that another STP of 20 MLD at Moradabad is non-operational and directed State to ensure that the same may be revived. He reiterated that efforts should be taken to complete the complete the projects at earliest and directed State to ensure proper utilization of STP. He raised his concerns over solid waste dumping during his recent visits to Etawah, Bulandshahr & Khurja indicating that large dumps of plastic waste are visible in both urban & rural areas, and directed the State to take necessary action at the earliest.

25. Rajasthan

Secretary, Ministry of Jal Shakti stated that in previous meetings no senior officers were present and indicated that a major concern is poor capacity utilization of the existing STPs. He also indicated about slow progress of Kota project funded by NMCG since last couple of years.

Director General, NMCG informed that a review meeting with the State was held under his Chairmanship with the State on 21.12.2020.

Senior Solid Waste Management Specialist, NMCG informed that the State has now sent the State dossier, households connected with sewer network has increased from 57% to 61%, 2 STPs have been completed & operationalized, 24 STPs are in advanced stages of completion with a progress of more than 90% and are expected to be completed by March 2021, capacity utilization has increased from 47% to 69%, for Kota project the clarifications received from the State have been sent for third party appraisal.

Some of the major issues include poor O&M of STPs & CETPs as 39 STPs out of 78 are non-complying and 11 CETPs out of 14 operational are reported to be non-complying. The State needs to develop a mechanism for daily assessment & reporting in terms of capacity utilization and compliance for all existing STPs and CETPs. In addition, municipal solid waste processing against the generation is very low (only 37%), incremental progress is not being provided as per directions of NMCG, legal issues for Hanumangarh STP & Bhiwadi STP need to be sorted out. 2 STPs at Mandiya and Nokha are completed since last 2 months, but are not yet operational. The action plan submitted by the State is very vague and needs to be specific indicating realistic timelines.

Secretary, LSG, Rajasthan informed that currently 67 STPs are under construction and the timelines have been provided in the MPR. It was further indicated that online monitoring of all STPs is being developed under Asian Development Bank funding and is likely to be completed soon. With respect to Kota project, it was informed that State has agreed for its increased share and is pending with Central Sanctioning Committee. With respect to household connections, it was informed that gradually number of connections are increasing and State is tying up funds under AMRUT and other schemes.

Secretary, Ministry of Jal Shakti indicated that it is the primary responsibility of the State to ensure that the STPs are working properly with proper capacity utilization.

26. Haryana

Director Technical, NMCG informed that out of 115 existing STPs in the State, 32 STPs are reported to be non-complying (7 in Ghaggar, 14 in Yamuna, 11 in others). The 7 non-complying STPs in River Ghaggar basin are not complying with the design standard of BOD 10 mg/l. As per the latest water quality reports, significant improvement in drains joining in River Ghaggar is being observed. The 14 non-complying STPs along River Yamuna basin are critical as these are having major impacts on the water quality of river upstream of Delhi and the quality in Najafgarh drain, Delhi. Compliance status of the existing CETPs needs to be provided.

Secretary, Ministry of Jal Shakti indicated that Haryana has fairly good treatment capacity, with Faridabad the only city having lesser treatment capacity in the State and work for STPs to bridge

the gap has begun. The issue of high concentration of ammonia in the river Yamuna was flagged. State needs to address the pollution in Drain no. 2, 6 and 8 and ensure compliance of the STPs and CETPs.

Additional Chief Secretary (Environment), Haryana attended the meeting along with other State officials. Member Secretary, Haryana Pollution Control Board informed that STPs are being monitored regularly and a centralized system is being installed for getting real time monitoring done. With regard to the issue of high ammonia concentration, monitoring has been conducted and ammonia level has been found to be within permissible levels. Further, illegal tankers discharging into the drains/rivers have also been addressed by conducting special drives. Online river monitoring station is being installed near Palla. With regard to issue of mixing of effluent water of DD-8 with DD-6, it was informed that Irrigation Department Haryana has started constructing a culvert pipe for segregating waste effluent and after completion of the work the issue shall be resolved. Large number illegal industrial units have been closed down in Panipat. Most of the non-complying STPs are having BOD more than 10 mg/L and the State agencies are upgrading the STPs either by altering the chemical dosing or by addressing the structural changes requirement. Only 1 CETP in Jind was found to be non-complying and the same is being upgraded.

Additional Chief Secretary (Irrigation), Haryana informed that to divert the effluent discharging from drain 6 to drain 8 in Haryana, a pipe has been planned to be constructed by 30.06.2021. As the STPs are constructed for 15 year design period, therefore all the STPs may not be able to achieve 100% of the utilization and works of untapped sewer is being expedited. With regard to STPs at Panipat, it was informed that the 20 and 25 MLD STP were monitored continuously for a week and it was found to be achieving the discharge norms of BOD level 10 mg/L, while on the remaining 2 STPs online monitoring systems are being installed. For increasing the utilization capacity of the STPs at Panipat, sewer lines are being laid in unapproved colonies.

ED Tech, NMCG suggested that the flow of Panipat drain running near to the 2 STPs of 60 MLD may be diverted to the STPs for treatment, in order to abate pollution and increase the utilization capacity. This suggestion of intercepting the Panipat drains to adjacent STP was also discussed during visit of Hon. Minister Sh Ratan Lal Katraia to Panipat-Sonepat. The characteristics of

drain have been found fit for treatment in STP by HSPCB. A D.O. letter to CS Haryana has also been written for this interception by DG, NMCG on 04th January, 2021. State was requested to complete this assignment on priority.

27. Himachal Pradesh

Director Technical, NMCG informed that MPR from the State was received on 04.01.2021 and as per the MPR, the State generates 163 MLD of sewage and there are 65 existing STPs of 120.5 MLD capacity of which 59 STPs are complying and there is a utilization capacity of 76.8 MLD, 28 STPs are under construction and 32 STPs are proposed. A 25 MLD CETP is existing at Baddi, which is reported to be non-complying, a 5 MLD CETP at Kala Amb is under construction, which was scheduled to be completed by 31.12.2020 and a 2 MLD CETP at Paonta Sahib is proposed.

Member Secretary, Himachal Pradesh Pollution Control Board informed that 25 MLD CETP existing at Baddi is non-complying with regard to FDS and Chloride, PCB has shut down the dyeing units of the defaulting industries till upgradation of the ETPs. 5 MLD CETP at Kala Amb is under progress and shall be completed by February 2021. 2 MLD CETP proposed at Paonta is awaiting funding.

Secretary, Ministry of Jal Shakti directed NMCG to get clearer picture of the State, as the figures provided are not reconciling with the information provided by the State official.

28. West Bengal

Director Technical, NMCG informed that 2758 MLD of sewage is being generated in the State, there are 41 existing STPs of 692 MLD with capacity utilization of 272 MLD. 26 STPs are operational of which only 8 are reported to be complying with the norms. Most of the partially complying STPs are under renovation while 9 STPs are non-operational. STPs of large capacity, operated by KMC are also non-complying at Bangur, Garden Reach (funding already sanctioned by NMCG and lying idle) and Keorapukur (recently upgraded under KEIIP). Status of STP at Churni (under tendering) is reported to be same since past 2 years. The report talks about many of the STPs as partially compliant but details of non-compliance parameter have not been given,

and thus it becomes difficult to understand from the report what sort of action is required to make those STPs compliant to design norms/ regulatory norms.

Secretary, Ministry of Jal Shakti raised serious concern over the status of STPs in the State.

CEO, KMDA informed that the work order for STP at Churni shall be issued shortly, but in the meanwhile phytoremediation works at the Churni River have begun. Principal Secretary (Environment), West Bengal informed that phytoremediation works have resulted in improvement in quality of the river. Further, it was informed that following the Odisha model, the State is planning to adopt decentralized faecal sludge plants across the State and one has already been constructed. OCEMS are being planned to be adopted for all the STPs and empanelment list of all the agencies by NMCG is being awaited. It was further informed that Finance Department, West Bengal has released funds for remediation of legacy waste and various solid waste management projects. 20 MLD CETP is operational at Kolkata Leather complex and another 20 MLD CETP shall be completed by 2022, after which there is no pollution into the rivers from the industry.

Secretary, Ministry of Jal Shakti highlighted that as laying sewer network takes good amount of time, therefore the Ministry has focused on interception and diversion of drains with STP projects in order to abate the pollution of rivers. Further, monitoring of the STPs also plays an important role in ensuring that existing infrastructure is in good position. It was suggested that State can take guidance from Odisha for adopting the Faecal Sludge and Septage Management. It was also highlighted that for operationalizing 2 STPs at Hoogly and North 24 Paraganas sanctioned under Namami Gange were cancelled after award of work. It was suggested that the State may indicate the compliance status of the STPs with regard to the standards notified by MoEF&CC and those not meeting the standards of NGT may be highlighted separately.

Executive Director Projects, NMCG informed that NMCG has proposed that an empanelment list of agencies who have successfully installed online monitoring systems on STPs shall be prepared and shared with the States.

With regard to Action Plan for Coastal Pollution Management, it was informed that the same shall be submitted to CPCB shortly. There were some legal issues in the works awarded for

upgradation of STPs in Hoogly district and work was on hold due the same. State official informed that all legal issues have been resolved and now work has started again.

NMCG has provided support for preparation of DPR for KMC area only under EAP funding. Final DPR is yet to be prepared by KMC's consultant. Once DPR is finalised, KMC has to explore funding sources for these. NMCG has not committed any funds for the works proposed in these DPR as these are primarily sewer network DPR. This has been informed many times but the status in MPR of the State remains same.

It was informed that, bid has been opened for Tolly's Nallah project and one bid has been received, and technical evaluation is under progress. For rejuvenation of oxidation pond at Jiaganj, civil work estimates have been submitted and estimates for electro- mechanical works are to be finalized. State RRC has approved action plans for 8 Priority-V Rivers. There are 2 units of FSTP of 50 MLD each planned, of which 1 is functional and 1 shall be functional by January, 2021. For treatment of legacy waste, plants are already operational, further work order have been given for 5 tenders and 12 tenders have been matured. With regard to solid waste management in 125 ULBs, tenders for 32 projects are to be revised and are to be floated again, tenders for 37 are to be floated shortly and for 40 projects RFP has been completed but land is yet to be finalized. About 11,930 TPD of processing waste capacity is proposed to be developed. With regard to the industries, it was informed that 16259 industries are existing in the State of which 454 are water polluting industries, having industrial discharge of 1360.64 MLD. All 454 have individual ETPs, 20 MLD CETP is operational in leather complex and another 20 MLD CETP is under construction, which shall be completed by late 2021- mid 2022. A team of NMCG will be visiting the State from 11th January to understand the ground realities of the STPs in the State and will provide guidance to State in resolving the pending issues in ongoing works to speed-up the progress of work.

29. Uttarakhand

Secretary, Ministry of Jal Shakti highlighted that there are not many issues in the State, therefore the State was directed to ensure compliance and operation status of the existing STPs. To increase the utilization capacity of 26 MLD at Rishikesh, works are to be expedited. 68 MLD

STP constructed at Dehradun is receiving only 8 MLD of sewage, for which I&D of drains have also been sanctioned, which shall lead to addition of about 20 MLD of sewage. State may explore the possibility to connect Sapera basti drain (about 5-8 MLD flow) also with existing STP of 68 MLD. This will improve the capacity utilization of STP in Dehradun. Similarly, a 30 MLD STP at Roorkee is constructed and is receiving only 4-5 MLD of sewage. State was directed to ensure optimum utilization capacity of these 2 STPs. Further, 3 STPs are reported to be non-complying at Nainital, Almora and Pithorgarh. Solid waste management is also a major concern in the State.

Principal Secretary (Environment), Uttarakhand informed that as the 3 non-complying STPs are old and of small capacity, possibility of upgradation of these STPs is being explored. For Joshimath, solid waste management facility is being planned.

30. Madhya Pradesh

Director Technical, NMCG informed that as reported by the State, Madhya Pradesh has developed an “Env Alert App” on Google play store and a Whatsapp group has also been created for monitoring the status of existing STPs. This has also helped in improving the utilization capacity of the STPs. Further, 11 STP projects have been completed by December, 2020 and are currently under trial run. State needs to provide incremental progress of the projects in the MPR.

Principal Secretary (Environment), Madhya Pradesh informed that App developed is in under testing and details of major STPs such as inflow, outflow and BOD level of treated effluent are being received on daily basis.

Principal Secretary (Urban Development Department), Madhya Pradesh informed that bio-remediation works of the Mandideep and Nagdwa are to be commissioned in January and March 2021 respectively. 2 non-operational plants have been made operational and 2 shall be made functional by March, 2021. Further, 15 STPs of 305 MLD are under trial and shall be commissioned by March, 2021. STPs of 55.4 MLD are under tendering and shall be awarded by March, 2021.

Secretary, Ministry of Jal Shakti praised the efforts made by MPPCB for monitoring the STPs and state of Madhya Pradesh for completing 15 more STPs of 305 MLD capacity. Secretary also advised state to remain focused on completion of more STPs as very good number of STPs are under advance stage of completion and with full attention more STPs could be completed shortly. Further, State needs to ensure optimum utilization of the 15 STPs to be commissioned by March 2021.

31. Chhattisgarh

Senior Environmental Specialist, NMCG informed that total sewage generation in Chhattisgarh is 600 MLD, against which at present the installed capacity is only 73.1 MLD. Issue of low capacity utilization is being addressed by the State. 238 MLD STPs are under construction and slight progress has been observed in the on-going projects. Matter regarding the purchase of treated waste water from the 35 MLD proposed STP at Korba needs to be sorted out with NTPC. For other STPs like Rajim (2.8 MLD), Simga (2.8 MLD), Kanker (7.88 MLD), Dhamtiri (19.6 MLD) and Nawapara (7.5 MLD), DPRs are ready. However, it was informed that funding for these schemes are not yet finalized and NMCG has been requested to provide financial assistance. Further, State has a number of FSTPs for addressing the pollution.

Additional Chief Secretary (Housing & Environment), Chhattisgarh informed that the STP at Korba was proposed to be taken up on PPP mode and NTPC was supposed to provide partial financial assistance. Tender floated has not been finalized by the NTPC, due which the progress has been delayed.

Senior Environmental Specialist, NMCG informed that as reported by the State earlier, it is a PP project, in which NTPC was bound to purchase the treated waste water from the STP and agreement in this regard and the quality of water has not been made yet.

Additional Chief Secretary (Housing & Environment), Chhattisgarh informed that pipeline and a tertiary treatment plant are to be established by NTPC Korba and the Municipal Corporation of Korba shall provide treated waste water at the rate of Rs.25/cubic metre after finalization of the bid subjected to slight changes in the rate quoted. NTPC is currently purchasing water from

Water Resource Department at the cost of Rs. 12/cubic metre. The rates to be further negotiated at the State level.

Secretary, Ministry of Jal Shakti suggested that the works of on-going projects may be expedited. Further, the notification of Ministry of Power with regard to utilization of treated water by NTPC located in the 50 kms vicinity of the STP was stressed.

32. Jharkhand

Senior Environmental Specialist, NMCG informed that the State reported sewage generation of 452 MLD in the State. There are 14 STPs of 108 MLD existing with utilization capacity of 74%. 4 STPs of 92.5 MLD STP are under construction and STPs of 242 MLD are proposed. It was informed that updated MPR from the State was not received. Trial run of the STP at Rajmahal has started and work is in progress for sewer network.

Secretary (Housing & Urban Development Department), Jharkhand informed that STP at Phusro has been sanctioned by NMCG. Industrial associations are being approached for providing financial assistance for the STP projects at Dhanbad and Ramgarh. For Chas, Ranchi and Mango, STPs will take time for implementation, and phytoremediation based STPs by NEERI are proposed. For Chas, a FSTP is being planned. On-going STP projects at Adityapur shall be by completed 2021 and at Ranchi by 2022.

Secretary, Ministry of Jal Shakti suggested that primarily NMCG funded projects on mainstream of River Ganga and therefore based on polluters pay principle, industries should be approached for financial assistance.

33. Bihar

Senior Environmental Specialist, NMCG informed that the State generates 1100 MLD of sewage, of which 651 MLD of sewage is being generated in the polluted river stretches. There exists old STPs of 90 MLD treatment capacity and new 3 STPs of 140 MLD have been completed. Utilization Capacity of the STPs is around 90-100 MLD and there are 22 STPs proposed which are at various stages of implementation (15 ongoing/awarded, 1being awarded, 6

under tendering). 604.50 km of the sewer length has been laid as reported in December, 2020 MPR. There are STPs of 362 MLD under construction and 129 MLD STPs are to be tendered out. It was informed that land NOC has been received for Digha (STP), Sultanganj (2 IPS), Chhapra (3 IPS), Barh (1 IPS), Bakhtiyarpur (STP) and Land NOC is still pending for STP and IPS for Maner I&D and STP scheme, and for the 2 IPS in Bakhtiyarpur. Land for the IPS-1 in Kankarbagh and IPS-B in Digha is pending. Land for the Begusarai STP is cleared and the compensation issue has been resolved. RCD and NHAI permission is still pending for 39km from RCD and 5.62km from NH is pending in Patna. Outside of Patna, 30.22km from RCD, 8.66km from NHAI (Naugachia and Begusarai, Chhapra), Railway crossings at Mokama, Begusarai and Sonapur is pending.

Secretary, Ministry of Jal Shakti suggested that officials from Ministry should regularly visit the States to take note of the progress and based on the site visits, issues may be flagged to the State. Further, the State needs to resolve the issues with regards to delay in tendering of the sanctioned projects. It was also directed that State Mission for Clean Ganga needs to be strengthened.

Principal Secretary (Urban Development Department), Bihar informed that the recent visit of officials from NMCG was beneficial in clearing the bottlenecks in a number of projects. Further, LoA has been issued for Bhagalpur STP, STP at Beur are expected to be completed by January 2021, 5 STP projects to be completed by March 2021, 4 STPs to be completed by May 2021. Land issue has been resolved and work is about to start for STP at Bhaktiyapur and land issue also resolved for STP at Munger. Further, issues with NOC from Railway have been resolved and tender has been issued for Buxar.

All the States were directed to urgently submit to NMCG information with regard to the issues highlighted and the presentation made in the meeting, for incorporation in the Quarterly Report for onward submission in Hon'ble NGT.

The meeting ended with thanks to the Chair.

Annexure-I**List of participants:**

1. Shri U. P. Singh, Secretary, Ministry of Jal Shakti – *in Chair*
2. Shri Rajiv Ranjan Mishra, Director General, NMCG cum Project Director, NRCD
3. Shri Ashok Kumar Singh, Executive Director (Projects), NMCG
4. Shri D.P.Mathuria, Executive Director (Technical), NMCG
5. Dr. Prashant Gargava, Member Secretary, CPCB
6. Shri Brijesh Sikka, Senior Consultant, NMCG
7. Shri. B.B. Barman, Advisor, NRCD
8. Shri J.C. Babu, Additional Director, CPCB
9. Dr. Pravin Kumar, Director Technical, NMCG
10. Shri Ankit Jain, Assistant Adviser, MoHUA
11. Shri Ishwer Singh, Consultant (Legal) NMCG
12. Shri S.K. Srivastava, Director, NRCD
13. Shri Sanjay K. Singh, Deputy Director, NRCD
14. Shri A.P. Singh, Scientist E, NRCD
15. Dr. Sabita Madhvi Singh, Joint Director, NRCD
16. Shri Rajat Gupta, Senior Solid Waste Management Specialist, NMCG
17. Shri Saumya Mukhopadhyay, Senior Environmental Specialist, NMCG
18. Shri G.K.Murty, Team Leader, NRCD
19. Shri Manish Kumar, Sewage Treatment and Wastewater Expert, NMCG
20. Shri Vijay Kumar, Assistant Civil Engineer, NMCG
21. Shri Rachit Andley, Project Manager, NMCG
22. Shri Avshesh Chauhan, Assistant System Analyst, NMCG
23. Shri Kumar Ajitabh, Project Officer Legal, NMCG
24. Mrs. Ruby Raju, Project Engineer, NMCG
25. Shri Kallol Choudhary, Industrial Process Expert, NMCG
26. Shri Rishabh Choudhary, Support Engineer, NMCG

Legal/OA673/2018/NMCG/2019
National Mission for Clean Ganga
Department of Water Resources, River Development
& Ganga Rejuvenation, Ministry of Jal Shakti

1st Floor,
Major Dhyan Chand National Stadium
India Gate, New Delhi-110002
Dated: 4th August 2021

OFFICE MEMORANDUM

Subject: Minutes of the 10th meeting of Central Monitoring Committee in the NGT Matter OA No.673 of 2018 held on 09.07.2021 from 10.30 AM on-wards

A copy of Minutes of the 10th Meeting of Central Monitoring Committee in the NGT matter O.A. No. 673 of 2018 held through Video Conferencing on 09.07.2021 from 10.30 AM on-wards, under the Chairmanship of Secretary, Ministry of Jal Shakti is forwarded herewith for information/ necessary action.

(831)

(D. P. Mathuria)

Executive Director-Technical, NMCG
ed-technical@nmcg.nic.in

Encl: As above.

To,

1. Chief Secretary, Government of Andhra Pradesh, 1st Block, A.P Secretariat Office, Velagapudi – 522503
2. Chief Secretary, Government of Assam, Block- C, 3rd Floor, Assam Sachivalaya, Dispur - 781006, Guwahati
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4. Chief Secretary, Government of Chhattisgarh, Mahanadi Bhawan, Mantralaya, Naya, Raipur – 492002
5. Chief Secretary, Government of Goa, Secretariat, Porvrom, Bardez, Goa – 403521
6. Chief Secretary, Government of Gujarat, 1st Block, 5th Floor, Sachivalaya, Gandhinagar – 382010
7. Chief Secretary, Government of Haryana, 4th Floor, Haryana Civil Secretariat, Sector-1, Chandigarh – 160019
8. Chief Secretary, Government of Himachal Pradesh, H P Secretariat, Shimla –171002
9. Chief Secretary, Government of Jammu & Kashmir, R. No. 2/7, 2nd Floor, Main Building, Civil Secretariat, Jammu -180001
10. Chief Secretary, Government of Jharkhand, 1st Floor, Project Building, Dhurwa, Ranchi- 834004

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20. Chief Secretary, Government of Punjab, Chandigarh – 160001
21. Chief Secretary, Government of Rajasthan, Secretariat, Jaipur – 302005
22. Chief Secretary, Government of Sikkim, New Secretariat, Gangtok – 737101
23. Chief Secretary, Government of Tamil Nadu, Secretariat, Chennai-600009
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31. Chief Secretary, Govt. of Puducherry, Main Building, Chief Secretariat, Puducherry-605001
32. Chief Secretary, Andaman & Nicobar, Secretariat, Port Blair
33. Administrator, Lakshadweep

Copy To:

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2. Secretary, Department of Environment, Science and Technology Paryavaran Bhawan, Near US Club, Shimla, Himachal Pradesh-171001
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12. Principal Secretary, Department of Environment, Room No. 406 4th Floor Annex II, Secretariat, Kerala Thiruvananthapuram, Kerala, PIN- 695001
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18. Additional Chief Secretary, State Silvicultural garden, Khandagiri, Bhubaneswar, Odisha 751003
19. Principal Secretary, Forest and Environment Department, Rajasthan 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur, Rajasthan 302004
20. Principal Secretary, Chief Project Director (SBFP-JICA), Forests, Environment & Wildlife Management Department, Government of Sikkim
21. Principal Secretary, Namakkal Kavignar Maaligai, Fort St. George, Chennai 600 009
22. Secretary, Department of Science, Technology & Environment, Vigyan Prajukti O Paribesh Bhawan, P.N. Complex, Gorkhabasti, Agartala, West Tripura, PIN-799006
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25. Deputy Conservator of Forests, (Territorial Division), Van Bhavan, Dadra and Nagar Haveli
26. Secretary, Department of Environment, Govt. of NCT of Delhi, 6th Floor, Delhi Secretariat, IP Estate, New Delhi 110002
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33. The Member Secretary, Assam Pollution Control Board, Bamunimaidam, Guwahati - 781021
34. The Member Secretary, Andhra Pradesh Pollution Control Board D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada - 520 010
35. The Member Secretary, Bihar State Pollution Control Board, Parivesh Bhawan, Plot No. NS-B/2 Paliputra Industrial Area, Patliputra, Patna (Bihar) - 800 010
36. The Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas Bhavan, North Block Sector-19, Atal Nagar Dist- Raipur (C.G.) 492002
37. The Member Secretary, Delhi Pollution Control Committee, Government of N.C.T. Delhi 4th Floor, ISBT Building, Kashmere Gate, Delhi-110006
38. The Member Secretary, Daman, Diu & Dadra Nagar Haveli Pollution Control Committee, Office of the Deputy Conservator of Forests, Fort Area, Court Compound, Moti Daman, Daman - 396220
39. The Member Secretary, Goa State Pollution Control Board, 1st Floor, Dempo Tower, EDC Patto Plaza, Panaji, Goa-403 001
40. The Member Secretary, Gujarat Pollution Control Board Paryavan Bhavan, Sector 10- A, Gandhinagar - 382 043
41. The Member Secretary, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula-134109, Haryana
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55. The Member Secretary, Punjab Pollution Control Board, Vatavaran Bhawan, Nabha Road, Patiala, Punjab 147001
56. The Member Secretary, Odisha Pollution Control Board, A-118, Nilakanta Nagar, Unit – VIII, Bhubaneshwar – 751012
57. The Member Secretary, Rajasthan Pollution Control Board, 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur (Rajasthan) - 302 004
58. The Member Secretary, Sikkim State Pollution Control Board, Department of Forest, Environment & Wildlife Management Government of Sikkim, Deorali, Gangtok, - 737102
59. The Member Secretary, Telangana State Pollution Control Board, Paryavaran Bhawan, A-3, I.E. Sanath Nagar, Hyderabad-500 018
60. The Member Secretary, Tripura Pollution Control Board, Vigyan Bhawan, Pandit Nehru Complex, Gorkhabasti, PO: Kunjaban Agartala – 799006
61. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032
62. The Member Secretary, Uttarakhand Environmental Protection & Pollution Control Board, 29/20, Nemi Road, Dehradun, Uttarakhand – 248001
63. The Member Secretary, Uttar Pradesh Pollution Control Board, Building.No. TC-12V, Vibhuti Khand, Gomti Nagar, Lucknow-226 010
64. The Member Secretary, West Bengal Pollution Control Board, Paribesh Bhavan, 10A, Block-L.A., Sector III, Salt Lake City, Kolkata - 700 106
65. The Member Secretary, Andaman & Nicobar Islands Pollution Control Committee, Department of Science & Technology, Dollygunj Van Sadan, Haddo P.O., Port Blair – 744102

66. The Member Secretary, Lakshadweep Pollution Control Committee, Department of Science, Technology & Environment, Kavarati-682555

Copy for kind information:

1. PPS to Secretary, Department of Water Resources, RD&GR, Ministry of Jal Shakti, Shram Shakti Bhavan, Rafi Marg, Sansad Marg Area, New Delhi- 110001
2. PS to Director General, NMCG cum Project Director NRCD
3. PS to Additional Secretary, Ministry of Housing and Urban Affairs, Nirman Bhawan, Maulana Azad Road, New Delhi – 110011.
4. Joint Secretary, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jorbagh Road, New Delhi – 110003
5. Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032
6. PS to ED (Project/ Finance), NMCG
7. Adviser, NRCD

Minutes of the 10th meeting of the Central Monitoring Committee held on 09.07.2021 through Video Conferencing regarding 351 polluted river stretches based on the directions of Hon'ble NGT in the matter OA No. 673 of 2018

The 10th meeting of the Central Monitoring Committee (CMC) constituted by Hon'ble NGT in the matter OA No. 673 of 2018 was held through video conferencing with the States on 09.07.2021 from 10.30 AM onwards in Conference Room, NMCG under the chairmanship of Secretary, Ministry of Jal Shakti (MoJS). The list of participants of NMCG, NRCD, MoHUA and CPCB present at the meeting is at **Annexure-I**.

II. Director General, NMCG welcomed all the participants. It was highlighted that although the NGT orders covers various aspects, in the CMC meetings the focus primarily remains on sewage infrastructure, solid waste management and industrial pollution abatement measures taken by the States. However, measures to tackle various other issues also need to be adopted as they play a very important role in conservation and rejuvenation of rivers. State should take steps to maintain e-flow in the rivers, in order to ensure sustenance of river ecology. Similarly, in compliance to the directions of NGT in the matter OA No 325 of 2015, States should take steps in inventorizing the existing water bodies and efforts should be made in maintaining/improving the water quality and conserving of the water bodies. Further, it was informed that NMCG along with MoHUA have come up with a document regarding rivers and Cities Master plan titled '*Strategic Guidelines for Mainstreaming Urban River Sensitive Master Plans*'. The document is available on NMCG website, which the States and its agencies may like to go through.

ED (Tech), NMCG informed that most of the States had submitted MPRs for the month of May 2021, and a few of the States had also submitted MPR for June 2021. States were requested to ensure regular and timely submission of MPRs. Due to rise in number of COVID-19 cases and restrictions imposed by the States/UTs, progress with regard to sewerage infrastructure projects in the past few months has been insignificant. For monitoring the capacity utilization of the existing STPs, few States have installed online monitoring systems and have developed online portals/ Apps/ WhatsApp groups. Other States may also adopt such a mechanism. States also need to take necessary steps to make non-operational STPs functional at the earliest. As per the water quality monitoring data submitted by the States, improvement in BOD levels can be seen in some stretches. Many of the States have installed or are in process of installation of FSTPs for treatment of sewage as

an alternative to STPs. However, bioremediation measures are yet to be adopted by most of the States.

Director General, NMCG highlighted that the timeline of NGT for completion of STPs is already over and the States need to take fresh permission from NGT for extension of the timelines. As the progress in Assam has been very slow since the start of monitoring by CMC, Assam needs to understand the sense of urgency and urgently expedite the progress in the proposed projects.

III. Subsequently, State-wise discussions held are as follows:

Through a presentation, progress made by the States was highlighted and the issues related to sewage, industrial and solid waste management in the States, based on the information submitted in MPRs, were brought out for review.

1. Punjab

Director, NRCD informed that 4 polluted river stretches have been identified in the State. As reported by the State in the MPR, there is a sewage generation of 2108 MLD and 124 STPs of 1785 MLD are existing. As 1 STP is not operational, there is a gap of 371 MLD in sewage treatment capacity. Out of 103 STPs monitored, 27 STPs of 552.3 MLD are reported to be non-complying. State Government needs to ascertain whether non-compliance of STPs has been reported by the agency responsible for O&M or the regulators, and the actions taken by the regulators against the non-complying units. Out of 47 STPs of 605.3 MLD under construction, 11 STPs have been completed and are under stabilization, State Government needs to ensure these STPs are made operational at the earliest. No bio-remediation works have been initiated in Punjab. With regards to pollution due to Buddha Nallah, it was informed that State is implementing the Buddha Nallah Rejuvenation Project with an estimated budget of Rs. 840 crore (Rs. 519 crore – Capital cost and Rs. 321 crore - O&M cost for 10 years), which includes establishment of 2 new STPs and refurbishment of 4 existing STPs. 3 CETPs were envisaged in Ludhiana, of which works have been completed for 40 MLD and 50 MLD CETPs and works of 0.15 MLD STP have been halted due to Court stay.

ED (Tech), NMCG informed that a meeting was held under the Chairmanship of Hon'ble Minister of Jal Shakti on 17.06.2021 regarding pollution from Buddha Nallah. Based on the discussions held in the meeting, a joint inspection team under the supervision of CPCB

inspected the catchment area of Buddha Nallah. Results of the random inspection were received by NMCG on 08.07.2021 and as per the results, out of 4 CETPs inspected, 2 CETPs were found to be non-complying, out of 29 industrial units inspected, 15 units were found to be non-complying and out of 14 STPs inspected, 12 STPs were found to be non-complying.

Chief Secretary, Punjab attended the meeting along with Principal Secretary (LG), Principal Secretary (ST&E) and Chairman, Punjab Pollution Control Board (PPCB). Principal Secretary (LG), Punjab informed that while previously 43 STPs were reported to be non-complying, now the number has reduced to 27 STPs. Of the 27 STPs reported to be non-compliant, 8 STPs (2 STPs are SBR and 6 STPs are WSP) are not complying with the BOD standards and remaining 19 STPs are not complying with the Fecal Coliform standards. Efforts are being put in by the State to resolve these issues by constructing chlorination tank etc. and it is expected that in 1-2 months the compliance status of the STPs in Punjab shall drastically improve. Out of 500 MLD STPs reported to be non-compliant, 3 STPs of 350 MLD in Ludhiana are being refurbished under the Buddha Nallah Rejuvenation Project and are expected to be completed by December 2021. The compliance status of the STPs are being monitored by PPCB. With regards to the on-going and proposed STP projects, it was informed that finances for the projects have been arranged. Work is in progress for 41 STPs of 598 MLD and the State Government is rigorously monitoring the progress and most of the STPs are expected to be completed by March 2022, except for bigger projects such as Buddha Nallah, which shall be completed by end of 2022. With regard to bioremediation, it was informed that works have started at 3 locations and are providing satisfactory results. Most of the drains are to be tapped and treated in the existing/ proposed STPs. With regard to the shifting of diaries, it was informed that proposal was considered by the High Level Committee, but land for shifting is yet to be finalized and procured. Further, till shifting diaries take place, State Government has included provision for establishment of ETPs/ CETPs in the area under the Buddha Nallah Project.

Director General, NMCG highlighted that considering the issues relating to Buddha Nallah, the ongoing STP projects need to be monitored closely and the CETPs should be made functional and operated optimally at the earliest.

Principal Secretary (ST&E), Punjab informed that release of electric connections has been requested from Electricity Department for the 2 CETPs of 40 and 50 MLD. These CETPs are expected to be operational by August 2021. Previously, 2 CETPs were reported to be non-

complying, of which 15 MLD CETP at Ludhiana has been stabilized and is now complying with the standards and the 5 MLD CETP at Jalandar is non-complying due to high BOD of 45 mg/l. Some maintenance works are in progress and this CETP shall be complying shortly. Of the 1400 industrial units inspected during one year, due to non-compliance 25 units have been closed down, environmental compensation of Rs. 3.5 crore have been imposed on 78 units and advisory has been issued to 150 units.

Chief Secretary, Punjab informed that CMD, PSPCL is aware of the request for electrical connections for the two newly constructed CETPs of 40 & 50 MLD and after due strengthening, these shall be made operational shortly.

Shri A. Sudhakar, Additional Director, CPCB informed that CPCB has completed the inspection in the catchment area of river Satluj by June 2021. Industries non-complying to the norms have been identified and action is being taken against the defaulting units. 12 STPs, 2 CETPs and 15 industrial units have been identified as non-complying to the norms.

Secretary, Ministry of Jal Shakti directed CPCB to keep a close watch on the industries and to initiate appropriate action against the defaulters.

2. Assam

Director, NRCD informed that 44 polluted river stretches have been identified in the State. 436 MLD of sewage is generated in the State whereas the treatment capacity available is NIL. Previously, the State had informed that for the area in and around Guwahati region (covering 5 polluted river stretches), 14 decentralized STPs of 157 MLD capacity were proposed with financial assistance of JICA. However, in the latest MPR of May 2021 submitted by the State, it has been reported that DPR for 4 STPs of total 202 MLD capacity (including 8 FSTPs) for Guwahati has been forwarded to CPHEEO, Ministry of Housing & Urban Affairs. Previously it was reported that DPRs for STPs at Mangaldoi, Tejpur, Nagaon, Jorhat and Silichar are awaiting sanction, however now it is reported that the DPRs for these towns are under preparation. As per MPR, total Municipal Solid Waste processing facility available for 95 ULBs is about 983.5 TPD and capacity utilization is only 404 TPD. Capacity utilization of the existing solid waste processing units is very low. Latest status of setting up of Integrated Solid Waste Management Plant at Sonaguli and removal of legacy waste at Boragaon dumping site in the catchment area of Deepor Beel (Ramsar Site) needs to be provided.

Principal Secretary (Environment), Assam informed that there are no sewage treatment plants existing in the State. The site for development of Integrated Solid Waste Management Plant has been shifted to Chandrapur and the issue of legacy waste at Boragaon shall be addressed. 15-20% of the legacy waste has been treated, and in another 6 months it is expected that the entire legacy waste shall be treated. It was informed that previously, it was planned to have 14 STPs of 157 MLD for Guwahati. However, after detailed assessment it is now proposed to have 4 STPs of 187 MLD at Guwahati.

Secretary (GDD), Assam informed that the JICA had appointed NJS Consultants for carrying out detailed survey and preparation of DPR for areas around Guwahati and based on the survey, it was suggested that instead of 14 decentralized STPs, 4 STPs of 187 MLD should be established. Further, the proposal/ DPR was submitted to CPHEEO in April 2021 for approval. Deputy Adviser, CPHEEO in a meeting held with State Government, JICA and DEA in June 2021 raised the issue with regard to specification of pipes and the response has been submitted. The meeting is again fixed for July 2021 and it is expected that approval for proposal/ DPR shall be obtained shortly thereafter.

Director General, NMCG highlighted that the timeline of NGT for completion of STPs is over and the States may take fresh permission from NGT for extension of timelines. Progress in Assam has been slow since the beginning of monitoring by CMC and the State Government needs to expedite the progress of the proposed projects.

Deputy Adviser, CPHEEO informed that the issues of designs of pipes and clear NOC of the land parcels for 4 STPs & intermediate pumping stations are required to be urgently finalized, as the earlier proposed 14 STP projects could not be initiated due to non-availability of land.

Principal Secretary (Environment), Assam informed that NOCs are in place and after approval of DPRs, tender shall be floated. Further, with regard to number of polluted river stretches, it was informed that Assam has provided details to CPCB and has requested reduction in number of polluted stretches.

Shri A. Sudhakar, Additional Director, CPCB informed that as per the directions of NGT, all the river stretches should achieve the MoEF&CC notified bathing standards and unless these rivers achieve the standards as per the 5 parameters (including BOD & fecal coliform), the polluted river stretches cannot be removed or considered as not polluted. Submission for de-listing made by States should have 2 years' continuous water quality monitoring data with 8

sets of reading for each year. This data will be verified by CPCB and recommendations of the CPCB shall be submitted to Hon'ble NGT for approval. This has already been communicated to all the States/UTs.

3. Jammu & Kashmir

Director, NRCD informed that there are 9 polluted river stretches identified in the State. The State has sewage generation of 523 MLD and there are 15 STPs of 139 MLD capacity, but only 11 STPs are operational. There is gap in sewage generation of 384 MLD. 10 STPs of 92.01 MLD are under construction and 28 STPs of 153 MLD are proposed. Even after these STPs are put in place, the gap of 138 MLD in sewage treatment shall still remain. State Government needs to inform the action proposed for bridging the remaining gap. Bio-remediation on identified polluted river stretches has not yet been taken up. 2 CETPs of 1.05 MLD are functional, 9 CETPs of 7.5 MLD are under construction and 10 CETPs of 5.1 MLD are proposed. Against the total municipal solid waste generation of 1526 TPD, 244 TPD of waste is being processed and work for 125 TPD and 270 TPD plants was to start from March, 2021. Progress of Devika river project is very slow, and work on construction of remaining 2 STPs has still not started. HUDD and UEED need to expedite finalisation of design and start the construction work. Out of 130 kms. of sewer lines to be laid, only 48 kms. has been laid till date since award of contract in January, 2019. Govt. of UT of J&K needs to expedite implementation of the project.

Principal Secretary (Housing & Urban), J&K informed that out of 139 MLD existing sewage treatment capacity, only 63% is being utilized. Efforts are being put in to utilize 100% of the existing STPs by increasing the household connections and interception and diversion of 13 Nallahs. 11 STPs of 96 MLD are under construction and plan has been approved for 13 STPs of 168 MLD and these shall roll out in the next month. Of the existing 15 STPs, 10 MLD STP at Bhagwati Nagar is under refurbishment and shall be operationalized by August 2021, after which all the 15 existing STPs in J&K shall be fully functional and compliant.

Director General, NMCG highlighted that the foundation stone for Devika project was laid by Hon'ble PM and the State should closely monitor the progress of the project. It was directed that NRCD officials should visit J&K and review the project on the ground.

Principal Secretary (Housing & Urban), J&K informed that project is being regularly monitored and penalties are being imposed on the contractors for delay. There were issues due to migration of labourers, the site was turned into micro-containment zone, land acquisition and utility shifting, which have been recently resolved. Issues in design and drawings have also been resolved. Laying of sewer network has progressed and the STPs under Devika Project are expected to be commissioned by March 2022. Development of Ghat in Package II is almost ready and will be completed by August 2021.

Secretary, Ministry of Jal Shakti also highlighted that the Devika project should be handled with utmost priority and be completed in a defined time frame.

4. Sikkim

Director, NRCD informed that there are 4 polluted river stretches (in Priority V) identified in the State. State has sewage generation of 47.7 MLD and there are 9 STPs of 22.5 MLD capacity having utilization capacity of 54.3%. State Government needs to put in efforts to increase the utilization capacity. Gap in sewage treatment capacity is 25.18 MLD (including rural areas). 1 STP of 3.25 MLD is under construction and 7 STPs of 11.33 MLD are proposed. The status of proposed STPs remains the same for the last few months.

ED (Tech), NMCG informed that the completion timeline for the proposed 7 STPs varies between December 2022 – 2028, which is not acceptable. Further, MPR from Sikkim was last received for the month of March 2021 and the State Governments needs to ensure timely submission of MPRs.

Chief Conservator (Forest), Sikkim attended the meeting with the concerned State Department officers. The State PHED official informed that 6 STPs are operational and complying with the norms, 3 new STPs have been commissioned, but the household connections are yet to be completed due to recent lockdown in the State. With regard to Zone II sewerage system, part of main trunk line got affected due to landslide. Land acquisition is in process for STP proposed at Namchi and as land identified for STP at Jorhang was objected by public, new land has been identified and process of acquisition is in progress. With regard to new STPs, funding avenues are being explored by the State and NRCD has been approached for STP at Chungthang.

Secretary, Ministry of Jal Shakti indicated that in absence of Chief Secretary of the State, respective Principal Secretaries should attend the CMC meetings.

5. Daman, Diu and Dadra Nagar Haveli (DD & DNH)

Scientist B, NRCD informed that out of 2 STPs operational in UT, one STP of 13 MLD capacity at Dadra Nagar Haveli is highly underutilized (2.8 MLD). This is mainly due to non-completion of household connections as reported in May 2021 MPR. 4870 households connections have been made out of proposed 24105 connections, which implies only 2% progress have been made since February 2021. Status of proposed 16 MLD STP at Daman (at DPR stage) remains same. With regard to 7 MLD STP at Diu, technical sanction has been accorded and NIT is to be published soon. Status with regard to phyto-remediation and bioremediation for 13 drains and the status of standalone modular STPs for Damanwada, Magarwada, Pariyari and Patlara panchayats remains the same as reported previously. Status with regard to industrial pollution management and solid waste management also remains the same. The UT needs to submit more information with regard to groundwater regulation and management of e-flow of rivers (including details of assessment of e-flow, notification of minimum e-flow to be maintained in the rivers and mechanism adopted for monitoring the e-flow in the rivers). Action Plan for management of coastal pollution is yet to be submitted by the UT to CPCB.

Chief Conservator of Forest cum Member Secretary, Pollution Control Committee, DD & DNH informed that only one river i.e. Damanganga has been identified as the polluted river stretch in the UT. The river is being regularly monitored by PCC at 9 locations and since past 2 years while BOD levels in the river are observed to be within the limit of less than 3 mg/l, Fecal Coliform levels are yet to achieve the desired limit at 2 locations. This issue is to be addressed by deploying phytoremediation measures. However, due to recent rise in COVID cases and the impact of cyclone Tauktae, not much progress could be achieved in this regard. Further, it was informed that out of 24105 proposed households connections, 4870 households have been connected to the 13 MLD STP at Dadra Nagar Haveli and the STP is now receiving 4 MLD of sewage. All ETPs are functional. With regard to the Action Plan for Management of Pollution in Coastal Plain, it was informed that National Centre for Coastal Research (NCCR), Chennai has been engaged for preparation of DPRs. Further, Zoological Survey of India has also been approached for the same. NIO has conducted a study across the

UT and had reported that no major pollution issues relates to marine and coastal areas of the UT. For construction of 7 MLD STP at Diu, tenders will be invited shortly. DPR for 16 MLD STP at Daman was submitted to MoEF&CC for financial assistance, and alternate funding sources are to be explored in case of non-responsiveness from MoEF&CC. All drains in the UT have been cleared before monsoon and all encroachments have been removed. Massive plantation has been carried out in mangroves and other forest lands for protection of coastal areas at Diu.

6. Manipur

ED Tech, NMCG highlighted that the on-going STP projects of 16 MLD and 1 MLD for Nambul river project have shown significant progress from February 2021 onwards. State needs to closely monitor the progress in order to keep up the pace. Status of proposed 49 MLD STP remains the same and no completion timeline has been provided in the MPR. 1 CETP of 400 KLD existing in the State is yet to be made operational. The MPRs for the months of March, April and May were submitted along with the MPR of June 2021 on 1st July 2021. State should ensure timely submission of MPRs in future. Status of Multi Segregation Shed at Chothe Village of 630.75 cum capacity mentioned in the earlier MPR of February, 2021 has not been reflected in the June, 2021 MPR.

Scientist B, NRCD highlighted that in the 9th meeting of CMC held on 4th March 2021, State Govt was directed to provide details regarding effluent quality of the 5 industrial units connected to CETPs and their compliance in the MPR. This has still not been provided in the subsequent MPRs. Further, previously it was reported that 269.5 TPD of solid waste management facilities are existing in the State, but in the updated MPRs it is mentioned that 116.5 TPD of processing facilities are existing. State needs to provide justification for the same.

Additional Chief Secretary (Environment & Forest), Manipur attended the meeting physically and informed that works of the on-going 16 MLD (62%) and 1 MLD (30%) STPs are being closely monitored by the State. Efforts are being made to complete the projects before the expected completion timeline of March 2022. It was informed that out of proposed 12000 household connections, 4600 household connections have been made and the 27 MLD existing STP is presently operational at 10.35 MLD. The works were greatly affected by the rise in COVID-19 cases and recent lockdown imposed in the State. The household

connections are expected to be complete by December 2021. 49 MLD STP proposed has been cleared by DEA for external funding opportunities and vetted by IIT Guwahati. Further, DPR has been submitted to NRCD for treatment of 16.75 MLD of sewage through bio-remediation and 50 KLD Faecal Sludge and Septage Management (FSSM). With regard to the DPRs for 7 polluted stretches (in Priority V), it was informed that these are under preparation and shall be submitted shortly to the Ministry of Jal Shakti for sanction. With regard to the non-functional CETP, it was informed that Manipur Industrial Development Corporation is preparing DPR with an estimated cost of Rs. 1.77 crore and after sanctioning of the DPR, implementation will take 3 months to complete and connect the industries to CETP. Health Department, Manipur is taking action for treatment of biomedical waste and is establishing Biomedical Waste Treatment Plant, which is proposed to become operational by end of 2021. Further, it was informed that the Multi Segregation Shed at Chothe Village has been completed and shall be inaugurated shortly by the Chief Minister. With regard to the incomplete information and discrepancies in the data submitted, it was assured that shortcomings in the MPR will be rectified in next submission and State shall ensure timely submissions of MPRs to the Ministry.

Secretary, Ministry of Jal Shakti directed NRCD to look into the proposal submitted by the State and to provide appropriate response to the State.

7. Meghalaya

Scientist B, NRCD informed that there is gap in sewage treatment of 73 MLD. 8 STPs of 1.85 MLD are existing in the State. 1 Septage Treatment Plant of 0.115 MLD at Shillong (90%) is under construction and works got delayed due recent lockdown in State. 0.04 MLD Faecal Sludge Treatment Plant at Khliehriat is at 70% progress. FSSM of 0.35 MLD at Shillong is having 10% physical progress. With regard to 5 number of Onsite treatment plants proposed at Shillong, land for 4 have been cleared while negotiation is in process for the remaining one which got delayed due to lockdown. Status with regard to 0.105 STP at Eastern Air Command, Shillong has not been provided in the MPR. There are 260 water polluting industries having discharge of 3.5 MLD. 254 industries are having functional ETPs. It has been reported that 10 ETPs of 0.002 MLD each at Tura are under progress, but their status and completion timeline has not been provided. The State generates 245 TPD of municipal solid waste and processing plant of 8 TPD is functional. 65 MLD processing plant

has been completed, but it is yet to be operationalized. Processing facility of 170 TPD is under trial and plant of 0.1 TPD at Khliehriat is under progress. Further, 10 processing plants of 166 TPD are proposed. The State Government needs to provide latest status.

Additional PCCF, Meghalaya informed that 90% works have been completed of the 0.115 MLD FSTP at Shillong. Machinery for the plant is yet to be procured, after which the plant shall be made functional. Regarding scheduled date of completion for 0.04 MLD FSTP at Khliehriat and status of 0.105 MLD STP at Shillong, it was told that information will be submitted in the next MPR. 0.04 MLD FSTP at Khliehriat is 70% completed. FSSM of 0.35 MLD having 10% physical progress is expected to be completed by March 2023. With regard to the 5 onsite STPs of total 13.42 MLD capacity at Shillong and STP at Eastern Air Command, State shall be submitting the status separately. With regard to the FSSM at Jowai town, it was informed that the Meghalaya Government has approached Government of Odisha for providing technical assistance for the FSSM project and the Odisha Government has agreed to provide assistance. Some of the solid waste processing plants are under trial and some are yet to be made operational due to which the capacity utilization of the solid waste processing facilities is low. It was informed that NIT has been floated for in-situ bioremediation of 5 drains (out of 32 drains) falling to Umkhras and Umshyrpi rivers at Shillong. Also, bioremediation works for Kyrhuhkhla and Lukha Rivers (of Priority IV & V respectively) are being implemented by District Administration under Meghalaya Environment Protection & Restoration fund.

State Government was directed to update information in their MPR submissions.

8. Nagaland

Scientist B, NRCD informed that 25.43 MLD STP at Dimapur is yet to be made operational and 79% of the related sewer network works have been completed. Previously it was reported that 2 FSTPs of 20 KLD and 90 KLD are existing at Dimapur and Kohima respectively, however in the latest MPRs details of these 2 FSTPs have not been provided. There are 5 water polluting industries in the State, generating 102 KLD of industrial discharge. 3 ETPs of 102 KLD capacity are operational and complying, and 2 ETPs of 30 KLD are reported to be under process. Their status and completion timeline needs to be provided. The State generates 304.3 TPD of municipal solid waste, of which 132.05 TPD is being processed. However,

there exists only 50 TPD capacity processing plant and a plastic recycling unit. Action plan to bridge the gap in solid waste processing is to be provided by the State Government.

The official from PHED, Nagaland informed the project at Dimapur got delayed due to non-availability of land for sewer laying. The issue has been resolved and the project is now making good progress and is expected to be complete within its revised timeline. With regard to the shortcomings in the MPR, the State Representative stated that the matter will be looked into and rectified.

9. Mizoram

ED Tech, NMCG highlighted that the low utilization of the existing 10 MLD STP at Aizawl is a concern, which is due to pending house service connections. After augmentation in the flow reaching the STP, State Government needs to ensure that treated water from the STP is optimally reused.

Secretary, IWRD, Mizoram along with concerned official from State Department attended the meeting. He informed that the STP is receiving only 0.3 MLD of sewage, as only 3125 of 19,000 households have been connected to the STP. The progress of work was halted in the last 2 months due to complete lockdown imposed in the State, and the work is now being resumed.

10. Tripura

Director, NRCD informed that out of total sewage generation of 82.4 MLD in the State, sewage treatment capacity exists only for 8.72 MLD (8 MLD STP & 720 KLD FSTP at Agartala), thus leaving a huge gap of 73.68 MLD in sewage treatment which needs to be addressed urgently. Low capacity utilization of existing 8 MLD STP due to incomplete laterals/house service connections and slow progress on STP of 8 MLD (under construction) were also highlighted.

Due to connectivity issues, response from the State could not be properly heard and State was directed to submit written information. As per the information provided by the State Government, progress on different conservation measures taken up and/or implemented vis-à-vis the approved action plan is as under:-

- (i) As per the directions of NGT, Haora river has been identified for rejuvenation, which would serve as a model for other polluted stretches.
- (ii) To increase capacity utilization of STP of 8 MLD at Agartala, expansion of sewer network and house service connections are in progress and are likely to be completed in 18 months. Also, works for STP of 8 MLD proposed at Akhuaura ICP, Agartala are under progress.
- (iii) As many as 210 drains discharging into polluted river stretches have been identified by ULBs for in-situ bio-remediation. Presently, survey work is going on to collect baseline information of these drains. Tender evaluation for bio-remediation on 5 drains on pilot basis at Agartala has been completed.
- (iv) In case of proposed 15 nos. of Faecal Sludge Treatment Plants of total capacity 600 KLD for all ULBs in the State approved under Swachh Bharat Mission (SBM), technical specifications/tender documents have been finalized and uploaded on the website of Urban Development Department, Govt of Tripura. Also, land has been identified and tendering process has been initiated by the ULBs.
- (v) Solid waste processing facility exists for 256 TPD (250 TPD composting plant at Agartala & 6 TPD at Kamalpur Nagar Pachayat of District Dhalai) out of total municipal waste generation of 411.32 TPD in the State.

The State Government is required to expedite progress of the proposed FSTPs and the STP under construction to meet the timelines stipulated by NGT. For the existing STP of 8 MLD at Agartala town, capacity utilization is to be increased. The State Government was also asked to expedite in-situ bio-remediation for all identified drains discharging into polluted river stretches as per the directions of NGT.

11. Maharashtra

Director, NRCD informed that total sewage generation in the State is estimated as 9757 MLD, which includes nearly 2500 MLD of sewage from Mumbai city. 142 STPs of 7747 MLD are installed with utilization capacity of 4123 MLD. Out of 142 STPs, 7 STPs of 227.56 MLD capacity were reported to be non-operational. State Government needs to take necessary action on priority to expedite commissioning of these STPs. In case of 34 non-compliant STPs which includes 2 STPs of 757 MLD & 240 MLD in Mumbai, MPCB was requested to ensure proper functioning of all STPs in the State to meet the prescribed norms.

In case of 53 polluted river stretches, there is a gap of 1023.26 MLD between sewage generation and treatment. To address the said gap, present status of the proposed STPs was informed as below:

Status	STPs	Capacity (in MLD)
DPR preparation under progress	14	97.30
Awaiting sanction of DPR	15	235.00
Under tendering and/or works to be awarded	20	528.00
Under construction	29	437.86
Total	78	1298.16

With regard to industrial effluent management in polluted river stretches, it was informed that CETPs of total capacity 83.3 MLD are operational in different industrial estates/areas. To meet the gap of effluent treatment, three CETPs of capacity 2.84 MLD (1 MLD at Satpur in District Nashik, 0.64 MLD at Sangli and 1.2 MLD at Ichalkaranji in District Kolhapur) are proposed, which are still in the initial stages of implementation. MPCB needs to expedite implementation of the proposed CETPs, and also ensure proper functioning of all the CETPs in the State to meet the prescribed norms. In case of solid waste management in the State, it was informed that processing facilities exist for 16037 TPD of municipal solid waste against total generation of 22945 TPD. These include 337 composting plants, 82 vermi-composting facilities, 62 bio-methanization plants, one waste to energy (W to E) plant and 26 RDF plants. Also, 18 landfill sites are presently under development out of 320 sites proposed to cater to solid waste generation from 394 ULBs in the State. For C&D wastes, processing facilities for 5 major ULBs (MCGM, Navi Mumbai MC, Thane MC, Pimpri-Chinchwad MC and Pune MC) are proposed to cater to 2050 TPD of such waste. In case of the project for pollution abatement of river Mula Mutha at Pune under NRCP, concerns were raised on negligible progress. In case of land acquisition for 11 STPs under the project, it was informed that the State Government has allowed construction of STPs in the flood line and thus facilitating land acquisition for 3 STPs at Botanical Garden, Dhanori and Warje. However, land parcels for 4 of the STPs are yet to be acquired by the project implementing agency Pune Municipal Corporation (PMC). In view of tenders invited for the project by PMC on 24th February, 2021, the State Government was asked to ensure immediate possession of land for all the STPs by PMC.

It was also informed that penalty of Rs.29.75 crore was imposed by NGT on BMC for letting untreated sewage into the sea through 85 major outfalls, and to pay Rs.4.25 crore as compensation for environmental damage to CPCB till remedial measures are taken.

In this regard, Chief Engineer, BMC stated that compliance of Hon'ble NGT order is in progress. Colaba STP of 37 MLD has been commissioned in 2020. For other 7 STPs of 2464 MLD, tenders have been invited. Review committee has been appointed for scrutiny of the bids.

Joint Director (WPC), MPCB informed that as Maharashtra was again badly hit by COVID-19, the progress is slow for the ongoing projects since February 2021. The number of ongoing STPs has increased from 21 to 29. Similarly, number of STPs in tendering stage have increased from 12 to 14 of 472 MLD capacity. DPRs for 16 STPs are yet to be approved. Large number of STPs are reported to non-complying with the new standards of BOD 10 mg/l. State has directed to upgrade the existing STPs to achieve the new norms. With regard to action plan for coastal areas in the State, it was informed that District Environment Plan for 21 coastal towns were submitted to CPCB in December, 2019 and the plan is being implemented and being monitored. The State Government was directed to provide update status in the MPRs.

Joint Secretary, Urban Development Department, Maharashtra informed that State had planned implementation of works for bridging the gap of 2000 MLD in sewage treatment. However, due to COVID-19 pandemic and the subsequent financial constraints, the same could not be taken up. Further, projects for additional capacity are being proposed to be sanctioned either under Jal Jeevan Mission or under State scheme within 2022 and they shall be commissioned in 2 years thereafter. State Government is constantly reviewing the ongoing projects and 50 STPs of around 900 MLD shall be completed within a year.

On a query from DG, NMCG, the Joint Adviser, CPHEEO informed that guidelines are under consideration for Jal Jeevan Mission (Urban) and are expected to be finalized in the near future.

12. Odisha

Director, NRCD informed that as per CPCB report, sewage generation in the State is estimated at 1273 MLD, whereas the same is reported to be 4200 MLD in the State dossier

forwarded to this Ministry earlier. In case of six major towns in the State (Bhubaneswar, Cuttack, Puri, Sambalpur, Rourkela and Talcher), it was earlier informed as 367 MLD, but now it is reported to be 298.55 MLD. The State Government was requested to reconcile and firm up the data for further discussions. It was further informed that against total sewage generation of 367 MLD from six major towns, sewage treatment capacity created so far is 266.5 MLD with 10 STPs installed in these towns. Meanwhile, with more sewage treatment of 104 MLD and the FSTPs planned for these towns, there would be no gap between sewage generation and treatment. However, the same would not hold good for the State as a whole. Three STPs of total capacity 104 MLD were under construction from the resources mobilized by the State. One STP of 48 MLD at Rokat is scheduled for completion by June, 2021. STPs of 40 MLD at Dhanupalli, Sambalpur and 16 MLD at Mattagajpur, Cuttack were reported to be 93% & 82% complete. The State Government to expedite networking and/or house service connections to ensure adequate inflow to these STPs for their optimal utilization. In case of industrial effluent management, it was informed that the no CETP exists in the State. There are 1030 water polluting industries in the State generating 803 MLD of effluent, and all these units are equipped with ETPs. The State Government needs to ensure compliance of industrial units with the environmental norms and not contribute to pollution load to any of polluted river stretches and/or the recipient water bodies. Regarding municipal solid waste management, it was informed that out of total municipal waste generation of 1772 TPD in the State, waste processing facility (Open dumping, Micro-composting) is available and operational for 853 TPD. For Bhubaneswar and Cuttack, agreement has been signed for setting up 550 TPD centralized Waste to Energy Plant. The State Government was asked to expedite the same in order to ensure compliance to the Solid Waste Management Rules, 2018. Regarding action plans for coastal areas/towns (4 nos) and rejuvenation of Kathajodi river (in its Cuttack stretch) to serve as a model, the State Government was asked to provide/update status in the MPRs.

Member Secretary, Odisha Water Supply & Sewerage Board informed that 5 new STPs are partially commissioned and their related I&D and household connections work is still in progress. STP at Rokat is to be completed by December 2021, STP at Mattagajpur by December 2021 (partially by August 2021) and STP at Dhanupalli by March 2022 (partially by September 2021). It was informed that 53 Septage Treatment Plants have been completed and 65 Septage Treatment Plants are in construction stage.

Secretary, Ministry of Jal Shakti highlighted that from next meeting onwards, in absence of Chief Secretary, the State should be represented by Principal Secretaries of respective State Departments.

13. Goa

Director, NRCD informed that 9 STPs of 78.35 MLD are existing in the State against total sewage generation of 112.53 MLD (based on actual assessment of waste water generation mainly in urban areas, including census towns). Remaining areas including the rural ones, are covered through septic/soak pit arrangement, and thus not requiring designed treatment facilities/plants. Utilization capacity of the STPs remains only 29 MLD and the State needs to expedite house connections. 5 STPs of 35.5 MLD are under construction. 3 STPs of 43 MLD are proposed, but works related to STPs have not yet started due to local issues and only sewer networking is in progress. The State Government was directed to expedite implementation of the ongoing and proposed STPs to meet the timelines set by NGT.

Secretary (Science, Technology & Environment), Goa informed that low capacity utilization (29 MLD) of the existing 78.35 MLD is partly due to 30 years' design period of the STPs and full capacity utilization would be achieved at a later stage only. However, almost all the sewage inflow received at the STPs is being treated fully. STPs under construction at Colva (7.5 MLD), Calangute (5.6 MLD) and Kavlem (15 MLD) were reported to be nearing completion in terms of civil works along with installation of electrical and mechanical equipments. However, their commissioning is delayed for want of house service connections, electrical connections, pumping arrangements and these are expected to be complete by December, 2021 only. With regard to proposed STPs, locals are being persuaded by the State in order to overcome the local issues and to initiate the STP works. In compliance of the directions of NGT, polluted stretch of Sal river (Priority-III) has been identified to be developed as a model to showcase for other identified river stretches. Different conservation works on the said river stretch have been taken up for implementation with the target date of completion as March, 2022. With regard to solid waste management, integrated processing facilities exist only for 150 TPD at Saligao out of total 766 TPD municipal waste generated in the State. The same is proposed to be increased by 200 TPD (100 TPD at Saligao & 100 TPD at Cacora) by December, 2021. State has engaged TERI for further strengthening of EPR policy and has also enacted Plastic Waste Management Act to reduce plastic pollution.

Secretary, Ministry of Jal Shakti stressed that the facilities for integrated solid waste management proposed at Bainguinim (250 TPD) and Verna (250 TPD) need to be expedited to meet the respective timelines.

14. Andhra Pradesh

Scientist E, NRCD informed that there are 43 STPs of 515.85 MLD capacity existing in State. All are reported to be operational and complying with norms. However, 20 MLD STP at Kadapa and 6.5 MLD STP at Pulivendula have been reported to be partially operational. There exists a gap of 987 MLD in sewage treatment capacity and 474.07 MLD capacity STPs are under construction, however no significant progress is observed in the ongoing projects. Many of the projects in which works is yet to begin are being reported to be completed by December 2021, which may be verified and realistic timelines may be provided in the MPRs. Details of on-going/ proposed ETPs such as capacity, progress, expected date of completion, etc., need to be reported. Utilization capacity of the existing solid waste management facilities is very low (39%). Tenders have been called for 10 integrated solid waste management plants under PPP Model. Details on other action plans such as ground water regulation, RHW, floodplain & e-flow management, plantation, biodiversity, mining activity regulation, adoption of Model River and action against defaulters have not been provided in the MPRs.

Commissioner cum Director of Municipal Administration informed that for bridging the gap of 987 MLD in sewage treatment, work is under progress for 32 STPs of 474 MLD, which were expected to be completed by December 2021. However, due to financial constraints, work got delayed at few locations. 51.4 MLD STPs are under tendering and for remaining proposals, funding avenues are being explored. Further, it was informed that 64 FSTPs are proposed. Except for 11 FSTPs which are in re-tendering, works are under progress for remaining 53 FSTPs and are expected to be completed by December, 2021. It was informed that 6850 TPD of solid waste is generated in the State and 49 Compost plants are effectively functioning. State is considering adopting the Indore solid waste management model and is proposing to initiate 100% door to door solid waste collection from all households from August, 2021 onwards and is in the process of establishment of garbage transfer stations. 2 Waste to Energy plants have been completed, one at Guntur shall be functional in July 2021 and another one also at Guntur to be made operational within 2-3 months. 72 Integrated

SWM plants are under tendering. It was assured that information from remaining points shall be made part of the MPRs from next submission onwards.

Director General, NMCG pointed out that the State needs to expedite the ongoing projects as the completion timeline of June, 2021 for ongoing STP works has already been exhausted. The delay in commissioning the plants would result in the State being a defaulter for which fines may be levied on the State by NGT.

15. Kerala

Scientist E, NRCD highlighted about the delay in completion of the ongoing projects and that a large number of the projects in the State are also either at proposal/ tendering/ DPR stage and are yet to be grounded. State generates 3472 TPD of waste and there is a gap of 970 TPD in solid waste treatment. To address this issue, 10 Waste to Energy Plants have been proposed by the State, of which 2 plants are under construction, 3 plants are in DPR stage, 3 plants are in tendering stage and 2 plants are in initial stage. State needs to expedite the works of on-going and proposed projects.

Additional Chief Secretary (Environment), Kerala informed that delay in implementation of the STP projects is due to rise in COVID-19 cases. The matter of solid and liquid waste management is being reviewed regularly by Chief Secretary, Kerala.

Additional Chief Secretary (LSG), Kerala informed that delays in project were attributed to local government elections held in December 2020, then assembly elections held in April, 2021 and imposition of lockdown in the State during May-June 2021 due to rise in number of COVID-19 cases. However, during this period, the State Town and Country Planning Department has completed an assessment of the municipalities to identify the scope of requirement of FSTPs/ STPs. Technical assistance was provided by Sanitation Mission to the Local Governments. The assessment was done on the basis of groundwater table, land availability, distance of source from the proposed land, taking up projects and estimation of fund requirements. During this period, initiatives were taken to fast track the projects by bringing in the urban agglomerations and CFC funds into play. It was informed that there would not be any issue of funds, as the Local Governments have fairly good amount of funds and also funds are being covered under World Bank Project for Re-Build Kerala initiative. With regard to the solid waste management projects, it was informed that clearances,

including from coastal zone, are being taken due to which progress seems to be slow. Further, identification of suitable land is an issue, which is being taken up with different State Government Departments. However, a lot of progress has been achieved in segregation of waste and a systematic mechanism has been developed. Around 20,000 decentralized entrepreneur collections units have been engaged for the work. Material collection facilities have also come up in each Local Government. Clean Kerala Company has been engaged and a calendar of action has been prepared, on the basis of which the segregated waste is collected and the recyclables are being recycled through tying up with the recyclers. Result of this systematization will be visible within a month's time. Waste management is a top priority of the State at present.

Member Secretary, Kerala State Pollution Control Board (KSPCB) informed that Board along with State Urban Development Department is preparing updated dossier with regard to sewage management in the State, which shall help in addressing the issue of gap in sewage treatment capacity. As per the water quality monitoring data of the year 2020 (Jan-Dec), 8 rivers seem to have achieved the bathing quality standards and water quality has also improved in other rivers, including River Karamana, which is identified as Priority I river. It was reported that the under construction STP at Medical College, Thiruvananthapuram has been completed. Kerala Water Authority is proposing additional STPs in 28 ULBs and DPRs for the same have been prepared. Regular meetings of RRC are being held to monitor the progress of implementation of the Action Plans. KSPCB is regularly inspecting the industries and appropriate action is being taken against the defaulters. Similarly, other departments of the State are taking necessary actions as per the Action Plans and the direction of Hon'ble NGT.

16. Puducherry

Director General, NMCG directed the UT to provide details on the issue of non-compliance of the existing oxidation pond of 12.5 MLD and status of DPRs with regard to the 2 new proposed STPs of 3 MLD each at Puducherry and Karaikal.

Scientist E, NRCD informed that as reported by UT officials, the oxidation pond is non-complying with respect to the new standards of BOD 10 mg/l but is complying with the earlier norm of BOD of 30 mg/l.

Secretary (Science, Technology & Environment), Puducherry informed that due to increase in household connections the gap in sewage treatment has been reduced. PWD has initiated tenders for installation of online monitoring systems for the existing STPs.

Tenders have been finalized for treatment of legacy waste in the UT and, therefore, the issue of solid waste management in the UT shall be resolved in the near future. UT has submitted Action Plan for Coastal Pollution Management to CPCB. It was informed that out of 98 water polluting industries, 10 industries are found to be non-complying, PCC is regularly following up with them and most of the industries are on the verge of closing down. Steps are being taken for management of floodplain and e-flow and to prevent illegal sand mining in the UT.

Secretary (PWD), Puducherry informed that the oxidation ponds were commissioned in 1980 and were designed as per the old discharge standards (BOD of 30 mg/l). Efforts shall be put in to complying with the new norms of BOD 10 mg/l. Work order for preparation of DPRs for 2 STPs of 3 MLD each have been awarded to WAPCOS, site inspection has been conducted by the team, and efforts are being put in to comply with the timelines.

17. Telangana

Scientist E, NRCD informed that as per State MPR, 17 STPs with a total capacity of 210.4 MLD are under different stages of implementation, of which work is yet to start at 2 locations. Of the 17 STPs, 13 STPs of 80.41 MLD are proposed to be completed before December 2021 and remaining 4 STPs of 130 MLD are expected to be complete by March, 2022. Further, 111 STPs with total capacity of 1915 MLD are proposed.

Director General, NMCG highlighted that there exists a huge gap in sewage treatment capacity of 1861.45 MLD in the State. As informed by the State, the Action Plan for pollution management in Hyderabad is already available, while management of untreated sewage in other ULBs need to be addressed. The non-complying industries need to be closely monitored for ensuring compliance and State Pollution Control Board needs to take strict action against the defaulters. State Government needs to have a plan for monitoring the e-flow in the rivers. E-flow assessment may also be carried out by engaging experienced institutions. It was suggested that a separate session may be organized wherein experts in the field may be engaged, wherein methods for assessment of e-flows in perennial and non-perennial rivers may be discussed upon.

Chairman, HWSSB informed that out of 2750 MLD of sewage generated in the State, 2229 MLD sewage alone is generated in Hyderabad. STPs of 770 MLD are operational and are complying with the norms. Online continuous monitoring systems are in place in all STPs. With regard to the proposed 31 STPs of 1215 MLD (under HAM), it was informed that one package has been successfully tendered and works for 17 STPs have started. This shall address the Hussain Sagar Catchment area and is expected to be completed within 2 years.

With regard to the other 2 packages under HAM, it was informed that a meeting was held in the morning with Minister of Urban Development, wherein it was agreed to sanction projects for 14 STPs of approx. 800 MLD. This shall take care of the River Musi stretch-I. Co-treatment of septage with STP is being taken up and in places not having STPs and sewer network, State is planning to construct FSTPs.

Director General, NMCG appreciated the State's efforts in adopting HAM model for developing sewerage infrastructure and directed the State to document the information and share it with Ministry of Jal Shakti, so that the best practices can be circulated to all the States across India.

With regard to other parts of Telangana, Member Secretary, Telangana State Pollution Control Board (TSPCB) informed that 72 STPs of 315 MLD capacity are proposed, of which DPRs have been prepared for 42 STPs and DPRs are under preparation for 30 STPs. Due to paucity of funds, not much progress has been made. It was also informed that Chief Secretary, Telangana has also requested State Departments to sanction some projects, but due to rise in COVID-19 cases not much progress could be made. Utilization of 6 existing STPs of 116 MLD (along PRS of III, IV & V) is only 36 MLD. There is huge gap in sewage treatment at Dubba Nizamabad, for which funds are being arranged. It was informed that considerable progress has been made in the ongoing 17 STPs, including initiation of works in a number of projects. Further, 374 industries are being monitored online and 84 industries are on ZLD. 47 industries are found to be non-compliant, of which 9 industries were closed and directions were issued to 38 industries. It was informed that sites have been inspected and maps have been prepared for management of flood plains. With regard to e-flow management, State Irrigation Department had informed that due to non-perennial nature of the rivers, assessment could not be taken up. However as suggested by DG, NMCG the State shall look into the technical aspects of the issue. With regard to solid waste management, it was informed that processing facilities shall be established in all 141 municipalities: Works

have been completed in 52 municipalities and works are going on in 75 municipalities. Further, solid waste is being managed in all 12,700 gram-panchayats in the State by creation of compost shed, 100% door to door collections, deployment of tractors for collection of waste and installation of recyclers for management of plastic waste. It was also informed that 71 municipalities are adopting FSSM of total 1565 KLD, out of which works have been completed in 18 ULBs and work in 17 ULBs is in progress.

Director General, NMCG directed the State to go through the document “Urban River Development Plan” prepared by NMCG in collaboration with MoHUA and another document regarding ‘Strategic Guidelines for Mainstreaming Urban River-sensitive Master Plans’, which are available on the NMCG website.

18. Lakshadweep

Scientist E, NRCD highlighted that the UT should submit Monthly Progress Reports in a timely manner, and Action Plan for Coastal Pollution Management is yet to be submitted to CPCB.

Secretary (Environment & Forest), Lakshadweep informed that MPRs shall be submitted on time by the UT. Draft Action Plan for Coastal Pollution Management has been prepared, but considering the proposed expansion of tourism services in the UT, after consultation with scientific institutions such as NCSCM & NIO, the final Action Plan shall be submitted accordingly within the next 15-20 days. At present, there is only one STP of 24 KLD in the UT. It is now proposed that all commercial tourist establishment in the islands should mandatory install STPs. With regard to marine conservation, UT has already declared 685 sq.km area of lagoons as marine conservation reserves to protect marine biodiversity such as corals. 7 more similar conservation reserves shall be notified and are under approval process. This shall lead to 35-37% of the lagoon area under protected area management. 100% door to door collection and segregation of municipal solid waste is being done and the non-biodegradable waste is sent to mainland for treatment. As of July 2021, this year 358 metric tonnes of waste has been transported for treatment.

19. Gujarat

Joint Director, NRCD highlighted that in the past 6 months, construction of 7 STPs have been completed and 3 new STPs of 98 MLD are proposed to be taken up in addition to the 60 already proposed STPs. Pilot project for treatment through insitu bio- remediation have been taken up at 3 municipalities, and after successful results the same shall be replicated at other locations. Out of 73 existing STPs in the State, 27 STPs are reported to be non-complying and out of 34 operational CETPs, 18 CETPs are reported to be non-complying. State needs to provide status with regard to the action taken to resolve the land acquisition issues for Tapi rejuvenation project. State also needs to expedite the deep sea disposal project, as while the Jetpur tender has been finalized, but for Ahmedabad region decision is still pending. Completion timelines of the under construction STPs need to be re-looked and revised timelines are to be provided. State is yet to submit Action Plan for Coastal Pollution Management to CPCB.

Commissioner, Municipalities Administration & Additional Chief Executive Officer-GUDM; Commissioner, Surat Municipal Corporation; Additional Secretary, Forest & Environment Department, senior officers from Ahmedabad Municipal Corporation, Vadodara Municipal Corporation, Gujarat Water Supply & Sewerage Board (GWSSB) as well as other concerned Departments attended the meeting along with Member Secretary, Gujarat Pollution Control Board.

Member Secretary, Gujarat Pollution Control Board informed that out of 27 STPs found to be non-complying, action have been taken against 13 units and show-cause notices have been issued to 14 STPs. With regard to the 18 non-complying CETPs, 2 CETPs are now found to be complying. Show-cause notices have been issued to 13 CETPs. 5 CETPs of the State are under trial run after closure order of the Board. It was also informed that Environmental Compensation of Rs. 21.87 crores has been imposed on the non-complying CETPs and Rs. 13.72 crores has been recovered so far. With regard to Deep Sea Effluent Disposal Pipeline, tender is finalized in case of Jetpur region & work order has been issued. In case of Ahmedabad region, as the final disposal point falls on the upstream of the proposed Kalpsar Reservoir, the matter is under active consideration of Government of Gujarat. Two meetings convened under the Chairmanship of Chief Secretary, Gujarat to find an alternative for disposal of effluent and to discuss the issues in implementation of deep sea effluent disposal pipeline project for industrial areas of Ahmedabad region.

Commissioner, Municipalities Administration & Additional Chief Executive Officer-GUDM informed that some land acquisition issues are pending at Collector office & Revenue Department levels in case of STPs of rural area under Tapi Shuddhikaran project. Same will be taken on priority basis and GWSSB shall start work as soon as the land acquisition issues are resolved. He further added that the STPs are planned in such a way that each & every Municipality will have its own STP to cater to its sewage generation. To improve the sustenance of these STPs, State is implementing solar power provisions in these STPs. In big cities such as Ahmedabad, Vadodara, Rajkot and Surat, considering the future expansion, upgradation of existing STPs and commissioning of new STPs are being taken up.

Commissioner, Surat Municipal Corporation submitted that out of 15 STPs planned in Surat under Tapi Shuddhikaran, 3 STPs have been made operational, work is in progress for 4 STPs and land has been taken possession of and soil investigation is in progress for 6 STPs. Land possession in case of 1st STP is pending and for 2nd STP final approval is pending.

Director General, NMCG appreciated that the Gujarat is a leading State as far as reuse of treated sewage is concerned. He suggested that priority should be given to the Tapi Shuddhikaran which is a project of concern and to sort out the issues as early as possible. Further, it was suggested that State can adopt combination of FSTP + STP models for treatment of sewage.

20. Karnataka

Joint Director, NRCD highlighted the issue of low capacity utilization of the existing STPs (69%). In the past 6 months, slow physical progress has been observed in the ongoing STP projects and progress of almost 23 STPs appears to be stagnant. Out of 141 STPs, 13 STPs have been reported to be non-operational in the State. 251 ETPs have been reported as non-compliant. Physical progress of 55 under construction STPs have not been provided. State needs to provide details of action taken with regard to e-flow management of the rivers and floodplain management.

Principal Secretary (Environment), Karnataka cum Chairman, KPCB responded that legal notices have been issued as per Water Act to the non-complying industries. With regard to the 2 under construction CETPs of 7.2 MLD, it was informed that marginal progress has been achieved, 1.2 MLD CETP at Bidar is nearly 100 % complete and 5 MLD CETP at Yadgir has

achieved 80% progress and shall be made operational in the next few months. With regard to Expression of Interest of 3 proposed CETPs, land and capital issues are yet to be resolved. There is an increase in processing of solid waste in the State from 5800 TPD to 6200 TPD. State has submitted Action Plan for Coastal Pollution Management to CPCB in the first week of July, 2021. With regard to the low utilization capacity of the existing STPs, it was informed that houses are not connected to the main sewer line and sufficient tools are not available to take coercive action against the defaulting houses. Out of the 13 STPs which were reported to non-operational, 3 STPs have been made operational. With regard to the 251 non-complying ETPs, an expenditure of Rs. 5.6 crore has been made to resolve the issues and improvement in compliance status are expected to be reported soon. Out of 55 under construction STPs, physical progress has improved in 40 STPs.

ED (Tech) NMCG pointed out that completion timeline for the ongoing projects needs to be reviewed as many of the STPs in progress still shows completion timeline of February/March 2021.

Director General, NMCG directed State to provide adequate information in the MPRs and reiterated that completion timeline of NGT has been exhausted, State may request NGT for any relaxation in timeline.

21. Tamil Nadu

Joint Director, NRCD highlighted that data for sewage generation increased from 3729.16 MLD to 3786.16 MLD as per the latest MPR. 4 CETPs are reported to be non-complying. 37 STPs in the proposal stage are observed to be progressing very slowly despite the gap in treatment capacity of 1400 MLD. Out of 45 under construction STPs, incremental progress of 17 STPs is held up from past 6 months and work for 1 STP has yet not started. State needs to ensure timely submissions of MPRs and compliance status with regard to the decisions taken in the meeting. 28 STPs are still in DPR stage along PRS, which need to be expedited. Action Plan for Coastal Pollution Management is yet not submitted by the State to CPCB.

Principal Secretary (Environment, Climate Change and Forests), Tamil Nadu stated that due to rise in COVID-19 cases and recent lockdown imposed in the State, slow progress of under-construction STPs have been reported. Further, it was informed that Action Plan for Coastal

Pollution Management has been already submitted to CPCB and approval on the same has been received from CPCB.

Representative from Municipal Corporation, Chennai informed that due to Covid-19 pandemic, there is delay in progress of the ongoing STPs. In case of Solid Waste Management, out of total 135 TPD of solid waste generated in Chennai, 28 TPD of waste is processed and by October 2021, remaining waste shall also be processed.

ED (Tech), NMCG highlighted that industries happen to be the major concern for the State. 10 CETPs of 41 MLD are proposed and DPRs for these have been forwarded to GoI for funding. In absence of these CETPs, regulation and compliance of the industries is questionable, hence this issue needs to be looked into at the State level and status may be reported.

Director General, NMCG raised serious concern over little progress with regard to the 10 proposed CETPs and the major challenge of compliance of the industrial units.

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22. Andaman & Nicobar

Joint Director, NRCD highlighted that MPRs are not being received regularly and incremental progress of the under construction STPs is not provided. UT needs to take necessary action against 27 non-complying STPs and 15 non-complying ETPs. UT is yet to submit Action Plan for Coastal Pollution Management to CPCB.

Secretary (Department of Science & Technology), Andaman & Nicobar informed that number of operational STPs has increased by 8 in last few months and number of complying STPs has also increased to 32 and number of non-compliance STPs has reduced from 51 to 25. With regards the remaining 24 STPs, notices have been issued to 9 STPs and these are expected to comply within 10 to 15 days, and notices will be issued to rest of the 15 STPs within 7 days. Inspections have been completed and by end of July/August captive STPs will be complying. FSTP in Port Blair is 90% complete and only installation of machinery is required, which got delayed due to rise in Covid-19 cases. In case of decentralized STPs, tendering process has been completed and will be awarded soon. These STPs shall be completed within next two years. With regard to the industrial pollution management, it was informed that there are around 700 industrial units of which only 36 units require ETPs. 21

units have ETPs installed, 6 units have closed down and show cause notices have been issued to the remaining 9 units. It was informed that there is little confusion with regard to solid waste management data. It is estimated that 121 TPD of solid waste is generated and around 50 TPD of waste processed. However, as per the Municipal Corporation, 90 TPD of waste is generated and the entire waste generated is being treated. Action Plan for Coastal Pollution Management will be submitted by mid-July 2021. National Institute of Ocean Technology has already conducted survey and study in and around Port Blair. The remedial measures will be decided in the meeting to finalize the coastal rejuvenation plan in July itself.

DG, NMCG appreciated the efforts being put in by the UT Administration and suggested that proposed and on-going projects should be closely monitored to avoid any delay in the works. It was suggested that details of the marine parks can be shared along with the MPRs so that the same can be made part of the quarterly submissions to NGT.

23. Bihar

Senior Environmental Specialist, NMCG informed that 2 mission visits have been done in December 2020 and March 2021. It was informed that along polluted river stretches other than river Ganga, DPRs for towns of Raxaul, Jogbani, Harinagar & Nakatiaganj are yet to be sanctioned and funds to be tied up by the State Government. Along river Ganga, revised DPRs for Manihari, Teghra, Dighwara & Jamalpur are awaited. With regard to network projects, permissions from RCD, PMC, NHAI & Railways are pending. For removal of pipes from Beur & Saidpur, permission from PMC is also pending for a long time. Land NOC is pending for IPSs at Maner, Sultanganj & Digha. It was further informed that land NOC for Bakhtiyarpur has been received. For under tendering projects, it was informed that 6 projects were under tendering out of which work has been awarded for Hajipur, financial bids have been opened for Kahalgaon project. For Khagaria project, necessary guidance has been given by NMCG and financial bid is expected to be opened soon.

Managing Director, BUIDCO informed that DPRs for Dighwara, Manihari, Teghra, Dehri & Arval towns have been submitted to NMCG. DPRs for Narkatiaganj, Jogbani & Ramnagar have been received from NEERI, which is under examination at BUIDCO and shall be sent to NMCG within a week. The DPR for Harinagar shall also be sent to NMCG by next week. The DPR for Raxaul has not been prepared by NEERI as field survey could not be done due to COVID restrictions. The land NOC for Maner & Fatuah is under progress. However, land

NOC for Digha has been received and work has commenced. With respect to land issue for Sultanganj, it was informed that site visit was carried out along with officials of NMCG and it was observed that the project can be completed without construction of IPS.

Director General, NMCG requested State officials that after site verification, the component of IPS may be removed and the Sultanganj project should be completed early. State was directed to expedite the ongoing projects sanctioned under Namami Gange and was directed to avoid delays in completion of the projects. State was also suggested to look for alternate funding options for newly proposed projects and to go for FSTPs for smaller towns rather than constructing STPs. The issue of utilization of assets created under RFD, Patna was also raised and State was requested to develop the same.

ED (Projects), NMCG indicated that critical issues pertaining to ongoing projects needs to resolved for timely completion of projects.

ED (Tech), NMCG highlighted that State had informed that floodplain demarcation is not possible along rivers. Engineer-in-chief, WR Department informed that a scientific study has been initiated and a report shall be submitted soon to NMCG.

24. Jharkhand

Senior Environmental Specialist, NMCG highlighted that 452 MLD sewage is generated in the State for which 15 STPs of 103.55 MLD exist. Further projects of 92.5 MLD capacity are under construction. Slow progress has been observed in the ongoing STP project of 36 MLD at Adityapur. With respect to Rajmahal project, it was informed that the STP works have been completed, but the last mile sewer connections are in progress. Trial run for the STP has commenced by connecting 1 SPS. With regard to proposed projects, Phusro project is under tendering and bids have been received. Dhanbad, Ramgarh & Mango are yet to be awarded.

Director (SUDA), Jharkhand informed that due to land disputes not much progress has been made at Adityapur STP and 37 MLD STP at Ranchi has been re-awarded. Rajmahal STP is under trial run. It was further informed that 10 bids have been received for Phusro and works will be awarded within a week. Regarding Dhanbad & Ramgarh project, it was informed that CSR funding is sought from DVC & BCCL but response is awaited. With regard to bioremediation/ in-situ remediation proposed at Chas, Ranchi and Mango, DPRs are yet to be received from NEERI. State has developed Integrated Liquid Waste Management Plan, as a

part of which FSTPs are being installed in 26 ULBs having population less than 50,000. Works are in progress for 4 FSTPs, 4 FSTPs are under tendering and DPRs are being prepared for 15 FSTPs as per the guidelines of Jal Jeevan Mission and Swach Bharat Mission 2. With regard to solid waste management, it was informed that out of 36 MSW processing plants proposed, works for 31 plants have been sanctioned and 5 plants are yet to be sanctioned. Floodplain maps for River Ganga has been prepared by State Water Resources Department and for remaining stretches, Consultants have been hired. Feasibility Report has been prepared for development of a Bio-diversity park at Sahibganj.

Director General, NMCG directed State to operationalize the Rajmahal STP at the earliest and requested State to share copy of Integrated Liquid Waste Management Plan.

25. Chhattisgarh

Senior Environmental Specialist, NMCG informed that total sewage generation in the State is 600 MLD. 3 STPs of 73 MLD capacity have been completed, but the capacity utilization is around 6 MLD only. 6 STPs of 238 MLD capacity are under construction. However, very less progress has been achieved since last review meeting due to pandemic. It was further informed that for better capacity utilization, focus should be on house service connections. Work has been awarded for Kanker, Dhamtiri, Simga, Nawapara & Rajim. However, further details has not been provided with regard to these STPs. With regard to the 35 MLD STP proposed at Korba, the issue of treated water by NTPC is pending since 1.5 years and needs to be resolved urgently by State. It was further indicated that all FSTPs in the State have been constructed and working.

Chief Secretary, Chhattisgarh informed that all efforts are being made for improving capacity utilization and ensuring timely completion of ongoing projects. It was further clarified that for the proposed 6 projects, the works have been awarded to the contractors. Delay in these projects is mainly due to recent lockdown that was imposed in State and owing to heavy rainfalls during monsoon. However, some progress in these 6 STP projects have been achieved.

Additional Chief Secretary (Housing & Environment) informed that NTPC is agreeing to reuse the treated water, but the issue with regard to cost of purchase of treated water is yet to be resolved and requested NMCG to intervene for resolving the issue at the earliest.

Director General, NMCG informed that the matter shall be pursued with Ministry of Power and further requested the State to formulate a policy for reuse of treated waste water.

ED (Technical), NMCG raised the issue of recent fly ash breach incident reported from the NTPC Power Plant and ACB India power plant in Korba causing environmental damages. As the site is in the catchment of Priority IV River Hasedo, State Government was requested to submit a report in the matter. Member Secretary, Chhattisgarh Environment Conservation Board informed that action was taken by the Board immediately after the incident was reported and agreed to provide the report.

26. Uttar Pradesh

Senior Waste Management Specialist, NMCG informed that out of 106 existing STPs, 3 are non-operational. 37 STPs are under construction out of which 3 STPs (Ramana, Ramnagar & Chunar) have been completed and are under trial run. In addition, 25 STPs are proposed out of which (i) concession agreement has been signed for STPs at Ghazipur & Mirzapur and (ii) the financial bids for Bareilly STP have been opened & likely to be awarded soon followed by execution of concession agreement. The gap in sewage treatment of about 677 MLD is proposed to be met by construction of FSTPs. No DPR has yet been finalized/ proposed by the State on one of the major town on Ganga main stem (Pandit Deen Dayal Upadhyay Nagar). With respect to progress of on-going STPs, it was informed that all projects are progressing and progress needs to be expedited. 2 projects at Moradabad & Lucknow are still sub-judice. The DPR for GH Canal project at Lucknow is pending for approval from AMRUT. The contracts for 2 on-going projects at Balia & Pratapgarh were terminated. For Balia project, the State is yet to take further follow up action, while for Pratapgarh project NMCG has communicated its observations to State for DPR revision. In addition, NMCG has provided its NOC for Farrukhabad project, but the State has not yet awarded the work.

With respect to industrial pollution, there has not been any significant change. Out of 7 existing CETPs, 5 are complying whereas 2 CETPs of Mathura & Jajmau are still non-complying. 2 CETPs at Unnao & Banther are under rehabilitation whereas another CETP at Jajmau is under construction.

In respect of Municipal solid waste, there has been very minimal improvement. The deadline for operationalization of plant at Fatehpur has been shifted to March 2022 from June 2021. In

addition, the deadline for operationalization of 7 plants at Sambhal, Badaun, Mirzapur, Ballia, Rampur, Jhansi & Rampur have also been revised to March 2022 from October 2021. The land issues for 8 SWM plants at Bareilly, Firozabad, Loni, Nazibabad, Bhadoi, Basti, Gorakhpur & Akbarpur are still unresolved. 37 new proposed plants are expected to be operational by March 2022.

It was further informed that State Govt. has notified Ground Water (Management & Regulation) Act. Further, State has taken up rejuvenation of small rivers & ponds. Work is in progress for 20 small rivers. Work related to flood plain notification for Hindon, Yamuna, Varuna & Gomti rivers is in progress. Sites have been identified for Bio-diversity parks and project proposals are under preparation. E-flow for Kannauj-Unnao stretch is being maintained as per CWC directions. E-flow for Ghagra, Rapti, Ramganga & Saryu rivers have been decided, however the requisite notifications are yet to be issued. E-flow for Yamuna, Ganga (Unnao- UP border) & Betwa is yet to be decided.

Managing Director, UPJN informed that out of 6 non-complying STPs, 3 projects at Mathura are under rehabilitation and 2 projects are expected to be completed by August 2021. The permission from Railway for Banda project has been received in June 2021 and the project is expected to be completed by December 2021. The capacity of non-functional STP at Sultanpur is augmented to 10 MLD (existing 5 MLD) and work is expected to be completed by November 2021. Regarding excess flow in Ramana STP, it was informed that flow from storm water drain and newly developed areas is reaching the STP which is under audit and a report shall be shared at the earliest. For Moradabad project, the matter is pending in High Court. It was informed that the matter is being followed up by Senior advocate and at local level also it is being pursued. Regarding Lucknow project, the next date for hearing has been scheduled in 3rd week of July.

DG, NMCG requested to involve a senior advocate and get the matter resolved.

Regarding GH Canal project at Lucknow, it was informed that the project has been awarded and work has commenced. For Balia project, the comments of UPJN has been communicated to SMCG on 6th July 2021. The LoA for Bareilly project is expected to be issued within next 15 days. The technical evaluation for Kairana project is under process. It was further informed that the land for Pandit Deen Dayal Upadhyay Nagar has been made available and DPR shall be prepared/ submitted shortly.

Director General, NMCG requested to ensure timely completion of 7 STP projects which are in advanced stages of construction.

ED (Tech), NMCG raised the issue of waiver of penalty imposed by UPSIDC for development of park in Farrukhabad textile CETP and requested State to look in to the matter for early resolution.

27. Rajasthan

Senior Waste Management Specialist, NMCG informed that since the last review meeting, 3 additional STPs have become operational taking the total to 94 functional STPs. However, the capacity utilization has not changed significantly and remains at approximately 65%. There has been significant improvement in performance compliance of STPs. Previously, 45 STPs were reported non-complying, but now only 17 STPs are non-complying, out of which 7 are under upgradation. 11 CETPs out of 14 are still non-complying. No progress had been reported on 31 STPs under construction since last review meeting. Municipal solid waste processing remains at 41% and no progress has been reported on under construction/ tendering projects. Land issues for 2 STPs in Jaipur and Bhiwadi were indicated and no progress for 2 STPs at Hanumangarh has been reported. STP at Nokha has been completed, but it has not been made operational. The progress of Nawalgarh STP has not been indicated in the MPR. It was further informed that there are large number of STPs which have achieved a progress of more than 90% and the completion timelines are being increased by 2-3 months. State was requested to look in to the matter for early and timely completion of these projects.

Chief Engineer, Rajasthan informed that since last review meeting, 4 new STPs (Fategarh, Sanwar, Jhunjhunu & Suratgarh) have been made operational. Out of 65 ongoing projects, 16 projects are expected to be completed by September 2021, another 16 projects by March 2022 and remaining projects are scheduled for completion in a phased manner by 2025. The capacity utilization has reduced from 69% to 65% due to dismantling of existing STP at Delawas and it is under upgradation. Regarding non-complying STPs, it was informed that out of 39 non-complying STPs, 15 STPs are now complying and out of remaining 24 STPs, 7 are under upgradation under various schemes which will be completed by December 2022. 8 STPs at Salawa, Jaisalmer, Jhalor, Churu, Jhalawar, Pali, Rajsamand & Bikaner are on old technology and need upgradation. The funding for these STPs is yet to finalized either under

SBM II, any new scheme of 15th Finance Commission or any other scheme. The Consent to Operate for 8 non-complying STPs at Ajmer, Bhalotra, Didwana, Fatehpur, Jaysinghpore, Makwana, Nimbada & Kushalgarh has been applied. The STP at Nokha, which is not functional, is proposed for refurbishment under RUIDP Phase IV by adding 2 STPs of 4 MLD and 7 MLD capacity to cover the complete town. Regarding monitoring mechanism of STPs, the work has been awarded to the consultants and it is expected that the portal & application will be developed for trial run by 15th August 2021. Regarding legal issues of Hanumangarh STP, it was informed that it has gone into arbitration and any further decision shall be taken after conclusion of arbitration. Regarding Bhiwadi STP, it was informed that the project is held up due to public agitation and next date for hearing has been sought. Regarding house service connections, it was informed that a progress of 1.22% has been achieved since last meeting. Municipal SW processing has increased from 38.5% to 41.36% as 2 new processing plants and 6 new MRF have been commissioned.

ED (Tech), NMCG raised the issue of non-complying CETPs and requested State to make them compliant. Chief Engineer, RSPCB informed that presently there are 15 CETPs. 3 CETPs do only primary treatment and feed to Pali CETP, hence there are only 12 CETPs operational. Out of these, 6 are complying whereas 5 are non-complying. 6 complying CETPs are working on ZLD and remaining 5 CETPs are being upgraded to ZLD. State was requested to furnish details of monthly progress of CETPs.

28. Uttarakhand

Member Secretary, Uttarakhand Pollution Control Board informed that with completion of 2 new STPs, the number of existing STPs in the State has increased to 66. All the STPs are found to be complying with the norms. For 5 under-construction STPs, the agency has been directed to complete the construction works by December 2021 and upon completion of these additional 52 MLD will be added to the existing capacity. 3 CETPs existing in the State are complying. 24 industries are yet to be connected to CETP at Pantnagar and shall be connected by December, 2021. These 24 industries are found to be complying with the norms. Stricter norms are being finalized for 3 CETPs in designing phase. DPR has been prepared and submitted for co-treatment of septage in STPs at Haridwar, Rishikesh, Devprayag and Srinagar. State is preparing Byelaws for Septate Management. With regard to solid waste management, it was informed that out of 91 ULBs in State, DPRs have been

approved for 88 ULBs and sent to Government of India. 550 tonnes of SLF is operational at Haridwar and Dehradun. State is exploring possibilities of establishing Waste to Energy plants. It was informed that in 400 kms along the Ganga river stretch in floodplain zone has been notified. Some encroachment in floodplain has already been removed and some more is being removed. Afforestation works and wetland conservation along the floodplain is being taken up. Further, it was informed that out of 52 hydro projects in the State, in most of the projects e-flows are being maintained.

Director General, NMCG highlighted that NMCG receives a number of representations on solid waste being dumped in Uttarkashi, which is an eco-sensitive zone. Therefore, State may develop solid waste management facilities in consultation with experts in the field.

29. Delhi

Director (Technical), NMCG informed that the estimated sewage generation in the Delhi is 3,273 MLD, for which 35 STPs of 2715 MLD are in operation. The utilization capacity is reported to be 2,444 MLD (90%). The status of sewage generation and existing STPs remains the same. No samples have been taken from STPs due to lockdown, but earlier only 9 STPs out of 35 STPs were reported to be complying. For CETPs, no samples could be taken for monitoring due to lockdown, but earlier all 13 CETPs were reported to be non-complying.

Director General, NMCG directed the State to provide information on the status of ongoing projects such as Coronation Pillar, STP Projects under YAP-III, issue of tree cutting, non-compliance of CETPs, other bottlenecks in implementation of the on-going projects. It was highlighted that benefits of the completed projects cannot be achieved without completing the entire project. Further, it was suggested that works at STP sites should continue during the monsoon period in order to avoid delay in execution of the project.

CEO, Delhi Jal Board informed that the obstacles with regard to the on-going projects are being overcome, every month detailed review is being taken by Delhi Government, which has resulted in considerable progress in the projects. 9 STPs are meeting the new parameters of BOD-10mg/l and TSS -10 mg/l. 21 STPs are complying with the design parameters of the respective STPs (BOD-20mg/l, TSS- 30mg/l) and (BOD-30mg/l, TSS- 50mg/l). DJB has planned for upgradation of these STPs at design parameters of BOD-10 mg/l and TSS -10 mg/l by adding chemical dosing, more aeration and addition of filters, etc. Earlier 5 STPs

were not meeting the design parameters due to poor O&M. Now in these STPs, works such as repairs of aerators, disc filters etc are being completed and these plants (Keshopur, Kondli etc) will be rectified through dosing and enhanced aeration to meet the design parameters by December 2021. Further, it was informed that a significant progress has been achieved in the on-going STP projects despite tough conditions due to rise in Covid-19 cases and efforts are being made to complete the projects as per the committed timelines. Presently, there are no issues remaining with regard to tree cutting permission, and the permission only for Kondli Phase II is under process and is expected by next month. However, Phase II project at Kondli will be commence after October 2021. The physical progress in Kondli, Rithala and Okhla are 62%, 47% and 34%. With regard to 318 MLD Coronation Pillar STP, 50% capacity has been made operational in March 2021 and 50 MGD flow has been taken in for optimization of different parameters and the STP is scheduled to be 100% complete by September, 2021. It was ensured that there is no hindrance regarding any type of statutory permissions in construction of STP projects and all committed timelines will be achieved. All payments have been done to all vendors on weekly basis and separate accounts for separate projects have been set up. Further, efforts are being put in to complete the 3 STP projects at Kondli, Rithala and Okhla by December, 2022.

Special Commissioner (Industries), Delhi informed that there is no plan for closure of CETPs and NEERI has been engaged for improvement of performance of CETPs. NEERI has proposed two types of plans - Short term plan and Long term plan. Short term plan is for removal of large amounts of sludge deposited. The TSDF site for hazardous waste is going to start soon and accordingly all sludge will be moved to TSDF site and performance of CETPs will improve. Long term plan is for upgradation of CETPs. Recently NEERI has given options for upgradation of 3 CETPs, which is under examination. Accordingly, instructions will be given to the all CETP societies for upgradation of CETPs at the earliest. It is also suggested that DPCC has to notify the outlet parameters for industries which are permissible as per inlet norms for CETP. Further, as some of the effluents are being discharged into the storm water drains, therefore on pilot basis it was proposed to treat wastewater in a drain from Wazirabad in the CETP. However, NOC from DJB is awaited in this regard.

ED (Tech), NMCG stated that NEERI has taken too much time in technical appraisal for upgradation of CETPs. Recently DPCC has given directions to all 13 CETPs for ensuring compliance to the norms, else these CETPs need to be closed down.

Director General, NMCG highlighted that since the beginning of monitoring by CMC in January 2020, same status has been reported with regard to upgradation of the CETPs. Industries have to follow the norms. Unless the closing down of the member industrial units of the CETPs takes place, no improvement of CETP performance is possible. It was suggested that NEERI should complete the study in a time bound manner.

ED (Tech), NMCG further highlighted that the flow of approx. 1000 MLD of untreated sewage from Maharani Bagh Pumping station through Kalindi Biodiversity park is being discharged into Yamuna River. DJB needs to review and take action in this matter and submit report to NMCG.

CEO, DJB informed that 13 out of 18 drains have been trapped. The discharge may have been reaching the river through un-sewered areas. DJB has plan to lay the sewer lines in un-sewered areas. However, to address the issue of pollution, STPs at the mouth of drains were proposed for Barapullah Drain as well. But due to unavailability of land, the project could not be taken up. DJB has made a plan to pump the flow of Barapullah drain to Okhla STP. ISP is also commissioned which will take care of Najafgarh, Supplementary and Sahadara drains after completion of STP projects in Dec 2022.

Due to connectivity issues, response from Member Secretary, DPCC could not be properly heard and he was directed to submit written information. As per the information submitted by DPCC, following Action has been taken by DPCC against the CETPs and water polluting industries/ units in the 17 Industrial Areas connected to 13 CETPs:

(i) Action against CETPs

DPCC had issued Show Cause Notices on 05.04.2021 to 10 CETP Societies and 2 Operators of CETPs at Narela & Bawana for Imposition of Environmental Compensation (Total EC amount is Rs. 12.05 Crores) for not meeting the prescribed standards in the period February, 2019 to February, 2021. Replies were received w.r.t said Show Cause Notices and after considering the replies, Environmental Compensations (Total EC amount of Rs. 12.05 Crores) has been imposed by DPCC on the 10 CETP Societies and 2 Operators of CETPs at Narela & Bawana on 07.07.2021.

(ii) Action against Water Polluting Industries/ units

DPCC has issued directions for closure to 1065 water polluting industries/ units in the 17 industrial areas connected to the 13 CETPs in first week of July, 2021.

30. Haryana

Director (Technical), NMCG informed that the State generates approximately 1,375 MLD of sewage, against which 152 STPs of 1803 MLD exist, which are being utilized at 1081.9 MLD capacity. Out of these 18 STPs are reported to be non-complying (9 in Yamuna catchment and 9 in others).

ED (Tech), NMCG highlighted that even though Haryana has adequate sewage treatment capacity, even then the drains in the State have high BOD. There is deficiency in sewage treatment capacity in Faridabad and STPs are under-construction. Two big drains - Gauchi and Buddia carry large quantity of sewage and discharge into River Yamuna. Further it has been reported that all CETPs are compliant, but based on site visit by NMCG team, CETPs were found to be non-complying. There have been repeatedly large number of cases related to unauthorized sand-mining in Yamuna Nagar.

Member Secretary, Haryana State Pollution Control Board (HSPCB) informed that with completion of 3 STPs, Haryana now has 155 STPs of 1823 MLD. There is deficiency in sewage treatment capacity in Faridabad but construction of new STPs is under progress and there is no issue of fund availability for these projects. All STPs in Ghaggar are complying and 18 STPs are non-complying in Yamuna and other areas. HSPCB has issued directions to all STPs to adopt new norms of BOD 10mg/l. HSPCB will take the action against the non-complying STPs. Centralized online monitoring systems have been installed in STPs, CETPs and industries for compliance monitoring. Most of non-complying STPs are defaulters as they are not meeting Fecal coliform norms. Chief Secretary, Haryana recently directed to upgrade all STPs to meet FC norms. Most of the ongoing STP projects are scheduled to be completed by Dec 2022. It is confirmed that performance of CETPs is a serious problem. Integrated Drain Monitoring Committee (IDMC) is monitoring CETPs independently. Ground Water Authority in Haryana has been constituted for groundwater regulation. Treated Waste Water Policy has been notified by the State, wherein it is proposed that 50% of the treated water shall be reused by 2025 and 100% reutilization by 2030. Septage Management Policy is being implemented by the ULBs and through tankers the septage is being treated in nearby STPs. Further, it was informed that the matters are being seriously

looked in by the State Government and Chief Secretary, Haryana is closely monitoring the issues. Sonapat STP is under- utilized due to non-completion of household connections, which are under-progress.

31. Himachal Pradesh

Director (Technical), NMCG informed that as per the data submitted by the State, water quality in 7 polluted river stretches is seen to be improved. Out of 65 existing STPs, 7 are reported to be non-compliant. Baddi CETP is now reported to be compliant. Kala Amb CETP was to be completed by December 2020, and the progress of the same is to be reported. Timeline of the 2 MLD CETP at Paonta Sahib is to be provided. Further, it was highlighted that River Kanan, after confluence with River Sirisa, reaches River Satluj and is carrying pollution load downstream to other States. Therefore, the State needs to have a rejuvenation plan for this river.

Member Secretary, Himachal Pradesh Pollution Control Board (HPPCB) informed that Kala Amb CETP is expected to be completed by August, 2021. With regard to gap in sewage treatment, 29 STPs are under-construction and 31 STPs are proposed, which are expected to be completed by 2022. With regard to CETP at Paonta Sahib, funding arrangement is yet to be tied up. It was also informed that the stretch with regard to river Sirsia is being addressed by CETP Baddi and HPPCB is closely monitoring the industries and the CETP in order to prevent pollution of river.

32. West Bengal

Director (Technical), NMCG informed that there are 17 polluted river stretches, of which 12 rivers stretches falls on priority IV (Damodar, Kanshi, Jalangi & Mathabhanga) & V (river Barakar, Silabati, Rupnarayan, Dwarkeswar, Mayurakshi, Kaljani, Karola & Teesta). State has informed that 70%-80% pollution abatement work of these rivers (Kanshi, Jalangi, Silabati, Rupnarayan, Dwarkeswar & Kaljani) have been completed and in the subsequent months 100% work will be completed. Due to these interventions, quality of water will be improved in particular stretches. In the ongoing projects, State has made significant progress except in Ghushighata STP work wherein 170 MLD STP is proposed. Work for Churni project was awarded, but it is yet to start. With regard to industrial pollution, CETP Module no. 5 has

been stabilised and operation started in Jun 2021. Module no. 6 is in the stage of stabilisation and is expected to start functioning by Aug. 2021. Civil construction of Module no. 7 & 8 is complete and trial run will be started within Aug. 2021. Thus all the CETPs will be completed in Aug 2021 and after completion of these CETPs, water quality of River Vidyadhari which is in priority –I is expected to improve.

Principal Secretary (Urban Development), West Bengal informed that it was proposed to install a 170 MLD STP at Ghusighata earlier. However, State Environment Department did a study on low cost treatment technology which is being used in the East Kolkata Wetland (EKW), wherein around 910 MLD of sewage is naturally treated. Ghusighata is in the downstream of EKW and simultaneously UDD engaged IIT, Kharagpur for condition assessment. IIT prepared a feasibility study report and suggested that improvement in water quality of the proposed STP in Ghusighata shall be insignificant and instead suggested to control the pollution at the source itself. With regard to River Vidyadhari, which is surrounding to Kolkata, it was informed that the river comprises of 3 small rivers basically - Kestopur Khal, Noyai Khal & Bagjola Khal. IIT suggested to install STPs in the ULBs that are polluting the river. Therefore, State has planned one 41 MLD STP for Kestopur Khal amounting to Rs. 247 crore. Apart from this, second major source of pollution in Vidyadhari river is from Bagjola Khal and to intercept the flow of Bagjola Khal, 10 STPs of total capacity 246 MLD are at DPR stage. The funding of the project is planned under State sector. For Noai Khal, Feasibility Study is being done by IIT-Kharagpur and the preliminary report has been submitted. STPs are proposed at Barasat, Dumdum, Madhyamgram, North Dumdum, Rajarhat –Gopalpur, New Barrackpore. Land identification is going on to address the discharge to Vidyadhari through Noai Khal from above mentioned ULBs. Similarly, the part of Vidyadhari chain is New town of Kolkata, wherein another 24 MLD STP capacity has already operationalized. State is also constructing solid waste collection facility on all the major drains and outfalls falling into Kestopur, Bagjola & Noai Khals. So rather than making one STP at Ghusighat, State now plans to make 18 STPs in different localities so as to catch the pollution at the source. Further, it was informed that State has operationalized 3 new Electric Crematoriums and 7 Ghats during the month of April 2021 and May 2021. State also has started constructing 24 new crematoriums and another 6 are in pipe line. CPCB has developed a Mobile App namely ‘STP Monitoring App,’ where the static and dynamic data of all the STPs are getting digitized. So far, 12 STPs of West Bengal have been digitized

through this App and rest will be connected in next 3 months. West Bengal has taken up Karola river as a Model river having 47 number of outfalls and 100% works completed. The proposed works with regard to the river Kansai and Jalangi have been completed and works are proposed to be completed soon in 3 rivers. Further, State shall be sending documents to CPCB for de-listing of rivers from the polluted river categorization. With regard to low cost treatment technology, State plans to install one FSTP in each district of West Bengal by next one year. Works related to Solid Waste Management in 12 model towns are to be completed within one year. No legacy waste is found dumped within 1 kms of rivers. Scientific solid waste processing has started in 21 ULBs. Massive plantation of trees started in 7 non-attainment cities by State Forest Department. With regard to issues in projects proposed at Asanoli and Durgapur, DPRs have been submitted and land acquisition is also being pursued. NMCG was also requested to provide assistance in obtaining land from ECL and DBC. With regard to issues in Bardhaman project, a meeting was held with District Magistrate and local district authorities for resolving the issues and a comprehensive study is being carried out to understand if the project can be completed with minimum cost. With regard to Tolly Nallah, it was informed that all documents have been submitted. With regard to Churni river, it was informed that bio-remediation works have started and the work of STP is yet to start as there have been some queries by the Finance Department. This is expected to be resolved within 10 days. Further, it was informed that DPRs for Garden Reach-Keorapukur were submitted in April 2021 to NMCG and response is awaited.

Director (Technical), NMCG informed that Final Technical Bid Evaluation Report for Tolly's Nallah Project has been submitted to the World Bank along with the observation of NMCG on 23.06.2021 for approval. Bid validity has been extended up to 31.08.2021 by World Bank. It was requested that State may replicate the mechanism adopted by the State to rejuvenate the model river - Karola, in other rivers as well. With regard to the DPRs for Garden Reach-Keorapukur, it was informed that certain observations with regard to upgradation of recently upgraded STPs were highlighted to the State officials in the previous review meeting of the State.

Director General, NMCG informed that a separate review meeting shall be held with the State to review the progress of the projects and for discussion on the issues in the proposed projects.

33. Madhya Pradesh

Director (Technical), NMCG informed that State has made good progress and 11 new STPs (including big STP at Gwalior, Bhopal) have been completed and now there are 37 STPs of 1030 MLD existing in the State. There is increase in capacity utilization of STPs (629.16 MLD). As the projects are sewer network with STP projects, State may also report about the status and progress made in house-sewers connections in the MPR. River Khan has been adopted as Model River and recently a lot of appreciations has been received in media with regard to improvement in ecology and biodiversity of the river. As per the data provided in the MPR, water quality in rivers, except at Nagda, appears to be good. Compliance status of STPs and CETPs may also be provided by the State.

Director General, NMCG appreciated the progress made by the State and enquired about the household connections.

Deputy Secretary (Urban Development Department), Madhya Pradesh informed that out of 16 lakh house hold connections proposed for all the STPs, 6.5 lakh household connections have been made. The household connections are part of the contracts with the contractor and later on residents shall be charged accordingly.

Director General, NMCG concluded the meeting and suggested NMCG to organize a Webinar before the next meeting of CMC, wherein best practices can be shared with the States.

The meeting ended with thanks to the Chair.

Annexure-I**List of participants:**

1. Shri Pankaj Kumar, Secretary, Ministry of Jal Shakti – *in Chair*
2. Shri Rajiv Ranjan Mishra, Director General, NMCG cum Project Director, NRCD
3. Shri Ashok Kumar Singh, Executive Director (Projects), NMCG
4. Shri D.P.Mathuria, Executive Director (Technical), NMCG
5. Shri Brijesh Sikka, Senior Consultant, NMCG
6. Dr. Pravin Kumar, Director Technical, NMCG
7. Shri A.Sudhakar, Additional Director, CPCB
8. Shri J.C. Babu, Additional Director, CPCB
9. Shri V.K.Chaurasia, Joint Adviser, MoHUA
10. Shri J.B.Ravinder, Deputy Adviser, MoHUA
11. Shri Ishwer Singh, Consultant (Legal) NMCG
12. Shri S.K. Srivastava, Director, NRCD
13. Shri A.P. Singh, Scientist E, NRCD
14. Dr. Sabita Madhvi Singh, Joint Director, NRCD
15. Shri Rajat Gupta, Senior Waste Management Specialist, NMCG
16. Shri Saumya Mukhopadhyay, Senior Environmental Specialist, NMCG
17. Dr. P.N.Rymbai, Scientist B, NRCD
18. Shri Vijay Kumar, Assistant Civil Engineer, NMCG
19. Shri Rachit Andley, Project Manager, NMCG
20. Shri Avshesh Chauhan, Assistant System Analyst, NMCG
21. Shri Kumar Ajitabh, Project Officer Legal, NMCG
22. Mrs. Ruby Raju, Project Engineer, NMCG
23. Shri Abhiyantes Verma, Support Engineer, NMCG
24. Ms. Preeti, Research Associate, NRCD
25. Shri Debarshi, Research Associate, NRCD

GOA STATE POLLUTION CONTROL BOARD

गोंय राज्य प्रदूषण नियंत्रण मंडळ

(An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Board)

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dated: 28/10/2021

To,

1.	The Secretary (Environment)	Chairman
2.	The Director, Directorate of Urban Development, Govt. of Goa, Dempo Towers, 1 st floor, Patto, Panaji	Member
3.	The Director, Department of Environment	Member
4.	The Chief Engineer, Water Resources Department, 1 st floor, Sinchayi Bhavan, Alto- Porvorim Bardez Goa.	Member
5.	The Director, Directorate of Industries, Trade & Commerce Udyog Bhawan, Panaji- Goa	Member
6.	The Director, Directorate of Health Services, Campal Panaji- Goa	Member
7.	The Director, Directorate of Panchayat, Junta House Building, Panaji- Goa	Member
8.	The Superintending Engineer, Circle- V North Goa, PWD, Altinho	Member
9.	The Superintending Engineer, Circle- VI North Goa, PWD, Altinho	Member
10.	The Managing Director, Sewerage Infrastructure Development Corporation Goa Ltd, Ishan Bulding, Opp. CCP, Panaji- Goa.	Member
11.	The Project Director, Japan International Cooperation Agency (JICA), PWD, Altinho, Panaji	Member
12.	The Captain, Captains of Ports Department, Govt. of Goa, Dayanand Bandodkar Road, Panaji- Goa.	Member
13.	The Director, Directorate of Fisheries, Govt. of Goa, Dayanand Bandodkar Marg, Panaji- Tiswadi- Goa.	Member
14.	The Dean, Goa Medical College, Bambolim- Goa.	Member
15.	The, Director, Department of Tourism, Paryatan Bhavan, Patto- Panaji- Goa.	Member
16.	The Director, Directorate of Mines & Geology, Institute of Menezes Braganza, Panaji- Goa 403001.	Member
17.	The Managing Director, Goa State Infrastructure Dev. Corporation Ltd, 7 th Floor, EDC House, Dr. A. B. Road, Panaji- Goa.	Member
18.	The Managing Director, Goa Waste Management Corporation, Saligao, Bardez	Member
19.	The Managing Director, Goa Industrial Development Corporation Limited, EDC Complex, Patto Plaza, Panjim- Goa.	Member
20.	The Member Secretary, South Goa Planning & Development Authority (SGPDA), 4 th Floor, D- wing, Osia Commercial Areade, Near SGPDA Market Complex, Margao- Goa	Member

21.	The Member Secretary, Goa State Pollution Control Board (GSPCB)	Member Secretary of the committee

Sub: Regarding Polluted Riverine Stretches.

Sir/ Madam,

With reference to the above cited subject, please find enclosed herewith the Minutes of the 27th River Rejuvenation Committee (RRC- Goa) meeting held on 08th October 2021 under the Chairmanship of Principal Secretary, Environment in Mini Conference- hall, Secretariat, Alto- Porvorim for your reference.

Yours faithfully,


(Dr. Shamila Monteiro)
Member Secretary

Goa State Pollution Control Board

CC to

- 1) The PS to Chief Secretary, Secretary Porvorim Goa.
- 2) The P.S. to Secretary (Env.), Secretariat, Porvorim Goa
- 3) Office file
- 4) Guard file

Minutes of the 27th River Rejuvenation Committee (RRC - Goa) meeting held on 08th October 2021 under the Chairmanship of Principal Secretary, Environment in Mini Conference-hall, Secretariat, Alto-Porvorim.

The twenty-seventh meeting of the River Rejuvenation Committee (RRC-Goa) was held on 08/10/2021 in the mini-conference hall of the Secretariat under the Chairmanship of Principal Secretary, (*Environment*). The following members were present for the meeting:-

1. Shri. Kunal IAS, Principal Secretary, Environment, Chairman, RRC-Goa.
2. Mr. Levinson J. Martin, Director. Dept. of Science & Technology (S & T) /M.D., Goa Waste Management Corporation (GWMC).
3. Mr. Dasharath M. Redkar, Director, Dept. of Environment & Climate Change.
4. Mr. G. P. Pilarnekar, Director, Directorate of Municipal Administration (DMA).
5. Mr. Dhiraj R. Wagle, Deputy Director, Directorate of Tourism.
6. Mr. Amar K. Vazirani, S.E.(V), Public Works Dept., (PWD).
7. Dr. Pradip Sarmokadam, Member Secretary, Goa State Biodiversity Board (GSBB).
8. Mr. Ranjit M. Borkar, Member Secretary, South Goa Planning and Development Authority (SGPDA).
9. Mr. Dilip Joshi, GM (C) – I
10. Mr. Sanket Faldessai, Field Manager, Goa Industries Development Corporation (GIDC).
11. Mr. Ram Asre M. Gupta, Hydrographic Surveyor, Captain of Ports (CoP).
12. Mr. Nikhil Gawde, Asst. Manager, SIDCGL
13. Mr. Rohit Naik, Technical Assistant, SIDCGL.

14. Adv. Firdous Saba Bepari, Legal Assistant, Goa State Urban Development Authority (GSUDA).
15. Mr. Sanjeev Joglekar, Senior Env. Engr., m(SEE), Goa-PCB / OSD, Department of Environment & Climate Change.
16. Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (RRC-Goa).

The M. S. (RRC-Goa) welcomed the Chairman and other Members of the Committee. Thereafter and as per the instructions of the Chairman, RRC-Goa / Secretary (*Environment*), Dr. Mohan R. Girap (*Scientist – C. Goa-PCB*) briefed the Committee that regular review / follow-up action has been appraised during the Central Monitoring Committee (CMC), *constituted by the NGT under the Chairmanship of Secretary, Department of Water Resources, GoI*, meetings held on 04th March 2021 (9th CMC-meeting) followed by on 09th July 2021 (10th CMC-meeting) attended by the Principal Secretary, Environment through Google-meet along with senior officials from the O/o SIDCGL, GWMC, WRD, DMA, DoP & Goa-PCB.

He further highlighted that the present meeting has been convened precisely to discuss / deliberate on –

- (A) CPCB's comments, *submitted vide letters dated 22nd September 2021*, in respect of submission of (a) action plan submitted towards rejuvenation of polluted river-stretches (*as a compliance to NGT matter in O.A. 673 of 2018*) and (b) action plan in respect of six coastal-rivers (*out of eleven river-stretches referred in (a) above*) to address coastal /marine pollution vide letter dated (*as a compliance to NGT matter in O.A. 829 of 2019*).
- (B) CPCB's report on National Inventorisation of Sewage Treatment Plants (STPs') including the STP status in Goa.

and to seek relevant inputs / updates from stakeholder departments concerned, being a 'State-specific' matter, and to suitably respond to the CPCB thereafter.

Accordingly and in response to A (a) above, it was appraised that the Goa-PCB will compile / tabulate water-quality data of all eleven river-stretches analysed during the period from May 2019 to April 2021 and propose to the CPCB (*on behalf of the State through RRC-Goa*) to 'De-list' those river-stretches complying with Primary Water Quality Criteria for Outdoor Bathing as referred at (i) below -

CPCB's observations in respect of O.A. 673 of 2018 is:

Response submitted by RRC-Goa - dated 17 September 2021

Sub: Defisting of polluted river stretches identified in States/UTs from the list of 351 identified Polluted River Stretches pertaining to Hon'ble NGT orders passed in O.A. No 673/2018.

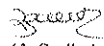
Sir,

This is in reference to Goa PCB letter No. 11/19/21-PCB/Vol I/ab/9994 dated 02.09.2021 requesting CPCB for defisting of polluted river stretches in Goa from the list of 351 Polluted River Stretches identified by CPCB. The proposal submitted to CPCB reviewed and following observations have been made:

- (i) As per water quality data submitted, all eleven river stretches are not conforming to Primary Water Quality Criteria for Outdoor Bathing during the period May 2019 -April 2021.
- (ii) Action plans have been submitted in case of river stretches of Sal, Mandovi, Zuari, Teracol, Chapora and Talpona vide letter dated 01.09.2021 in compliance to Hon'ble NGT orders passed in O.A. No. 829/2019 for control of coastal pollution. Action to be taken as per views or observations CPCB communicated vide letter dated 22.09.2021
- (iii) River-wise interventions made to improve water quality of afore-said six river stretches have not been indicated as requested vide CPCB letter dated 03.06.2021.

In view of the above, it is requested that detailed proposal (river-wise) be prepared covering afore-said aspects including water quality of rivers as communicated by CPCB vide letter dated 3.6.2021 and revised proposal may please be submitted only after implementation of all the approved action plans, and water quality of rivers is compiled at least for bathing water quality criteria notified under the Environment (Protection) Rules, 1986 to CPCB to enable to take further action in the matter

Yours faithfully,


(A. Sudhakar)
DH, WQM-I Division

Goa-PCB to compile the data "river-stretch-wise" for last two years and resubmit it.

To be responded, as proposed in response to CPCB's observations, as stated on previous slide after getting relevant data from stakeholder depts. concerned

State, through RRC-Goa, has already submitted the status to the CPCB. *As per the status submitted to the CPCB, the status is as follows:*

Similarly, Chairman, RRC-Goa instructed all stakeholder departments concerned (i.e. SIDCGL / GWMC / WRD / CoP / DMA / DoP) to submit status-update of river-wise interventions (*i.e. Action Plan Strategies (APS)*) with photographic evidence of on-site progress *vis-a-vis* compliance to time-lines proposed earlier in compliance to (iii) referred above.

Further and in response to A (b) above, Chairman, RRC-Goa instructed departments-concerned, *as detailed below*, to submit compliance to the Goa-PCB for onward submission to the CPCB.

CPCB's observations in respect of O.A. 829 of 2019 is
 Goa-PCB's observations in respect of O.A. 829 of 2019 is
 Goa-PCB's observations in respect of O.A. 829 of 2019 is

Remarks on Action Plan submitted for Control of Marine or Coastal Pollution

- a) General information such as
- (i) A map showing drainage map with rivers and drains in coastal area and marine outfalls with GPS location, major towns, industrial estates located along the coast.  Water Resources Department
 - (ii) Stretches showing Designated Best Use Classification of Coastal Waters in State.  Goa-PCB
 - (iii) Water quality of all marine outfalls and rivers joining coastal waters along with flow details.  SD COL - w.r.t. STPs effluents / S Line / Salt / Mangroves
 - (iv) Water quality of ambient sea water up to 5km from the shoreline.  May be requested through NO / Goa University
 - (v) Compliance status of coastal waters based on 'Designated Best Use' - Standards notified under The Environment (Protection) Rules, 1986 for SW-I to SW-V class waters.  Goa-PCB
 - (vi) Compliance status of existing STPs, CETPs and the major outfalls / drains.  SIDCOL / PWD / Goa-PCB
 - (vii) Compliance status of all the rivers joining coastal waters w.r.t to Bathing Criteria.  Goa-PCB
- b) Details on total generation w.r.t to industrial effluent and waste including hazardous waste, biomedical waste, E-waste & C&D waste in the Coastal Areas including detailed gap analysis.  GWMC / Goa-PCB / DMA / DoP
- c) Proposal for control marine litter including plastic waste in coastal areas.  DoE & CC - in consultation with DMA / DoP / GWMC

In response to sr.no. (ii), (iii) & (v) above, it was informed that all the coastal waters in the State has been categorised under the SW-II category based on the CPCB's criteria on 'Designated Best Use' (*refer Annexure - 1*) and accordingly compliance status of (i) coastal waters and (ii) all-rivers (categorised under Class - C based on the CPCB's criteria on 'Designated Best Use' (*refer Annexure - 2*) joining the coastal waters analysed by the Goa-PCB for the designated parameters under the National Water quality Monitoring Programme (NWMP) will be submitted to the CPCB.

Further, as regard to sr. no. (iv) - water quality of ambient seawater upto 5 - kms. from the shore line, Chairman, RRC- Goa instructed the representative of the CoP to look into the matter for compliance and in response to sr.no. (vi),

he instructed the representatives of the Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL) to submit the relevant information (*i.e. STP-treated water analysis*) with reference to the STPs' located along the coastal-areas whose outfall (*i.e. release /discharge of treated-water*) is either into sea, estuary or river.

ANNEXURE – 1

Designated best use classification (water quality standards) for Coastal waters and marine outfall

Class	Designated best use	Primary Water Quality Criteria
SW-I	Salt pans, Shell fishing, Mariculture and Ecologically Sensitive Zones	pH – 6.5 – 8.5 D. O. – 5 mg/l Colour and odour – No noticeable colour or offensive odour Floating matter – Nothing obnoxious Suspended solids – none from sewage or industrial waste Oil and Grease – 0.1 mg/l Heavy metals – Mercury 0.001 mg/l Lead – 0.001 mg/l Cadmium – 0.01 mg/l
SW-II	Bathing, Contact water sports and Commercial fishing	pH – 6.5 – 8.5 D. O. – 4 mg/l Colour and odour – No noticeable colour or offensive odour Floating matter – Nothing obnoxious or detrimental for use Turbidity – 30 NTU (<i>Nephelometric Turbidity Unit</i>) Faecal Coliform – 100/100 ml (MPN) Biochemical Oxygen Demand (3 days at 27°C) – 3 mg/l
SW-III	Industrial cooling, Recreation (non-contact) and Aesthetics	pH – 6.5 – 8.5 D. O. – 3 mg/l Colour and odour – No noticeable colour or offensive odour Floating matter – No visible, obnoxious floating debris Turbidity – 30 NTU (<i>Nephelometric Turbidity Unit</i>) Faecal Coliform – 500/100 ml (MPN) Dissolved Iron (Fe) – 0.5 mg/l or less Dissolved manganese (Mn) – 0.5 mg/l or

		less
SW-IV	Harbour	pH – 6.0 – 9.0 D. O. – 3 mg/l Colour and odour – No visible colour or offensive odour Floating matter, Oil, grease and scum (including petroleum products) – 10 mg/l or detrimental for use Faecal Coliform – 500/100 ml (MPN) Biochemical Oxygen Demand (3 days at 27°C) – 5 mg/l
SW-V	Navigation and Controlled waste disposal	pH – 6.0 – 9.0 D. O. – 3 mg/l Colour and odour – None in such concentrations that will impair any usage specifically assigned to this class. Sludge deposits, solid refuse floating solids, oil, grease and scum – None except for such small amounts discharge of appropriately treated sewage and or industrial waste effluents. Faecal Coliform – 500/100 ml (MPN)

ANNEXURE – 2

Designated best use classification (Water quality standards) of surface waters

Designated Best Use	Quality Class	Primary Water Quality Criteria
Drinking water source without conventional treatment but with chlorination	A	Total coliform organisms (MPN*/100 ml) shall be 50 or less pH between 6.5 and 8.5 Dissolved Oxygen 6 mg/l or more, and Biochemical Oxygen Demand 2 mg/l or less
Outdoor bathing (organized)	B	Total coliform organisms(MPN/100 ml) shall be 500 or less pH between 6.5 and 8.5 Dissolved Oxygen 5 mg/l or more, and Biochemical Oxygen Demand 3 mg/l or less
Drinking water source with conventional treatment	C	Total coliform organisms (MPN/100 ml) shall be 5000 or less pH between 6 and 9 Dissolved Oxygen 4 mg/l or more, and Biochemical Oxygen Demand 3 mg/l or less
Propagation of wildlife and fisheries	D	pH between 6.5 and 8.5 Dissolved Oxygen 4 mg/l or more, and Free ammonia (as N) 1.2 mg/l or less
Irrigation, industrial	E	pH between 6.0 and 8.5

cooling and controlled disposal.	Electrical conductivity less than 2250 micro mhos/cm, Sodium Absorption Ratio less than 26, and Boron less than 2 mg/l

* MPN: Most Probable Number.

Later, in response to 'mis-match' reported in the CPCB's publication on National Inventorisation of STPs' in respect of STP status in Goa, Chairman, RRC-Goa desired to include the details of STPs' (*i.e. installed capacity / treatment capacity / operational capacity, etc.,*) installed especially by various commercial & hospitality establishments (*i.e. starred-hotels*), residential-complexes exceeding 100 no. of flats as O/o SIDCGL has estimated the total wastewater generation from major cities / towns based on population and at present the status includes the details only from 'Common-STPs' operated by the State Government – i.e. PWD / SIDCGL only. He further accepted the fact that by including STP-details from other user-agencies in cities / towns, it would factually represent the on-site status of effluent generated *vis-a-vis* its treatment capability. Accordingly, he instructed the officials of SIDCGL / GSPCB / DMA / DoP to compile such database so as to understand 'gap-analysis'.

In addition, he also desired that 'Sewage Audit' may be conducted by the stakeholder departments concerned based on operational status of sewage-tankers (*Govt. Registered / private-carriers*) from their intake-point to its final disposal / treatment.

The meeting ended with vote of thanks to the Chair.


Dr. Shamila Monteiro,
Member Secretary, Goa-PCB / M. S., (RRC-Goa)

GOA STATE POLLUTION CONTROL BOARD

गोंय राज्य प्रदूषण नियंत्रण मंडळ

(An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Board)

Phone Nos. : 0832-2407700
2407701, 2407702
2407703

Tel/Fax No. : 0832-2407700



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Chairman, GSPCB: chairman-gspcb.goa@nic.in
Member Secretary GSPCB: ms-gspcb.goa@nic.in
Office: mail.gspcb@gov.in

No.11/19/21-PCB/Vol/lab/22813

dated: 31/03/2022

To,

1.	The Secretary (Environment)	Chairman
2.	The Director, Directorate of Urban Development, Govt. of Goa, Dempo Towers, 1 st floor, Patto, Panaji	Member
3.	The Director, Department of Environment	Member
4.	The Chief Engineer, Water Resources Department, 1 st floor, Sinchayi Bhavan, Alto- Porvorim Bardez Goa.	Member
5.	The Director, Directorate of Industries, Trade & Commerce	Member
6.	The Director, Directorate of Health Services, Campal Panaji-Goa	Member
7.	The Director, Directorate of Panchayat, Junta House Building, Panaji- Goa	Member
8.	The Superintending Engineer, Circle- V North Goa, PWD, Altinho	Member
9.	The Superintending Engineer, Circle- VI North Goa, PWD, Altinho	Member
10.	The Managing Director, Sewerage Infrastructure Development Corporation Goa Ltd, Ishan Buidling, Opp. CCP, Panaji- Goa.	Member
11.	The Project Director, Japan International Cooperation Agency (JICA), PWD, Altinho, Panaji	Member
12.	The Captain, Captains of Ports Department, Govt. of Goa, Dayanand Bandodkar Road, Panaji- Goa.	Member
13.	The Director, Directorate of Fisheries, Govt. of Goa, Dayanand Bandodkar Marg, Panaji- Tiswadi- Goa.	Member
14.	The Dean, Goa Medical College, Bambolim- Goa.	Member
15.	The, Director, Department of Tourism, Paryatan Bhavan, Patto- Panaji- Goa.	Member
16.	The Director, Directorate of Mines & Geology, Institute of Menezes Braganza, Panaji- Goa 403001.	Member
17.	The Managing Director, Goa State Infrastructure Dev. Corporation Ltd, 7 th Floor, EDC House, Dr. A. B. Road, Panaji-Goa.	Member
18.	The Managing Director, Goa Waste Management Corporation, Saligao, Bardez	Member
19.	The Managing Director, Goa Industrial Development Corporation Limited, EDC Complex, Patto Plaza, Panjim- Goa	Member

20.	The Member Secretary, South Goa Planning & Development Authority (SGPDA), 4 th Floor, D- wing, Osia Commercial Areade, Near SGPDA Market Complex, Margao- Goa	Member
21.	The Member Secretary, Goa State Pollution Control Board (GSPCB)	Member Secretary of the committee

Sub: Regarding Polluted Riverine Stretches.

Sir/ Madam,

With reference to the above cited subject, Please find enclosed herewith the minutes of the 28th River Rejuvenation Committee (RRC) meeting held on 9th March 2022 for your reference.

Yours faithfully,



(Dr. Shamila Monteiro)
Member Secretary
Goa State Pollution Control Board

CC to

- 1) *Office file*
- 2) *Guard file*

Minutes of the 28th River Rejuvenation Committee (RRC - Goa) meeting held on 09th March 2022 under the Chairmanship of Secretary, Environment in Conference-hall, Goa State Pollution Control Board (GSPCB)

The twenty-eight meeting of the River Rejuvenation Committee (RRC-Goa) was held on 09/03/2022 in the conference hall of the Goa State Pollution Control board (GSPCB) under the Chairmanship of Secretary, (*Environment*).

The following members were present for the meeting:-

1. Shri. Arun Kumar Mishra IAS, Secretary, Environment, Chairman, RRC-Goa.
2. Mr. Ram Asre M. Gupta, Hydrographic Surveyor, Captain of Ports (CoP).
3. Mr. Sandil K. Prabhu Chodnekar, G. M., GSIDC.
4. Mr. Valson, M. K. Executivae Engineer, SIDCGL.
5. Mr. Rohit Naik, Assistant Manager, SIDCGL.
6. Mr. Rajendra Khanna, Executive Engineer, JAICA (PWD).
7. Mrs. Trupti V. Prabhu Gaonkar, Assistant Surveyor of Works (rep. Of C. E., WRD).
8. Mr. Shouken Teli, Engineer, Goa Waste management Corporation (GWMC).
9. Mr. Rohan J. Kaskar, Dy. Director, Dept. of ZIndustries, Trade and Commerce (DITC).
10. Mrs. Si dhi Halarnkar, Director, Directorate of Panchayats.
11. Ms. Eleane Lisa Da Costa, J. E., Directorate of Municipal Administration (DMA).
12. Mr. Chandrakant Velip, Dy. Director, Fisheries Department.
13. Mr. Sanket Faldessai, Field Manager, Goa Industrial Development Corporation (GIDC).
14. Mrs. Reshma Kerkar, Scientific & Admin Officer, Goa State Biodiversity Board (GSBB).
15. Adv. Urvee T. Kanekar, Legal Assistant, Goa State Biodiversity Board (GSBB).
16. Dr. Ira Almeida, Director, Directorate of Health Services.
17. Mr. Amar K. Vazirani, S. E. (V), PWD.
18. Mr. R. Kumar, S.E. (VI), PWD.

19.Mr. Joao Francisco Dourado, Assistant Engineer, SGPDA.

20.Mr. Bento Thomas, Assistant Manager, Goa Waste Management Corporation (GWMC).

21.Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (*RRC-Goa*).

The M. S. (*RRC-Goa*) welcomed the Chairman and other Members of the Committee. Thereafter and as per the instructions of the Chairman, RRC-Goa / Secretary (*Environment*), Dr. Mohan R. Girap (*Scientist – C. Goa-PCB*) briefed the Committee that review / follow-up action has been appraised during the Central Monitoring Committee (CMC), *constituted by the NGT under the Chairmanship of Secretary, Department of Water Resources, GoI*, meetings held on 04th February 2022 (12th CMC-meeting) attended by the Secretary, Environment through Google-meet along with senior officials from the O/o SIDCGL, GWMC & Goa-PCB.

He further highlighted the need to comply with the proceedings / minutes of the last RRC-Goa meeting (*i.e. 27th RRC-Goa*), which was held on 8th October 2021, with specific reference to on-site status of various action plan strategies (APS) enumerated in action plans prepared for eleven polluted river-stretches and to be executed by stakeholder departments-concerned.

Accordingly and as instructed by the Chairman, department-specific status was sought from the officials of the representative departments concerned in respect of Sal river (*priority criteria – III*) followed by Mandovi and Talpona rivers (*priority criteria IV*) and other eight river-stretches (*priority criteria – V*).

In response to the same Chairman, RRC-Goa directed all stakeholder departments concerned (*i.e. SIDCGL / GWMC / WRD / CoP / DMA / DoP / DHS*) to submit status-update of river-wise interventions (*i.e. Action Plan*

Strategies (APS)) with photographic evidence of on-site progress *vis-a-vis* compliance to time-lines proposed.

Subsequently and on receipt of the relevant update from the following departments, the current-status of implementation of technological interventions is as under –

1. Office of the Executive Engineer, WD (XXVII) – Sewerage, **PWD** has updated that probable date of completion of the work of ‘maintenance of sewerage system in Panaji city’ involving setting-up of SBR-based 02 MLD capacity STP at Patto, Panaji is 31st October 2022.
2. Office of the M.D., **SIDCGL** w.r.t. Sal and Zuari river action plan strategies has stated as under -

Sr. no.	Action Strategy	River stretch	Time Frame	status
Sal river- Priority-III (from Mobor to Khareband Madgaon)				
	Diversion of Khareband Nallah to North main trunk which will be treated at 20 MLD STP	Khareb and Mobor 1. Khareband	31-May 22	RRC work is completed and laying of pipeline is left (around 100mts.) the work be completed by 31 st May 2022.
	Replacement of the Old Sewerage Network system, Laying of new sewerage system providing House connection to the existing sewerage system	Margao town, Navelim and other sub urban area around Margao	31-Dec-22	Out of 7.2 Km, 6.2 km of the North main trunk sewer line is replaced. The work completed by Dec 2022.
	Recycling and Reuse of treated sewage from the Sewage treatment plant at Colva for flushing and maintaining E- flow during dry season	Khareband to Mobor	31-Dec-22	Stop work notice has been issued by the Village Panchyat of Benuelim and Sal reported to Hon'ble High Court of Bombay, Goa

				bench. The work will require 3 working season.
Zuari River-Priority-V-(from Curchorem to Madkai)				
	The undersigned sewerage scheme in progress for Ponda municipal area		31-May-22	The scheme is expected to be commissioned by May 22.

3. **Captain of Ports (CoP)** in respect of action plan strategies for Sal river-stretch regarding has updated that desilting of river Sal in Phase-II from Telaulim - Varca New Bridge upto the mouth of river Sal within an area of 18.0 Kilometers in length, 12.0 Metres wide and 3.0 Metres depth as under :

Sr. No.	Events	Remarks	Approx. period
	Works of Desilting of River Sal Phase II, from the Telaulim- Varca New Bridge towards downstream upto shatmalley opposite salt pan in river Sal in 1 st Phase within an area of 6.0 Kilometers in length, 12.0 Metres wide and 3.0 Metres depth, so as to facilitate free movement of vessels.	1. Work order was issued on 24-11-2020. 2. The same stands completed on 24 th May, 2021.	
	Works of Desilting of River Sal Phase II, from Shatmalley opposite salt pan towards downstream upto Ambelim in river Sal ion 2 nd Phase within an area of 6.0 Kilometers in length, 12.0 Metres wide and 3.0 metres depth, so as to facilitate free movement of vessels	1. Work order was issued on 02/12/2021. 2. The work is under progress and will be completed by mid month of April 2022	
	Work order to execute the Desilting works	The entire stretch of 180 Km taken in 3 Phases 1 st Phase of 6.0 Km stands completed on 24-05-2021. 2 nd Phase will be completed in the	6 months or each phase.

	Financial Year 2022-21. 3 rd Phase will be completed in the Financial Year 2023-24	

4. **Directorate of Health Services (DHS)** has updated as

SOUTH GOA						
Sr. No.	Polluted river stretch	Responsible Officer with Name and Designation	Number of household discharging sewage	Current Status of compliance	Water Disconnected by PWD	Water Disconnection pending with PWD
1	Sal River	PHC Chinchinim Medical Officer Ic Dr Nixon Fernandes Mobile: 9011025060	54	54	0	0
		*UHC Margao Health Officer I/c Dr Nixon Fernandes Mobile: 9011025060	232	232	0	0
		PHC Cortalim Medical Officer Ic Dr. Pranajli Prasad Mobile : 9011025043	32	32	0	0
		PHC Navelim Medical Officer Ic Dr Prajakt Kamulkar Mobile : 9011025047	14	14	0	0

		PHC Cansaulim Health Officer Dr Lornaa Fernandes Mobile : 9011025034	0	0	0	0
2	Zuari river - Priority – V (from Curchorem to Madkai)	CHC Curchorem Health Officer Dr Mohanrao Desai Mobile 9011025042	133	133	0	0
		PHC Marcaim Health Officer Dr Dinesh Parab Mobile: 9011025035	92	92	0	0
		PHC Shiroda Health Officer Dr Racia Colaco Mobile: 747769035	19	19	0	0
		PHC Corlim Medical Officer I/c Dr Kedar Raikar Mobile 9011025020	21	21	0	0
		PHC Cortalim Medical Officer Ic Dr. Pranjali Prasad Mobile: 9011025043	124	124	0	0
		PHC Loutolim Medical Officer Ic Dr. Vinesh Gaonkar Mobile: 9011025943	86	86	0	0

		PHC Chimbel Medical Officer Ic Dr Jude D'Souza Mobile : 9011025039	287	287	0	0
		PHC Ponda Health Officer Dr Smita Parsekar Mobile : 9011025059	108	108	0	0
		PHC Quepem Health Officer Dr Samita Gauns Mobile : 9011025043	12	12	0	0
3	Khandepar river	PHC Ponda Health Officer Dr Smita Parsekar Mobile: 9011025059	2	2	0	0
4	Talpona river	CHC Canacona Health Officer Dr Sneha Amonkar Mobile : 9011025067	25	25	0	0
	Total		1216	1216	0	0
NORTH GOA						
1	Mandovi river – Priority- IV (from Panjim to Volvoi)	CHC Sankhali Health Officer Dr Uttam Desai Mobile 9011025021	1	1	0	0

3658

350

		PHC Betki Health Officer Dr. Brenda Pinto Mobile: 9011025026	348	348	0	0
		PHC Candolim Health Officer Dr Roshan Nazareth Mobile: 9011025028	60	50	10	0
		PHC Chimbai Medical Officer Ic Dr Jude D'Souza Mobile : 9011025039	1433	322	0	1111
		PHC Corlim Health Officer Dr Kedar Raikar Mobile: 9011025020	59	59	0	0
		UHC Panaji Health Officer Dr Sunita Arlekar Mobile : 9011025041	150	71	0	79
		PHC Porvorim Medical Officer Ic Dr Vikas Naik Mobile: 9011025040	239	222	17	0
		*PHC Aldona Health Officer Dr Preetam Naik Mobile: 9011025025	56	56	0	0

3	Chapora river – Priority V (from Alorna Fort to Morjim)	CHC Pernem Health Officer Dr. Vidya Parab Mobile : 7447769032	102	93	9	0
		PHC Cansarvarnem Health Officer Dr Damodar Narverkar Mobile : 9420160671	14	14	0	0
		PHC Siolim Health Officer Dr. Sadhana Shetye Mobile : 7447436762	175	166	9	0
2	Terekhol river – Priority – V (at Terekhol)	CHC Pernem Health Officer Dr. Vidya Parab Mobile: 7447769032	3	3	0	0
3	Assonora river	PHC Colvale Medical Officer Ic Dr Yogesh Govekar Mobile 9011025055	66	65	1	0
4	Valvanti river	CHC Sankhali Health Officer Dr Uttam Desai Mobile 9011025021	18	18	0	0
5	Bicholim river	CHC Bicholim Health Officer Dr Medha Salkar Mobile : 9011025053	206	206	0	0

		PHC Mayem Medical Officer Ic Dr Siddhi Kansar Mobile: 9011025027	3660			352
			48	48	0	0
6	Sinquerim river	PHC Candolim Health Officer Dr Roshan Nazareth Mobile: 9011025028	3	3	0	0
	TOTAL		2981	1745	46	1190
	GRAND TOTAL		4197	2961	46	1190

**5. Department of Municipal Administration (DMA) in respect of Sal-
river action plans strategies has updated as under -**

Sr. no.	Action Strategy	River Stretch	Agency	Status/Time Frame	Estimate
1.	Improvement and up-gradation of the existing solid Waste Management Facility including collection system, composting facilities and erection of material recovery facilities/ storage shed for non-biodegradable waste at Sonsoddo, Margao.	Margao Municipal Council (MMC) area	Department of Urban Development (Directorate of Municipal Administration (DMA) under 14 th Finance Commission Fund through Margao Council (MMC)	Completed	N.A.
	Additionally, the following decentralized sorting-stations/MRF-sheds are proposed to be set-up to cater to 10 TPD of dry-waste. a. Sonsoddo (area 160m2)		Department of Urban Development (Directorate of Municipal administration (DMA) under 14 th Finance Commission Fund through	Construction of shed is completed and made operational, presently Shreeji Engineering from Mumbai, Maharashtra is	25 lakhs (approx)

			Margao Municipal Council (MMC)	handling plastic dry waste and plastic waste recycling in that said shed	
	The Bio- Methanation at following locations is also proposed to treat the wet- waste- a. 05-TPD biomethanation at SGPDA wholesale fish market. b. 05-TPD biomethanation at retail market	Margao Municipal Council (MMC) area	Department of Urban Development (Directorate of Municipal Administration (DMA) under 14 th Finance Commission Fund through Margao Municipal Council (MMC)	One-5 –TPD Bio- Methanation Plant is complete in fish market (SGPDA) and same is under operation other 02 proposed 5-TPD plants have been postponed as per the decision of the High Powered Committee on 22 nd February 2021 and to set up only 01 5-TPD plant at SGPDA fish market and examine the working and function of the plant to issue work-order for another two 5-TPD plants within the jurisdiction of MMC.	2.65 Crores (approx.)

6. **Goa Waste Management Corporation (GWMC)**, as regard to setting up common waste treatment plans (*in respect of solid waste management, Bio-medical wastes and E-waste management*) has updated as under –

Madovi river action plan

Sr. No.	Action Strategy	River Stretch	Status / Time Frame	Estimated Cost (in Cr.)
1.	a) Installation of Bio-digester having capacity 100-TPD capacity at Bainguinim by the Goa Waste Management Corporation (GWMC) <i>Note : The total capacity of the facility is proposed to be 250 TPD from earlier 100TPD</i>	a) Betqui- Candola b) Marcem -Tivrem- Orgao c) Amona d) Navelim e) Candola, Volvoi f) St. Estevam g) Se-old Goa. h) Salvador-Do-Mundo i) Penha- De-France j) Reis-Magos Nerul	Environmental Clearance (EC) has been granted. RFQ bids were opened on 22/10/2022 and scrutinized and clarifications have been sought from bidders. 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 & others. Hearing was on 17/11/2021, 20/ 01/2022, 24/02/2022 and further adjourned to 24-03-2022 Proposed timeline to be decided post the verdict of Supreme court case.	103.80
2.	The State of Goa has identified site for construction of Common Biomedical waste at Kundaim Industrial Estate. Healthcare facilities have their own treatment facilities such as Autoclave, Deep	The Common Bio-medical waste treatment facility at Kundaim will treat all the Bio-medical waste generated in the State of Goa.	Currently 100% of project is completed and facility is operational. Approximately 1.5 to 2.0 tons are processed daily.	*12.00 Cr.

Sr. No.	Action Strategy	River Stretch	Status / Time Frame	Estimated Cost (in Cr.)
3.	burial pit and encapsulation pit, needle burners, etc. The Goa Waste Management Corporation and Producer Responsibility organization are collecting the E-waste generated throughout the State and the E waste is thereafter transported to authorized recyclers in other states.	The entire State of Goa	GWMC has issued work order to CAM industrial services for Design-Build and Operate an E-Waste Management (Collection, Storage and Dismantling) for the State of Goa on 27/08/2021. Since then, the operator has started collection of e-waste from ULBs/RLBs and the same is disposed scientifically to authorized recyclers. The dismantling/storage facility at Pissurlem will be completed by April 2023.	*5.00 Cr.

Talpona river action plan

Sr. No.	Action Strategy	River Stretch	Agency	Status / Time Frame	Estimated Cost (in Cr.)
1.	Proposed SWM facility at Cacora having 100 TPD (+25%)	Sanguem / Quepem and Canacona Talukas.	Goa Waste Management Corporation (GWMC).	Scheduled to be completed by May 2022.	**173.98 Cr.

Sr. No.	Action Strategy	River Stretch	Agency	Status/ Time Frame	Estimated Cost (in Cr.)
2.	The State of Goa has identified site for construction of Common Bio-Medical Waste Treatment and Disposal Facility (CBWTDF) at Kundaim Industrial Estate. Healthcare facilities have their own treatment facilities such as Autoclave, Deep burial pit and encapsulation pit, needle burners etc. The State has commissioned incinerator of 100 Kg/hr at Goa Medical College (GMC).	The Common Bio-medical waste treatment facility at Kundaim will treat all the Bio-medical waste generated in the State of Goa.	Goa Waste Management Corporation (GWMC).	Completed and operational Currently operational	*12.00 Cr. Not applicable
3.	The Goa Waste Management Corporation and Producer Responsibility organization are collecting the E-waste generated throughout the State and the E waste is there after transported to authorized recyclers in other states.	The entire state of Goa.	Goa Waste Management Corporation	GWMC has issued work order to CAM industrial services for Design-Build and Operate an E-Waste Management (Collection, Storage and Dismantling) for the State of Goa on	*5.00 Cr.

Sr. No.	Action Strategy	River Stretch	Agency	Status / Time Frame	Estimated Cost (in Cr.)
				27/08/2021. Since then, the operator has started collection of e-waste from ULBs/RLBs and the same is disposed scientifically to authorized recyclers. The dismantling/ storage facility at Pissurlem will be completed by April 2023.	

Chapora river action plan

Sr. No.	Action Strategy	River Stretch	Agency	Status / Time Frame	Estimated Cost in Cr.
1.	Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day).		GWMC	Expansion Completed in December 2021 and currently operational.	***10 3.87 Cr.

Terekhol river action plan

Sr. No.	Action Strategy	River Stretch	Agency	Status / Time Frame	Estimated Cost (in Cr.)

1.	Expansion of Saligao Waste Management facility from 125 Tons per day to 250 + 20% (300 tons per day).	Expansion Completed in December 2021 and currently operational.	***103.87 Cr.

Zuari river action plan

Sr. No.	Action Strategy	River Stretch	Agency	Status / Time Frame	Estimated Cost (in Cr.)
1.	Proposed SWM facility at Cacora having 100 TPD (+25%) and the estimated cost the work is 173.98 Cr.	Sangur / Quepem and Canacona Taluka	Goa Waste Management Corporation (GWMC).	Will be completed by May 2022	**173.98 Cr.

Current status has not been submitted by the Directorate of Panchayats (DoP) in respect of institutional mechanism towards collection, segregation and disposal / treatment of solid wastes in village panchayats falling within the jurisdiction of polluted river-stretches, Water Resources Department (WRD) in respect of installation of D.O. control measures within the polluted stretch of Sal river. Further, Directorate of Fisheries has already completed the installation of 20-seated toilet block & 40-KLD capacity STP at fishing-jetty at Malim falling within the polluted stretch of Mandovi river, toilet facility at Talpona, Chapora and Nerul fishing-jetties falling within the polluted stretch of Talpona, Chapora and Sinquerim rivers respectively. Chairman, RRC-Goa reiterated the need to expedite the on-site execution of works so as to be compliant with the timelines enumerated in the respective action plans.

This was followed by the review regarding the assessment of water-quality parameters – pH, Dissolve-oxygen (D.O.), Bio-Chemical Oxygen Demand (B.O.D.), Total / faecal-colliform *as per the CPCB's classification of Best Designated Usage of water-body*, in respect of trend for a period from May 2019 to April 2021, it is noted that out of 11 river-stretches, five river-stretches : namely Chapora / Assonora / Valvonti / Khandepar / Talpona complies with the CPCB-prescribed standards. Accordingly, RRC- Goa during the said meeting has proposed to communicate the same to the CPCB with a request to “De-list” these five river-stretches from the list of polluted river-stretches.

Further, Chairman, RRC-Goa complemented on the good work being initiated / undertaken by departments-concerned in the field of solid waste management and domestic sewage treatment / sewerage network and reiterated the need for continued efforts to address the data-gaps on priority through inter-departmental dialogues and achieve the contemplated targets of delisting remaining six river-stretches.

The meeting ended with vote of thanks to the Chair.

Dr. Shamila Monteiro,

Member Secretary, Goa-PCB / M. S., (RRC-Goa)

Minutes of the 29th River Rejuvenation Committee (RRC -Goa) meeting held on 10th June 2022 under the Chairmanship of Secretary, Environment in Conference-hall, Secretariat, A; to-Porvorim.

The twenty-ninth meeting of the River Rejuvenation Committee (RRC-Goa) was held on 10/06/2022 in the conference hall of the Secretariat under the Chairmanship of Secretary, (*Environment*). The list of participant is annexed herewith.

The M. S. (*RRC-Goa*) welcomed the Chairman and other Members of the Committee. Further, she also welcomed Mr. Prasana Prabhu Chairman of Ravishankar Foundation / Art of Living NGO, who has extensively worked in the field of rejuvenation of rivers in Maharashtra, Karnataka, Tamilnadu & other States, *as a special invitee*. Thereafter Dr. Mohan R. Girap (*Scientist – C. Goa-PCB*) briefed the Committee that follow-up actions have been appraised during the Central Monitoring Committee (CMC), *constituted by the NGT under the Chairmanship of Secretary, Department of Water Resources, GoI*, on 09th June 2022 (13th CMC-meeting) by the Director, Department of Environment & Climate Change.

He further highlighted the need to expedite the follow-up action as per the decision taken during the last RRC-Goa meeting (*i.e. 28th RRC-Goa*), which was held on 09th March 2022 with specific reference to on-site status of various action plan strategies (APS) enumerated in action plans prepared for eleven polluted river-stretches and to be executed by stakeholder departments-concerned.

Accordingly and as instructed by the Chairman, department-specific update was taken from the representative of the departments concerned **with specific reference to the Sal river** (*priority criteria – III*) as detailed below –

Sal River Action Plan Strategies: (Priority criteria – III)

These strategies are classified on the basis of the existing proposal in place, recommended up gradation in order to achieve the desired objective on short term and long-term basis.

1. Pending Work:

- I. **(a)Target** : Diversion of Khareband Nalla to North main trunk sewer line, which will be treated in 20- MLD capacity Sewage Treatment Plant (STP).
- (b)River stretch:** Khareband – Mobor

(c)Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL)

(d)Status and action required: Technical Assistant Mr. Rohit Naik representing the Managing Director, SIDCGL updated that there are local issues and the department, in dialogue with the concerned, is hopeful to sort-out the matter by 30th June 2022. As such, Chairman, RRC instructed that the work shall be completed by 31st July 2022.

II. **(a)Target:** Replacement of the Old Sewerage Network system, laying of new sewerage system, providing House connections to the existing sewerage system.

(b)River stretch: Margao town, Navelim and other sub urban areas around Margao

(c)Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL)

(d)Status and action required: Out of 7.2 Km, 6.2 km of the North main trunk sewer line has been replaced. Chairman, RRC instructed that M.D., SIDCGL should intervene and look into matter for its timely completion by 31st December 2022.

III. **(a)Target:** Recycling and reuse of treated sewage from the STP at Colva for flushing and maintaining E-flow during dry-season.

(b)River stretch: Khareband to Mobor

(c)Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL)

(d)Status and action required: The stop work notice has been issued by the Village Panchyats of Benuelim and Sal, thus work could not be undertaken. The matter has been reported to Hon'ble High Court of Bombay, Goa bench.

It was decided in the meeting that M.S., RRC-Goa should write letters to Secretaries / Sarpanchas of Sal and Benuelim village panchayats that no stay / stop-work order / closure directions be issued to the ongoing works being executed on-site by the SIDCGL without giving an opportunity of hearing to them.

IV. **Target:** The Bio-Methanation at following locations is also proposed to treat the wet-waste

- i. 05-TPD biomethanation at SGPDA wholesale fish market.
- ii. 05-TPD biomethanation at retail market.

One Bio-Methanation Plant having capacity of STPD is complete in fish market (SGPDA) and same is under operation. Other 02 proposed 5-TPD plants have been postponed as per the decision of the High Powered Committee on 22nd February 2021 and to set up only 01 5-TPD plant at SGPDA fish market and examine the working and function of the plant to issue work-order for another two 5-TPD plants within the jurisdiction of MMC.

- V. Establishment of Material Recovery Facility (MRF) at Navelim, Taulim, Cana Benaulim, Varca, Orlim, Carmona, Assolna, Cavelossim-Mobor, Velim by village panchayats.

Status and action required: BDO and Deputy Director Mr. Prasiddh P. Naik, representing the Director, DoP updated that out of 09 Village panchayats, 08 VPs has constructed Material Recovery Facility.

- VI. (a)**Target:** De-silting of River sal.

(b)**River stretch:** Taulim - Varca

(c)**Agency:** Captain of Ports (CoPs)

(d)**Status and action required:** Hydrographic Surveyor Mr. Ram Asre M. Gupta, representing the Captain of Ports (CoP) informed that Phase-I is completed. Phase-II of the work of desilting of river Sal, a stretch of 06 kms. from Shatmalley opposite salt pan (towards downstream) upto Ambelim is yet to be completed although timeline was given upto April 2022.

Further, works related to phase III (*comprising of 06 kms.*) will be completed in the financial year 2023 – 24. Thus, the entire stretch of 18 kms. is expected to be completed by 2024. It was decided that the department needs to expedite the completion of all phases and desilt the said-stretch by December 2022.

- VII. (a)**Target:** Installation of Dissolved Oxygen(DO) control Measures.

(b)**River stretch:** Khareband to Navelin

(c)**Agency:** Water Resources Department(WRD)

(d)**Status and action required:** Installation of Dissolved Oxygen (DO) measures is pending.

2. Completed Work:

- I. Diversion of Shirvodem Nallah to 20-MLD capacity STP at Shirvodem, Navelim by Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).

- II. Improvement and up-gradation of the existing Solid Waste Management Facilities including collection system, composting facilities and erection of material recovery facilities / storage shed for non-biodegradable waste at Sonsoddo, Margao under Margao Municipal Council(MMC) and Decentralized sorting-stations / MRF-sheds are to be set-up to cater to 10-TPD of dry-waste at Sonsodo (*area – 160 m²*) by the Department of Urban Development.
- III. Installation of shed admeasuring 20 m X 25 m where dry-waste is sorted and wet-waste is treated through aerobic composting by Cuncolim Municipal Council. In addition,
 - i. MRF equipment including Baling machine, conveyor-belt with hopper system.
 - ii. Augmentation work of 1.5 TPD capacity incinerator has been established.
- IV. **Target:** De-weeding of the river stretch from Khareband to Navelim in the River stretch of Khareband to Navelin has been completed by Water Resources Department(WRD)

Mandovi River Action Plan Strategies : (Priority Criteria – IV)

1. Pending Work:

- I. **(a)Target:**Disconnection of the direct discharge into the river/storm water drain/Nallahs is completed, Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks to avoid untreated domestic sewage discharge the natural drains is completed and Initiating action under the Water act including levying of fines for commercial establishment under Polluter pay principal. (within 1 month).

Status: PHC, Chimbel – 1,111 water disconnection pending with PWD, UHC, Panaji – 79 water disconnections pending with PWD. Thus, it is decided to write to the PWD for disconnecting of water lines.

(b) River stretch: Panjim to Volvoi comprising of Betqui- Candola, Marcem -Tivrem- Orgao, Amona, Navelim, Candola, Volvoi, St. Estevam, Se-old Goa., Salvador-Do-Mundo, Penha-de-France, Reis-Magos,Nerul V.Ps'

(c)Agency: Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).

- II. **(a)Target:** Improve collection system, and ensuring collection of segregated waste, Installation of Bio-digester having capacity 100 TPD capacity at Bainguinim by the Goa Waste Management Corporation (GWMC).The total capacity of the facility is proposed to be increased to 250 from its earlier capacity of 100 – TPD.

(b) River stretch: Betqui- Candola, Marcem -Tivrem- Orgao, Amona, Navelim, Candola, Volvoi, St. Estevam,Se-old Goa., Salvador-Do-Mundo,Penha- De-France, Reis-Magos, Nerul ,

(c)Agency: Respective Village (VPs') Panchayat and Directorate of Panchayat (DoP) and Goa Waste management Corporation (GWMC).

(d) Status:

- a) Out of 12 village panchayats, 05 V.Ps' have constructed the MRF and remaining 07 V.P.s' are in a process to set-up MRF. It was decided to write to Director (Panchayat) to expedite the action.
- b) GWMC to update in view of Hon'ble Supreme Court matter challenging the EC granted. It was decided to write a letter to MD, GWMC for earliest action and ATR thereof.

III. **a)Target:**

The up gradation of Sewage Treatment Plant at Patto, Panaji involving setting up of SBR-based 02 MLD capacity STP.

(b) River stretch: STP at Patto, Panajim

(c)Agency: PWD Goa

(d)Status: 80 % of the STP-construction has been completed. Expected date of completion is 31st October 2022. It was decided that the PWD shall ensure timely completion of project.

- IV. **a)Target:**The Goa Waste Management Corporation and Producer Responsibility organization are collecting the E-waste generated throughout the State and the E waste is thereafter transported to authorized recyclers in other states.

(b) River stretch: The entire stretch of Goa

(c)Agency: Goa Waste Management Cooperation.(GWMC) is developing.

(d)Status: The dismantling / storage facility at Pissurlem which will be completed by April 2023.

2. Completed work:

- I. Toilet facility and sanitation facility for fishing Jetty at Volvoi & Marcel is provided / work completed by Captain of Ports.
- II. Existing 8 toilets, 7 Bath rooms, 7 urinals at the fisheries complex Malim Betim, Goa managed by Sulabh International Social Service Organization Porvorim, Goa. The 20 seated toilet block was proposed along the waste water treatment plant of 40-KLD capacity has been completed by Dept of Fisheries.
- III. The State of Goa has identified site for construction of Common Biomedical waste at Kundaim Industrial Estate. Healthcare facilities have their own treatment facilities such as Autoclave, Deep burial pit and encapsulation pit, needle burners, etc. The work has been completed by the Goa Waste Management Cooperation (GWMC). Currently, 100% of project is complete and facility is operational. Approximately 1.5 to 2.0 tons are processed on daily basis.

Talpona River Action Plan Strategies : Priority Criteria – IV

1. Pending Work:

- I.
 - a)**Target:**Improvement to collection system, and development of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Talpona River.
 - (b) **River stretch:** Along the Canacona in villages of Talpona and Poinginium
 - (c) **Agency:** Respective Village Panchayat (VPs') and Directorate of Panchayat (DoP).
 - (d) **Status:** 01 Village panchayat has completed construction of MRF work. A letter may be written to Director (Panchayat) to get the work complete by other VP of Poinguinim.
- II.
 - a)**Target:** Proposed Solid Waste Managemnt facility at Cacora having 100 TPD (+25%)
 - (b) **River stretch:** Sanguem / Quepem and Canacona Talukas.
 - (c) **Agency:** Goa Waste Management Corporation (GWMC).
 - (d) **Status:** GWMC has to update the status.

- III. **a)Target:** The Goa Waste Management Corporation and Producer Responsibility organization are collecting the E-waste generated throughout the State and the E waste is there after transported to authorized recyclers in other states.
- (b) River stretch/area:** The entire state of Goa.
- (c) Agency:** Goa Waste Management Corporation
- (d) Status:** The dismantling / storage facility at Pissurlem will be completed by April 2023.

2. Completed Work:

- I. Disconnection of the direct discharge into the river/storm water drain/Nallahs, installation of Bio-toilets and construction of septic tank and soak pits by residential houses along the Canacona, Talpona and poinguinim rivers are completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- II. Providing toilet facilities at Talpona fishing jetty has been completed by the Department of Fisheries.
- III. The State of Goa has identified site for construction of Common Biomedical waste at Kundaim Industrial Estate. Healthcare facilities have their own treatment facilities such as Autoclave, Deep burial pit and encapsulation pit, needle burners, etc. The work has been completed by the Goa Waste Management Cooperation (GWMC). Currently, 100% of project is complete and facility is operational. Approximately 1.5 to 2.0 tons are processed on daily basis.

Chapora River Action Plan Strategies : (Priority Criteria – V)

1. Pending Work:

- I. **a) Target:** Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village panchayat areas along the banks of Chapora River.
- (b) River stretch:** Alorna, Casaverem, Ozorim, Dhargalim, Tuem, Parcem, Agarwada, Chopdem, Morjim, Menecurim, Pirna, Nadora, Rivora, Colvale, Camurlim, Oxel, Siolim, Assagao, Anjuna,
- (c) Agency:** Respective Village Panchayat (VPs') and Directorate of Panchayats (DoP)
- (d) Status:** Out of 18 Village Panchayats, 09 V.P.s' have constructed

MRF. While, remaining 9 V.P.s' are in a process to set up MRF.

2. Completed Work:

- I. Disconnection of the direct discharge into the river/storm water drain/Nallah, Installation of Bio toilets and Construction of septic tank and soak pits by residential houses from Alorna fort to Morjim by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS)
- II. Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day) has been completed by GWMC and operational now.
- III. Providing toilet facilities at Chapora fishing jetty has been completed by Department of Fisheries through Goa Waste management Corporation (GWMC).

Terekhol River Action Plan Strategies: (Priority Criteria – V)

1. Pending Work:

- I. **a) Target:** Improvement and up gradation of the existing Solid Waste Management Facility including collection system and erection of material recovery facilities / storage shed for non- biodegradable waste in the village panchayat areas along the banks of Terekhol River.
- (b) River stretch:-** Querim-Tiracol, Paliyem, Corgao, Pernem municipal council, Casne – Amberem – poroscadem, Tamboxem- Mopa-, Uguem,Torxem
- (c) Agency:** Respective Village Panchayats (VPs') and Directorate of Panchayat (DoP).
- (d) Status:** Out of 06 Village Panchayats, All 06 Village Panchayats are in a process to set up MRF.

2. Completed Work:

- I. Disconnection of the direct discharge into the river/storm water drains / Nallahs and Construction of septic tank and soak pits by residential houses in villages of Tambosa, Nanerwada, Bhalkhajan, Querim Tiracol along Terekhol River has been completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).

- II. Expansion of Saligao Waste Management facility from 125 Tons per day to 250 + 20% (300 tons per day) has been completed by GWMC and same is currently operational.

Assonora River Action Plan Strategies: Priority Criteria – V

1. Pending Work: NIL

2. Completed Work:

- I. Disconnection of direct discharges of domestic sewage into the Assonora. River /storm water drains/ nallah. Disconnection of the direct discharge into the River / storm water drain / Nallah and Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge into the natural drains on river stretch from Assonora to U/s of Sirsaim has been completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- II. Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Assonora River on River stretch within the villages of Assonora and Sirsaim has been completed by respective Village Panchayat (VPs') and Directorate of Panchayat (DoP).

Bicholim River Action Plan Strategies: Priority Criteria – V

1. Pending Work:

- I. **Target:** Improvement in collection system, and erection of material recovery facilities / storage shed for non- biodegradable waste in the Municipal Council, village Panchayat areas along the banks of Bicholim River.
- (b) River stretch:-** Curchirem, Ona-Maulinguem, Karapur-Sarvan, Amona, Pilgao,
- (c) Agency:** Village Panchayat (VPs') and Directorate of Panchayat (DoP)
- (d) Status:** All village Panchayats are in process to set up MRF.

2. Completed Work:

- I. Disconnection of direct discharges of domestic sewage into the Bicholim river / storm-water drains / nallah, Installation of bio toilets and construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage

discharge in to the natural drains.(Status not given) along river stretch of Curchirem to Bicholim in Village Panchayats of Curchirem, Ona-Maulinguem, Karapur-Sarvan, Amona, Pilgao has been completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS) and Department of Urban Development.

- II. Augmentation of Dry and Wet-waste facility in Bicholim Municipal Council (BMC) has been completed by the Urban Development Department.

Valvanti River Action Plan Strategies: (Priority Criteria – V)

1. **Pending Work:**

I. **Target:**

- a) Improvement to collection system, and erection of material recovery facilities / storage shed for non- biodegradable waste in the village Panchayat areas along the banks of Valvanti River.
- b) Improvement and Up gradation of the existing Solid Waste Management Facility of Sanquelim Municipal Council; installation of biogas plant of 3 tons per day and construction of storage shed.

(b) River stretch:- Poriem, Honda, Karapur-Sarvona

(c) Agency: Directorate of Panchayat (DoP), Directorate of Health Services (DHS) and Sanquelim Municipal Council.

(d) Status: Out of 03 Village Panchayats, All 03 Village Panchayats are in a process to set-up MRF.

2. **Completed Work:**

- I. Disconnection of the direct discharge into the river / storm water drain / Nallah, Installation of Bio toilets, Construction of septic tank and soak pits by residential houses in River stretch of villages Poriem, Sanquelim, Poriem, Honda, Karapur, Sarvona, Pilgao has been completed by Directorate of Panchayat (DoP), Directorate of Health Services (DHS).
- II. Commissioning of existing sewerage network and 0.8-MLD capacity Sewage Treatment Plant (STP) covering three-wards (comprising of 03 wards - i. e. Bandharw ada, Muslim Wada Muzar wada & Gokulwadi.) in the river stretch of Sanquelim has been completed by SIDCGL.

Khandepar River Action Plan Strategies: (Priority Criteria – V)**1. Pending:**

- I. **Target:** Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village panchayat areas along the banks of Chapora River.
- (b) **Area:-** V.P. Curti Khandepar and V.P. Usgao-Ganjam.
- (c) **Agency:** Respective Village Panchayat and Directorate of Panchayats.
- (d) **Status:** All Village Panchayats are in a process to set-up MRF.

2. Completed Work:

- I. Disconnection of direct discharges of domestic sewage into the Khandepar river / storm-water drains/ nallah and Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains in River stretch from Codli to U/s of Opa water works in villages of Khandepar and Usgao has been completed by the Directorate of Panchayat (DoP), Directorate of Health Services (DHS).

Sinquerim River Action Plan Strategies: (Priority Criteria – V)**1. Pending Work:****I. (a) Target:**

- a) Improvement to collection system, and ensuring collection of segregated waste, Improvement and Up gradation of the existing Solid Waste Management.

(b) **River stretch:-** Pilerne-Marra, Candolim, Reis-Magos, Nerul

(c) **Agency:** Respective Village Panchayats (VPs') and Directorate of Panchayat (DoP).

(d) **Status:** Out of 04 Village Panchayats, 02 V.P.s' have constructed MRF. Remaining 02 V.P.s' are in a process to set-up MRF.

2. Completed Work

- I. Disconnection of the direct discharge into the river or through storm water drain/ Nallah, Installation of Bio- toilets along the river stretch, Construction of septic-tank and soak-pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains in River stretch from Candolim Bridge to Ganpati Temple (Nerul), Pilerne-Marra,

Candolim, Reis-Magos, Nerul has been completed by the Directorate of Panchayat (DoP), Directorate of Health Services (DHS).

- II. Work for providing toilet facility and sanitation facility for Fishing trawlers near Nerul in river stretch/Area of Nerul has been completed by Department of Fisheries through Goa Waste Management Corporation (GWMC).

Zuari River Action Plan Strategies: Priority Criteria – V

1. Pending Work:

- I. **Target:** Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Zuari River, including

(b) River stretch:- Savordem, Panchwadi, Shiroda, Borim, Wadi – talaulim, Durbhat, Bandora, Marcaim, Neura, St. Lawrence (Agasaim), St. Andre (Velha), Siridao – pale, Curchorem kakora, Macasona, Curtorim, Rachol Lotolium, Cortalim, Quelosim, Sancoal,

(c) Agency: Respective Village Panchayat (VPs') and Directorate of Panchayat (DoP)

(d) Status: Out of 19 Village Panchayats, 04 V.P.s' have already constructed MRF. Further, 08 Village Panchayats are in a process to set-up MRF while, in case of remaining 07 V.P.s', construction of MRF work is in progress.

- II. (a) **Target:** Proposed SWM facility at Cacora having 100 TPD (+25%) and the estimated cost the work is 173.98 Cr.

(b) River stretch:- Sanguem / Quepem and Canacona Taluka

(c) Agency: Goa Waste Management Corporation (GWMC).

(d) Status: GWMC to update.

- III. (a) **Target:** The underground sewerage scheme Including 15-MLD capacity Sewage Treatment Plant (STP) at Kavelem for Ponda municipal areas..

(b) River stretch:-

(c) Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL)

(d) Status: The scheme is expected to be commissioned by 31st May 2022.

2. Completed Work

- I. Disconnection of direct discharges of domestic sewage into the Zuari River / storm water drains / Nallahs, Disconnection of the direct discharge into the river / storm water drain / Nallahs. Installation of Bio toilets, Construction of septic tank and soak pits by residential houses in the river stretch from Curchorem to Madkai has been completed by the Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).

Subsequently and on request from Chairman, RRC, Mr. Prasan Prabhu made a brief power-point presentation on various success stories wherein their firm has provided guidance and has implemented on-site technical interventions to revitalise a river-stretch through Public Participatory Approach (PPA). Thereafter, Chairman, RRC requested Mr. Prabhu to submit the proposal, *highlighting micro-level interventions that their NGO would like to do voluntarily to tackle the pollution-aspects of Sal river.*

Further, Chairman, RRC-Goa complemented the good work being initiated / undertaken by departments-concerned in the field of solid waste management and domestic sewage treatment / sewerage network especially by GWMC and DMA / DoP and reiterated the need for continued efforts by other stakeholder departments concerned to address the data-gaps on priority through inter-departmental dialogues and achieve the targets for completion of works with an aim to 'delist' remaining six river-stretches and to be compliant with CPCB's bathing water-quality standards.

To sum it up, Chairman, RRC-Goa directed all stakeholder departments concerned (*i.e. SIDCGL / GWMC / WRD / CoP / DMA / DoP / DHS*) to submit status-update of river-wise interventions (*i.e. Action Plan Strategies (APS)*) with photographic evidence of on-site progress *vis-a-vis* compliance with revised time-lines, *if any.*

The meeting ended with vote of thanks to the Chair.

Dr. Shamila Monteiro,
Member Secretary, Goa-PCB / M. S., (RRC-Goa)

1. Shri. Arun Kumar Mishra IAS, Secretary, Environment, Chairman, RRC-Goa.
2. Mr. Ram Asre M. Gupta, Hydrographic Surveyor, Captain of Ports (CoP).
3. Mr. Valsan, M. R., General Manager, SIDCGL.
4. Mr. Rohit Naik, Technical Assistant, SIDCGL.
1. Mr. Rajendra Khanna, Executive Engineer, JAICA (PWD).
2. Mr. Noella M. Souza Barreto, S. E. (V), PWD.
3. Mr. Bento Thomas, Assistant Manager, Goa Waste management Corporation (GWMC).
4. Mr. Prasiddh P. Naik, BDO, Rep. of Directorate of Panchayats.
5. Mr. Ashish Vadyekar, Contractual staff, Directorate of Panchayats.
6. Ms. Eleane Lisa Da Costa, J. E., Directorate of Municipal Administration (DMA).
7. Mr. Siddhesh Y. Shikerkar, J. E., Directorate of Municipal Administration (DMA).
8. Mr. Gajanan Mahale, Assistant Director, Department of Tourism.
9. Mr. Sanket Faldessai, Field Manager, Goa Industrial Development Corporation (GIDC).
10. Dr. Pradip Sarmokadam, Member Secretary, Goa State Biodiversity Board (GSBB).
11. Ms. Ashwini Bhagat, Deputy Director, Department of Industries, Trade and Commerce (DITC).
12. Ms. Roshell Fernandes, Deputy Director, Mines – I.
13. Smt. Sushma S. Shirodkar, Assistant Surveyor of Works, Water Resources Department (WRD).
14. Mr. Vyankatesh Sawant, Municipal Engineer – II, Corporation of City of Panaji (CCP).
15. Mr. Harish Adconkar, Managing Director, Goa State Infrastructure Development Corporation (GSIDC).
16. Dr. Prashan Suryawanshi.
17. Mr. Prasana Prabhu, Chairman, Ravishankar Foundation, Art of Living, Goa.
18. Mr. Mahadev Gomare, representative of Ravishankar Foundation, Art of Living, Goa.
19. Mr. Santosh Ghodge, representative of Ravishankar Foundation, Art of Living, Goa.
20. Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (RRC-Goa).

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Minutes of the 30th River Rejuvenation Committee (RRC -Goa)
meeting held on 09th September 2022 under the Chairmanship of
Secretary, Environment in the Conference hall of the Goa State
Pollution Control Board (GSPCB), Saligao.

The 30th meeting of the River Rejuvenation Committee (RRC-Goa) was held on 09/09/2022 in the conference hall of the Goa-PCB under the Chairmanship of Secretary, (*Environment*). The list of participant is annexed herewith.

The M. S. (*RRC-Goa*) welcomed the Chairman and members of the Committee. Subsequently, Chairman, RRC-Goa initiated the department-specific review *vis-à-vis* discussion / deliberation and follow-up action in respect of various action plan strategies (APS) enumerated for eleven polluted river-stretches (*i.e. as per the minutes of the last RRC-Goa held on 10th June 2022*).

River-stretch wise discussion / deliberation in respect of action plan strategies (APSs') are detailed as under:-

Pending Works

1. Sal River Action Plan Strategies: (Priority criteria – III)

River-stretch : Khareband to Mobor

- i. **Target:** Replacement of the Old Sewerage Network system, laying of new sewerage system, providing House connections to the existing sewerage system.(*i.e. Margao town, Navelim and other sub urban areas around Margao*).

Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).

Status and action required: Mr. Rohit Naik, Technical Assistant, SIDCGL representing the M.D., SIDCGL informed that out of 7.2 kms. of sewerage network system (*with the alignment same as that of old network*), about 6.7 kms. of the North main trunk sewer line has been replaced. Remaining 500 mts. is scheduled to be completed by January 2023. However, Chairman has instructed the SIDCGL to submit the Technical Feasibility report to substantiate the delay in completion within scheduled timeline.

It was also appraised that a storm water drain / nala (*not connected to the old sewerage network system and which was directly draining into Sal river*) is proposed to be connected to newly replaced sewerage system.

The carrying capacity of the newly replaced sewerage system is designed to treat the sewage generated during non-monsoon seasons. Chairman instructed the SIDCGL to provide suitable mechanism to address the monsoonal storm-water flow. In addition, SIDCGL needs to manage effective disposal of sludge likely to be deposited in the chamber proposed to be constructed.

- ii. **Target:** Recycling and reuse of treated sewage from the STP at Colva for flushing and maintaining E-flow during dry-season. (*river-stretch –Khareband to Mobor*).

Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).

Status and action required: Mr. Rohit Naik, Technical Assistant, SIDCGL representing the M.D., SIDCGL informed that the stop work notice issued by the Village Panchyats of Benuelim has been stayed and SIDCGL has been instructed to complete the pending-works. Accordingly, SIDCGL has proposed to complete the work by 31st December 2022.

- iii. **Target:** Wet Waste is proposed to be treated by Bio-Methanation process to treat the wet-waste.
- a. 05-TPD biomethanation at SGPDA wholesale fish market.
 - b. 05-TPD biomethanation at retail fish-market.

Mr. Ganesh Barve, Additional Director, Urban Development Department (UDD) along with Mr. Joao Dourado, Asst. Engr., SGPDA informed that One Bio-Methanation of 5-TPD capacity is complete in retail fish-market and same is under operation. Other 02 proposed 5TPD plants have been postponed as per the decision of the High Powered Committee and to set up only 01 no. of 5 TPD plant at SGPDA fish market and examine the working and function of the plant to issue work order for another 2 nos. of 5 TPD plants within the jurisdiction of the Margao Municipal Council (MMC).

Accordingly, Chairman has instructed the SGPDA to seek the clarification with timeline to complete the installation / operation of said biomethanation plant at Fish-market.

- iv. **Target:** De-silting of river Sal (*river-stretch –Talaolim to Varca*)

Agency: Captain of Ports (CoP)

Status and action required: Hydrographic Surveyor Mr. Ram Asre M. Gupta, representing the Captain of Ports (CoP) informed that Phase-I *i.e. a stretch of 06*

kms. from Talaulim-Varca new bridge towards downstream upto Shantimalley opposite salt-pan) stands completed on 24th May 2021.

Phase-II (i.e. a stretch of 06 kms. from Shantamally opposite salt-pan towards downstream upto Ambelim) stands completed on 7th April 2022.

While, tender a formality of the Phase-III (i.e. a stretch of 06 kms. From Ambelim towards downstream upto the mouth of Sal-river) has been completed and the file is submitted to the Government for post-tender administrative approval and financial expenditure sanction. On receipt of approval, work order will be issued by 1st October 2022 and the work of desilting is likely to be completed by April 2023.

- v. **Target:** Installation of Dissolved Oxygen (DO) control Measures.(river-stretch – Khareband to Navelim)

Agency:Water Resources Department(WRD)

Status and action required: No representative from the O/o WRD was present to update about the status. As such, Chairman, RRC-Goa instructed the Board to seek update from the Chief Engineer (WRD) in writing.

2. Mandovi River Action Plan Strategies : (Priority Criteria – IV).

River-stretch : Panjim to Volvoi comprising of Betqui- Candola, Marcem -Tivrem-Orgao, Amona, Navelim, Candola, Volvoi, St. Estevam, Se-old Goa., Salvador-Do-Mundo, Penha-de-France, Reis-Magos,Nerul V.Ps'

- i. **Target: Disconnection of the direct discharge into the river/storm water drain/Nallahs has not been completed.**

Construction of septic tank and soak pits by owners of residential houses and monitoring regular cleaning of septic tanks to avoid untreated domestic sewage discharge in the natural drains has not been complied so far.

Agency: Public Works Department (PWD).

Status: PHC, Chimbél – 1,111 water disconnection pending with PWD, While in respect of UHC, Panaji – 79, water disconnections pending with PWD. No representative from the section-concerned was present to update on the current-status. As such, Chairman, RRC-Goa instructed to seek status from the Principal Chief Engineer (PCE), PWD.

- ii. Installation of Bio-digester having 100 - TPD capacity at Bainguinim by the Goa Waste Management Corporation (GWMC). The total capacity of the facility is proposed to be increased to 250 TPD from its earlier capacity of 100 – TPD.

Agency: Goa Waste management Corporation (GWMC).

Status: Mr. Bento Thomas, Assistant Manager, GWMC informed that GWMC had earlier floated tender two-times but no response was received. Thus, it is proposed to refloat the tender with

- (a) Relaxed conditions / Terms of references (ToRs') and
- (b) Reduced capacity of 100 tons per day capacity, *instead of 250 tons proposed earlier.*

The works to be completed by December 2023. Chairman, RRC-Goa instructed the O/o GWMC to update the status of the plant to the GWMC Board, as the EC has been challenged in the Hon'ble Supreme Court.

- iii. **Target:** The up gradation of Sewage Treatment Plant at Patto, Panaji involving setting up of SBR-based 02 MLD capacity STP.

Agency: PWD Goa

Status: Mr. Rajendra Khanna, E.E., PWD (SE – VI) informed that 95 % of the STP-construction has been completed. Expected date of completion is 31st October 2022.

- iv. **Target:** Goa Waste Management Corporation (GWMC) and Producer Responsibility organization are collecting the E-waste generated throughout the State and the E-waste is thereafter transported to authorized recyclers in other states.

Agency: Goa Waste Management Cooperation (GWMC).

Status: Mr. Bento Thomas, Asst. Manager. GWMC informed that the e-waste dismantling / storage facility at Pissurlem will be completed by March 2023.

3. Talpona River Action Plan Strategies: (Priority Criteria – IV)

River-stretch – Talpona – Canacona & Poinguinim.

- i. **Target:** The Goa Waste Management Corporation and Producer Responsibility organization are collecting the E-waste generated throughout the State and the E-waste is there after transported to authorized recyclers in other states.

Status: Mr. Bento Thomas, Asst. Manager. GWMC informed that e-waste dismantling / storage facility at Pissurlem will be completed by March 2023.

4. Zuari River Action Plan Strategies: (Priority Criteria – V)

River-stretch – Curchorem to Madkai

- i. **Target:** The underground sewerage scheme including 15-MLD capacity Sewage Treatment Plant (STP) at Kavelem for Ponda municipal areas.

Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL)

Status:Mr. Rohit Naik, Technical Assistant, SIDCGL representing the M.D., SIDCGL informed that the construction of the said STP has been completed but commissioning is pending due to electricity connection. The Chairman, RRC-Goa instructed to resolve the issue on priority to make the STP operational at the earliest.

Completed Work

1. Sal River Action Plan Strategies: (Priority criteria – III)

River-stretch : Khareband to Mobor

- i. Diversion of Shirvodem Nallah to 20-MLD capacity STP at Shirvodem, Navelim by (SIDCGL).
- ii. Diversion of Khareband Nalla to North main trunk sewer line, which will be treated in 20- MLD capacity Sewage Treatment Plant (STP) by SIDCGL.
- iii. Improvement and up- gradation of the existing Solid Waste Management Facilities including collection system, composting facilities and erection of material recovery facilities / storage shed for non-biodegradable waste at Sonsoddo, Margao under Margao Municipal Council (MMC).
- iv. Improvement and upgradation of the existing solid waste management facility including collection system, composting facilities / storage-shed for non-biodegradable waste (10 – TPD capacity) at Sonsodo, (area – 160 sq.mts.) – construction of shed is complete and operational. Presently, M/s Shreeji Engineering from Mumbai handling the dry-waste recycling in that said shed. 02 nos. of baling machines in existing SWM plant at Sonsosdo. 1 no. of baling

machine is given to IDC-Nessai – V recycle waste management services. New IDC shed work is under progress on completion stage.

- v. Establishment of Material Recovery Facility (MRF) at Navelim, Taulim, Cana Benaulim, Varca, Orlim, Carmona, Assolna, Cavelossim-Mobor, Velim by village panchayats - Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 09 Village panchayats, have constructed Material Recovery Facility (MRF). However, Mr. Sanjeev Joglekar, OSD to Dept. of Env., & CC informed that although Colva village panchayat has constructed the MRF the same has been reportedly dismantled. As such, Chairman, RRC-Goa instructed the O/o DoP to inspect and verify the on-site status of MRF and take necessary action.
- vi. Decentralized sorting-stations / MRF-sheds to cater to 10-TPD of dry-waste at Sonsodo (*area – 160 m²*) has been completed along with two numbers of baling machines at Sonsodo.
- vii. Installation of shed admeasuring 20 m X 25 m where dry-waste is sorted and wet-waste is treated through aerobic composting by Cuncolim Municipal Council. In addition,
 - i. MRF equipment including Baling machine, conveyor-belt with hopper system.
 - ii. Augmentation work of 1.5 TPD capacity incinerator has been established.
- viii. De-weeding of the river stretch from Khareband to Navelim in the River stretch of Khareband to Navelin has been completed by Water Resources Department(WRD).

2. **Mandovi River Action Plan Strategies : (Priority Criteria – IV)**

River-stretch : Panjim to Volvoi comprising of Betqui- Candola, Marcem -Tivrem-Orgao, Amona, Navelim, Candola, Volvoi, St. Estevam, Se-old Goa., Salvador-Do-Mundo, Penha-de-France, Reis-Magos, Nerul V.Ps'

- i. Toilet facility and sanitation facility for fishing Jetty at Volvoi & Marcel is provided/work completed by Captain of Ports.
- ii. Existing 8 toilets, 7 bath-rooms, 7 urinals at the fisheries complex Malim Betim, Goa managed by Sulabh International Social Service Organization Porvorim, Goa. The 20 seated toilet block along the waste water treatment plant of 40-KLD capacity has been completed by Dept of Fisheries.

- iii. Improve collection system, and ensuring collection of segregated waste - Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 11 Village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF).
- iv. The State of Goa has identified site for construction of Common Biomedical waste at Kundaim Industrial Estate. Healthcare facilities have their own treatment facilities such as Autoclave, Deep burial pit and encapsulation pit, needle burners, etc. The work has been completed by the Goa Waste Management Cooperation (GWMC). Currently, 100% of project is complete and facility is operational. Approximately 1.5 to 2.0 tons are processed on daily basis.

3. **Talpona River Action Plan Strategies: (Priority Criteria – IV)**

River-stretch – Talpona – Canacona & Poinguinim.

- i. Disconnection of the direct discharge into the river/storm water drain/Nallahs, installation of Bio-toilets and construction of septic tank and soak pits by residential houses along the Canacona, Talpona and Poinguinim rivers are completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Providing toilet facilities at Talpona fishing jetty has been completed by the Department of Fisheries.
- iii. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that two village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF).
- iv. Proposed Solid Waste Management facility at Cacora having 100 TPD (+25%) – Mr. Bento Thomas, Asst. Manager. GWMC informed that the said facility has been constructed and trial-operations are ongoing.
- v. The State of Goa has identified site for construction of Common Biomedical waste at Kundaim Industrial Estate. Healthcare facilities have their own treatment facilities such as Autoclave, Deep burial pit and encapsulation pit, needle burners, etc. The work has been completed by the Goa Waste Management Cooperation (GWMC). Currently, 100% of project is complete and facility is operational. Approximately 1.5 to 2.0 tons are processed on daily basis.

4. **Chapora River Action Plan Strategies: (Priority Criteria – V)**

River-stretch – Pernem to Morjim

- i. Disconnection of the direct discharge into the river/storm water drain / Nallah, Installation of Bio toilets and Construction of septic tank and soak pits by residential houses from Alorna fort to Morjim by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 19 village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF). He further updated that Morjim village panchayat has constructed the MRF with area of 40 sq.mts., while, construction of another MRF with are of 150 sq.mts. is proposed to be completed by 15th October 2022.
- iii. Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day) has been completed by GWMC and operational now.
- iv. Providing toilet facilities at Chapora fishing jetty has been completed by Department of Fisheries through Goa Waste Management Corporation (GWMC).

5. **Terekhol River Action Plan Strategies:(Priority Criteria – V)**

River-stretch - along Terekhol river

- i. Disconnection of the direct discharge into the river/storm water drains / Nallahs and Construction of septic tank and soak pits by residential houses in villages of Tambosa, Nanerwada, Bhalkhajan, Querim Tiracolalong Terekhol River has been completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 06 village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF).
- iii. Expansion of Saligao Waste Management facility from 125 Tons per day to 250 + 20% (300 tons per day) has been completed by GWMC and same is currently operational.

6. **Assonora River Action Plan Strategies: (Priority Criteria – V)**

River-stretch – Assonora to Sirsaim

- i. Disconnection of direct discharges of domestic sewage into the Assonora. River /storm water drains/ nallah. Disconnection of the direct discharge into the River / storm water drain / Nallah and Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge into the natural drains on river stretch from Assonora to U/s of Sirsaim has been completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Assonora River on River stretch within the villages of Assonora and Sirsaim has been completed by respective Village Panchayat (VPs') and Directorate of Panchayat (DoP).

7. **Bicholim River Action Plan Strategies: (Priority Criteria – V).**

River-stretch – Biocholim to Curchirem

- i. Disconnection of direct discharges of domestic sewage into the Bicholim river / storm-water drains / nallah, installation of bio toilets and construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drain along river stretch of Curchirem to Bicholim in Village Panchayats of Curchirem, Ona-Maulinguem, Karapur-Sarvan, Amona, Pilgao has been completed by the Directorate of Panchayat (DoP) and Directorate of Health Services (DHS) and Department of Urban Development.
- ii. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 05 village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF).
- iii. Augmentation of Dry and Wet-waste facility in Bicholim Municipal Council (BMC) has been completed by the Urban Development Department.

8. **Valvanti River Action Plan Strategies: (Priority Criteria – V)**

River-stretch – Sanquelim-Bicholim to Poriem

- i. Disconnection of the direct discharge into the river / storm water drain / Nallah, Installation of Bio toilets, Construction of septic tank and soak pits by residential houses in River stretch of villages Poriem, Sanquelim, Poriem, Honda, Karapur,

- ii. Improvement to collection system, and erection of material recovery facilities / storage shed for non- biodegradable waste in the village Panchayat. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 03 village panchayats, falling on the banks of Valvanti, river-stretch have constructed Material Recovery Facility (MRF).
- iii. Improvement and Up gradation of the existing Solid Waste Management Facility of Sanquelim Municipal Council; installation of biogas plant of 3 tons per day and construction of storage shed. Mr. Ganesh Barve, Additional Director, DUD informed that Sanquelim Municipal Council (SMC) is generating 4 TPD of biodegradable waste (wet) and 3 TPD of non-biodegradable waste (dry). The SMC has covered shade of 400 sq.mts. for centralised treatment of wet-waste by windrow composting and 500 sq.mts. of covered shed for MRF for handling (sorting & baling) of dry-waste and thus having 100% door-to-door collection system.
- iv. Commissioning of existing sewerage network and 0.8-MLD capacity Sewage Treatment Plant (STP) covering three-wards (i. e. Bandharwada, Muslim Wada Muzar wada & Gokulwadi.) in the river stretch of Sanquelim has been completed by SIDCGL.

9. Khandepar River Action Plan Strategies: (Priority Criteria – V)

River-stretch – Ponda to Opa.

- i. Disconnection of direct discharges of domestic sewage into the Khandepar river / storm-water drains/ nallah and Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains in River stretch from Codli to U/s of Opa water works in villages of Khandepar and Usgao has been completed by the Directorate of Panchayat (DoP), Directorate of Health Services (DHS).
- ii. Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village panchayat areas along the banks of Chapora River. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that both the village panchayats V.P. Curti Khandepar and V.P. Usgao-Ganjam, have constructed Material Recovery Facility (MRF).

10. Sinquerim River Action Plan Strategies: (Priority Criteria – V)

River-stretch – Along Candolim.

- i. Disconnection of the direct discharge into the river or through storm water drain/ Nallah, Installation of Bio- toilets along the river stretch, Construction of septic-tank and soak-pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains in River stretch from Candolim Bridge to Ganpati Temple (Nerul), Pilerne-Marra, Candolim, Reis-Magos, Nerul has been completed by the Directorate of Panchayat (DoP), Directorate of Health Services (DHS).
- ii. Improvement to collection system, and ensuring collection of segregated waste, Improvement and up-gradation of the existing Solid Waste Management. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that 04 village panchayats, falling within the river-stretch, i.e. Pilerne-Marra, Candolim, Reis-Magos, Nerul have constructed Material Recovery Facility (MRF).
- iii. Work for providing toilet facility and sanitation facility for Fishing trawlers near Nerul in river stretch/Area of Nerul has been completed by Department of Fisheries through Goa Waste Management Corporation (GWMC).

11. Zuari River Action Plan Strategies: (Priority Criteria – V)

River-stretch – Curchorem to Madkai.

- i. Disconnection of direct discharges of domestic sewage into the Zuari River / storm water drains / Nallahs, Disconnection of the direct discharge into the river / storm water drain / Nallahs. Installation of Bio toilets, Construction of septic tank and soak pits by residential houses in the river stretch from Curchorem to Madkai has been completed by the Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Zuari River. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that 19 village panchayats, falling within the river-stretch, (Savordem, Panchwadi, Shiroda, Borim, Wadi – talaulim, Durbhat, Bandora, Marcaim, Neura, St. Lawrence (Agasaim), St. Andre (Velha), Siridao – pale, Curchorem kakora, Macasona, Curtorim, Rachol Lotolium, Cortalim, Quelosim, Sancoal,) all village panchayats have constructed the MRF facility except Rachol – Loutolim panchayat, which is in a process of tendering which is expected to be completed by 15th November 2022.

- iii. Proposed Solid Waste Management facility at Cacora having 100 TPD (+25%). Mr. Bento Thomas, Asst. Manager. GWMC informed that the said facility has been constructed and trial-operations are ongoing.

Chairman, RRC-Goa complemented the good work being initiated / undertaken by departments in the field of solid waste management and domestic sewage treatment / sewerage network especially by the Directorate of Panchayats (DoP) / Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL) / Goa Waste Management Corporation (GWMC) and Department of Urban Development (DUD).

The meeting ended with vote of thanks to the Chair.

Dr. Shamila Monteiro,
Member Secretary, Goa-PCB / M. S., (RRC-Goa)

ANNEXURE

1. Shri. Arun Kumar Mishra, IAS, Secretary, Environment, Chairman, RRC-Goa.
2. Dr. Pradip Sarmokadam, Member Secretary, Goa State Biodiversity Board (GSBB).
3. Mr. K. S. Pangam, Dy. Director (Admin.), Directorate of Panchayats.
4. Mr. Ganesh Barve, Addl. Director, Urban Development Department.
5. Dr. Gokuldas Sawant, CMO, Directorate of Health Services.
6. Mr. Ram Asre M. Gupta, Hydrographic Surveyor, Captain of Ports (CoP).
7. Mr. Sanjeev Joglekar, Senior Env. Engr., (GSPCB) & OSD to DoE & CC.
8. Mr. Rohit Naik, Technical Assistant, SIDCGL.
9. Mr. Rajendra khanna, Executive Engineer, (SE – VI), PWD.
10. Mr. Joao Francisco P. Dourado, Asst. Engr., SGPDA, Margao.
11. Mr. Bento Thomas, Assistant Manager, Goa Waste management Corporation (GWMC).
12. Mr. Shouken Teli, Engineer, Goa Waste Management Corporation (GWMC).
13. Mr. Gajanan Mahale, Assistant Director, Department of Tourism.
14. Mr. Sanket Faldessai, Field Manager, Goa Industrial Development Corporation (GIDC).
15. Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (RRC-Goa).

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Minutes of the 30th River Rejuvenation Committee (RRC -Goa)
meeting held on 09th September 2022 under the Chairmanship of
Secretary, Environment in the Conference hall of the Goa State
Pollution Control Board (GSPCB), Saligao.

The 30th meeting of the River Rejuvenation Committee (RRC-Goa) was held on 09/09/2022 in the conference hall of the Goa-PCB under the Chairmanship of Secretary, (*Environment*). The list of participant is annexed herewith.

The M. S. (*RRC-Goa*) welcomed the Chairman and members of the Committee. Subsequently, Chairman, RRC-Goa initiated the department-specific review *vis-à-vis* discussion / deliberation and follow-up action in respect of various action plan strategies (APS) enumerated for eleven polluted river-stretches (*i.e. as per the minutes of the last RRC-Goa held on 10th June 2022*).

River-stretch wise discussion / deliberation in respect of action plan strategies (APSs') are detailed as under:-

Pending Works

1. Sal River Action Plan Strategies: (Priority criteria – III)

River-stretch : Khareband to Mobor

- i. **Target:** Replacement of the Old Sewerage Network system, laying of new sewerage system, providing House connections to the existing sewerage system.(*i.e. Margao town, Navelim and other sub urban areas around Margao*).

Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).

Status and action required: Mr. Rohit Naik, Technical Assistant, SIDCGL representing the M.D., SIDCGL informed that out of 7.2 kms. of sewerage network system (*with the alignment same as that of old network*), about 6.7 kms. of the North main trunk sewer line has been replaced. Remaining 500 mts. is scheduled to be completed by January 2023. However, Chairman has instructed the SIDCGL to submit the Technical Feasibility report to substantiate the delay in completion within scheduled timeline.

It was also appraised that a storm water drain / nala (*not connected to the old sewerage network system and which was directly draining into Sal river*) is proposed to be connected to newly replaced sewerage system.

The carrying capacity of the newly replaced sewerage system is designed to treat the sewage generated during non-monsoon seasons. Chairman instructed the SIDCGL to provide suitable mechanism to address the monsoonal storm-water flow. In addition, SIDCGL needs to manage effective disposal of sludge likely to be deposited in the chamber proposed to be constructed.

- ii. **Target:** Recycling and reuse of treated sewage from the STP at Colva for flushing and maintaining E-flow during dry-season. (*river-stretch –Khareband to Mobor*).

Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).

Status and action required: Mr. Rohit Naik, Technical Assistant, SIDCGL representing the M.D., SIDCGL informed that the stop work notice issued by the Village Panchyats of Benuelim has been stayed and SIDCGL has been instructed to complete the pending-works. Accordingly, SIDCGL has proposed to complete the work by 31st December 2022.

- iii. **Target:** Wet Waste is proposed to be treated by Bio-Methanation process to treat the wet-waste.
- a. 05-TPD biomethanation at SGPDA wholesale fish market.
 - b. 05-TPD biomethanation at retail fish-market.

Mr. Ganesh Barve, Additional Director, Urban Development Department (UDD) along with Mr. Joao Dourado, Asst. Engr., SGPDA informed that One Bio-Methanation of 5-TPD capacity is complete in retail fish-market and same is under operation. Other 02 proposed 5TPD plants have been postponed as per the decision of the High Powered Committee and to set up only 01 no. of 5 TPD plant at SGPDA fish market and examine the working and function of the plant to issue work order for another 2 nos. of 5 TPD plants within the jurisdiction of the Margao Municipal Council (MMC).

Accordingly, Chairman has instructed the SGPDA to seek the clarification with timeline to complete the installation / operation of said biomethanation plant at Fish-market.

- iv. **Target:** De-silting of river Sal (*river-stretch –Talaolim to Varca*)

Agency: Captain of Ports (CoP)

Status and action required: Hydrographic Surveyor Mr. Ram Asre M. Gupta, representing the Captain of Ports (CoP) informed that Phase-I *i.e. a stretch of 06*

kms. from Talaulim-Varca new bridge towards downstream upto Shantimalley opposite salt-pan) stands completed on 24th May 2021.

Phase-II (i.e. a stretch of 06 kms. from Shantamally opposite salt-pan towards downstream upto Ambelim) stands completed on 7th April 2022.

While, tender a formality of the Phase-III (i.e. a stretch of 06 kms. From Ambelim towards downstream upto the mouth of Sal-river) has been completed and the file is submitted to the Government for post-tender administrative approval and financial expenditure sanction. On receipt of approval, work order will be issued by 1st October 2022 and the work of desilting is likely to be completed by April 2023.

- v. **Target:** Installation of Dissolved Oxygen (DO) control Measures.(river-stretch – Khareband to Navelim)

Agency:Water Resources Department(WRD)

Status and action required: No representative from the O/o WRD was present to update about the status. As such, Chairman, RRC-Goa instructed the Board to seek update from the Chief Engineer (WRD) in writing.

2. Mandovi River Action Plan Strategies : (Priority Criteria – IV).

River-stretch : Panjim to Volvoi comprising of Betqui- Candola, Marcem -Tivrem- Orgao, Amona, Navelim, Candola, Volvoi, St. Estevam, Se-old Goa., Salvador-Do-Mundo, Penha-de-France, Reis-Magos, Nerul V.Ps'

- i. **Target: Disconnection of the direct discharge into the river/storm water drain/Nallahs has not been completed.**

Construction of septic tank and soak pits by owners of residential houses and monitoring regular cleaning of septic tanks to avoid untreated domestic sewage discharge in the natural drains has not been complied so far.

Agency: Public Works Department (PWD).

Status: PHC, Chimbél – 1,111 water disconnection pending with PWD, While in respect of UHC, Panaji – 79, water disconnections pending with PWD. No representative from the section-concerned was present to update on the current-status. As such, Chairman, RRC-Goa instructed to seek status from the Principal Chief Engineer (PCE), PWD.

- ii. Installation of Bio-digester having 100 - TPD capacity at Bainguinim by the Goa Waste Management Corporation (GWMC). The total capacity of the facility is proposed to be increased to 250 TPD from its earlier capacity of 100 – TPD.

Agency: Goa Waste management Corporation (GWMC).

Status: Mr. Bento Thomas, Assistant Manager, GWMC informed that GWMC had earlier floated tender two-times but no response was received. Thus, it is proposed to refloat the tender with

- (a) Relaxed conditions / Terms of references (ToRs') and
- (b) Reduced capacity of 100 tons per day capacity, *instead of 250 tons proposed earlier.*

The works to be completed by December 2023. Chairman, RRC-Goa instructed the O/o GWMC to update the status of the plant to the GWMC Board, as the EC has been challenged in the Hon'ble Supreme Court.

- iii. **Target:** The up gradation of Sewage Treatment Plant at Patto, Panaji involving setting up of SBR-based 02 MLD capacity STP.

Agency: PWD Goa

Status: Mr. Rajendra Khanna, E.E., PWD (SE – VI) informed that 95 % of the STP-construction has been completed. Expected date of completion is 31st October 2022.

- iv. **Target:** Goa Waste Management Corporation (GWMC) and Producer Responsibility organization are collecting the E-waste generated throughout the State and the E-waste is thereafter transported to authorized recyclers in other states.

Agency: Goa Waste Management Cooperation (GWMC).

Status: Mr. Bento Thomas, Asst. Manager. GWMC informed that the e-waste dismantling / storage facility at Pissurlem will be completed by March 2023.

3. Talpona River Action Plan Strategies: (Priority Criteria – IV)

River-stretch – Talpona – Canacona & Poinguinim.

- i. **Target:** The Goa Waste Management Corporation and Producer Responsibility organization are collecting the E-waste generated throughout the State and the E-waste is there after transported to authorized recyclers in other states.

Status: Mr. Bento Thomas, Asst. Manager. GWMC informed that e-waste dismantling / storage facility at Pissurlem will be completed by March 2023.

4. Zuari River Action Plan Strategies: (Priority Criteria – V)

River-stretch – Curchorem to Madkai

- i. **Target:** The underground sewerage scheme including 15-MLD capacity Sewage Treatment Plant (STP) at Kavelem for Ponda municipal areas.

Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL)

Status:Mr. Rohit Naik, Technical Assistant, SIDCGL representing the M.D., SIDCGL informed that the construction of the said STP has been completed but commissioning is pending due to electricity connection. The Chairman, RRC-Goa instructed to resolve the issue on priority to make the STP operational at the earliest.

Completed Work

1. Sal River Action Plan Strategies: (Priority criteria – III)

River-stretch : Khareband to Mobor

- i. Diversion of Shirvodem Nallah to 20-MLD capacity STP at Shirvodem, Navelim by (SIDCGL).
- ii. Diversion of Khareband Nalla to North main trunk sewer line, which will be treated in 20- MLD capacity Sewage Treatment Plant (STP) by SIDCGL.
- iii. Improvement and up- gradation of the existing Solid Waste Management Facilities including collection system, composting facilities and erection of material recovery facilities / storage shed for non-biodegradable waste at Sonsoddo, Margao under Margao Municipal Council (MMC).
- iv. Improvement and upgradation of the existing solid waste management facility including collection system, composting facilities / storage-shed for non-biodegradable waste (10 – TPD capacity) at Sonsodo, (area – 160 sq.mts.) – construction of shed is complete and operational. Presently, M/s Shreeji Engineering from Mumbai handling the dry-waste recycling in that said shed. 02 nos. of baling machines in existing SWM plant at Sonsosdo. 1 no. of baling

machine is given to IDC-Nessai – V recycle waste management services. New IDC shed work is under progress on completion stage.

- v. Establishment of Material Recovery Facility (MRF) at Navelim, Taulim, Cana Benaulim, Varca, Orlim, Carmona, Assolna, Cavelossim-Mobor, Velim by village panchayats - Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 09 Village panchayats, have constructed Material Recovery Facility (MRF). However, Mr. Sanjeev Joglekar, OSD to Dept. of Env., & CC informed that although Colva village panchayat has constructed the MRF the same has been reportedly dismantled. As such, Chairman, RRC-Goa instructed the O/o DoP to inspect and verify the on-site status of MRF and take necessary action.
- vi. Decentralized sorting-stations / MRF-sheds to cater to 10-TPD of dry-waste at Sonsodo (*area – 160 m²*) has been completed along with two numbers of baling machines at Sonsodo.
- vii. Installation of shed admeasuring 20 m X 25 m where dry-waste is sorted and wet-waste is treated through aerobic composting by Cuncolim Municipal Council. In addition,
 - i. MRF equipment including Baling machine, conveyor-belt with hopper system.
 - ii. Augmentation work of 1.5 TPD capacity incinerator has been established.
- viii. De-weeding of the river stretch from Khareband to Navelim in the River stretch of Khareband to Navelin has been completed by Water Resources Department(WRD).

2. **Mandovi River Action Plan Strategies : (Priority Criteria – IV)**

River-stretch : Panjim to Volvoi comprising of Betqui- Candola, Marcem -Tivrem-Orgao, Amona, Navelim, Candola, Volvoi, St. Estevam, Se-old Goa., Salvador-Do-Mundo, Penha-de-France, Reis-Magos, Nerul V.Ps'

- i. Toilet facility and sanitation facility for fishing Jetty at Volvoi & Marcel is provided/work completed by Captain of Ports.
- ii. Existing 8 toilets, 7 bath-rooms, 7 urinals at the fisheries complex Malim Betim, Goa managed by Sulabh International Social Service Organization Porvorim, Goa. The 20 seated toilet block along the waste water treatment plant of 40-KLD capacity has been completed by Dept of Fisheries.

- iii. Improve collection system, and ensuring collection of segregated waste - Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 11 Village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF).
- iv. The State of Goa has identified site for construction of Common Biomedical waste at Kundaim Industrial Estate. Healthcare facilities have their own treatment facilities such as Autoclave, Deep burial pit and encapsulation pit, needle burners, etc. The work has been completed by the Goa Waste Management Cooperation (GWMC). Currently, 100% of project is complete and facility is operational. Approximately 1.5 to 2.0 tons are processed on daily basis.

3. **Talpona River Action Plan Strategies: (Priority Criteria – IV)**

River-stretch – Talpona – Canacona & Poinguinim.

- i. Disconnection of the direct discharge into the river/storm water drain/Nallahs, installation of Bio-toilets and construction of septic tank and soak pits by residential houses along the Canacona, Talpona and Poinguinim rivers are completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Providing toilet facilities at Talpona fishing jetty has been completed by the Department of Fisheries.
- iii. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that two village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF).
- iv. Proposed Solid Waste Management facility at Cacora having 100 TPD (+25%) – Mr. Bento Thomas, Asst. Manager. GWMC informed that the said facility has been constructed and trial-operations are ongoing.
- v. The State of Goa has identified site for construction of Common Biomedical waste at Kundaim Industrial Estate. Healthcare facilities have their own treatment facilities such as Autoclave, Deep burial pit and encapsulation pit, needle burners, etc. The work has been completed by the Goa Waste Management Cooperation (GWMC). Currently, 100% of project is complete and facility is operational. Approximately 1.5 to 2.0 tons are processed on daily basis.

4. **Chapora River Action Plan Strategies: (Priority Criteria – V)**

River-stretch – Pernem to Morjim

- i. Disconnection of the direct discharge into the river/storm water drain / Nallah, Installation of Bio toilets and Construction of septic tank and soak pits by residential houses from Alorna fort to Morjim by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 19 village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF). He further updated that Morjim village panchayat has constructed the MRF with area of 40 sq.mts., while, construction of another MRF with are of 150 sq.mts. is proposed to be completed by 15th October 2022.
- iii. Expansion of Saligao Waste Management facility from 125 tons per day to 250 + 20% (300 tons per day) has been completed by GWMC and operational now.
- iv. Providing toilet facilities at Chapora fishing jetty has been completed by Department of Fisheries through Goa Waste Management Corporation (GWMC).

5. **Terekhol River Action Plan Strategies:(Priority Criteria – V)**

River-stretch - along Terekhol river

- i. Disconnection of the direct discharge into the river/storm water drains / Nallahs and Construction of septic tank and soak pits by residential houses in villages of Tambosa, Nanerwada, Bhalkhajan, Querim Tiracolalong Terekhol River has been completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 06 village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF).
- iii. Expansion of Saligao Waste Management facility from 125 Tons per day to 250 + 20% (300 tons per day) has been completed by GWMC and same is currently operational.

6. **Assonora River Action Plan Strategies: (Priority Criteria – V)**

River-stretch – Assonora to Sirsaim

- i. Disconnection of direct discharges of domestic sewage into the Assonora. River /storm water drains/ nallah. Disconnection of the direct discharge into the River / storm water drain / Nallah and Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge into the natural drains on river stretch from Assonora to U/s of Sirsaim has been completed by Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Assonora River on River stretch within the villages of Assonora and Sirsaim has been completed by respective Village Panchayat (VPs') and Directorate of Panchayat (DoP).

7. **Bicholim River Action Plan Strategies: (Priority Criteria – V).**

River-stretch – Biocholim to Curchirem

- i. Disconnection of direct discharges of domestic sewage into the Bicholim river / storm-water drains / nallah, installation of bio toilets and construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drain along river stretch of Curchirem to Bicholim in Village Panchayats of Curchirem, Ona-Maulinguem, Karapur-Sarvan, Amona, Pilgao has been completed by the Directorate of Panchayat (DoP) and Directorate of Health Services (DHS) and Department of Urban Development.
- ii. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 05 village panchayats, falling within the river-stretch, have constructed Material Recovery Facility (MRF).
- iii. Augmentation of Dry and Wet-waste facility in Bicholim Municipal Council (BMC) has been completed by the Urban Development Department.

8. **Valvanti River Action Plan Strategies: (Priority Criteria – V)**

River-stretch – Sanquelim-Bicholim to Poriem

- i. Disconnection of the direct discharge into the river / storm water drain / Nallah, Installation of Bio toilets, Construction of septic tank and soak pits by residential houses in River stretch of villages Poriem, Sanquelim, Poriem, Honda, Karapur,

- ii. Improvement to collection system, and erection of material recovery facilities / storage shed for non- biodegradable waste in the village Panchayat. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that all 03 village panchayats, falling on the banks of Valvanti, river-stretch have constructed Material Recovery Facility (MRF).
- iii. Improvement and Up gradation of the existing Solid Waste Management Facility of Sanquelim Municipal Council; installation of biogas plant of 3 tons per day and construction of storage shed. Mr. Ganesh Barve, Additional Director, DUD informed that Sanquelim Municipal Council (SMC) is generating 4 TPD of biodegradable waste (wet) and 3 TPD of non-biodegradable waste (dry). The SMC has covered shade of 400 sq.mts. for centralised treatment of wet-waste by windrow composting and 500 sq.mts. of covered shed for MRF for handling (sorting & baling) of dry-waste and thus having 100% door-to-door collection system.
- iv. Commissioning of existing sewerage network and 0.8-MLD capacity Sewage Treatment Plant (STP) covering three-wards (i. e. Bandharwada, Muslim Wada Muzar wada & Gokulwadi.) in the river stretch of Sanquelim has been completed by SIDCGL.

9. Khandepar River Action Plan Strategies: (Priority Criteria – V)

River-stretch – Ponda to Opa.

- i. Disconnection of direct discharges of domestic sewage into the Khandepar river / storm-water drains/ nallah and Construction of septic tank and soak pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains in River stretch from Codli to U/s of Opa water works in villages of Khandepar and Usgao has been completed by the Directorate of Panchayat (DoP), Directorate of Health Services (DHS).
- ii. Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village panchayat areas along the banks of Chapora River. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that both the village panchayats V.P. Curti Khandepar and V.P. Usgao-Ganjam, have constructed Material Recovery Facility (MRF).

10. Sinquerim River Action Plan Strategies: (Priority Criteria – V)

River-stretch – Along Candolim.

- i. Disconnection of the direct discharge into the river or through storm water drain/ Nallah, Installation of Bio- toilets along the river stretch, Construction of septic-tank and soak-pits by residential houses and monitoring the frequent cleaning the septic tanks in order to avoid untreated domestic sewage discharge in to the natural drains in River stretch from Candolim Bridge to Ganpati Temple (Nerul), Pilerne-Marra, Candolim, Reis-Magos, Nerul has been completed by the Directorate of Panchayat (DoP), Directorate of Health Services (DHS).
- ii. Improvement to collection system, and ensuring collection of segregated waste, Improvement and up-gradation of the existing Solid Waste Management. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that 04 village panchayats, falling within the river-stretch, i.e. Pilerne-Marra, Candolim, Reis-Magos, Nerul have constructed Material Recovery Facility (MRF).
- iii. Work for providing toilet facility and sanitation facility for Fishing trawlers near Nerul in river stretch/Area of Nerul has been completed by Department of Fisheries through Goa Waste Management Corporation (GWMC).

11. Zuari River Action Plan Strategies: (Priority Criteria – V)

River-stretch – Curchorem to Madkai.

- i. Disconnection of direct discharges of domestic sewage into the Zuari River / storm water drains / Nallahs, Disconnection of the direct discharge into the river / storm water drain / Nallahs. Installation of Bio toilets, Construction of septic tank and soak pits by residential houses in the river stretch from Curchorem to Madkai has been completed by the Directorate of Panchayat (DoP) and Directorate of Health Services (DHS).
- ii. Improvement to collection system, and erection of material recovery facilities / storage shed for non-biodegradable waste in the village Panchayat areas along the banks of Zuari River. Mr. K. S. Pangam, Deputy Director, Directorate of Panchayats (DoP) informed that 19 village panchayats, falling within the river-stretch, (Savordem, Panchwadi, Shiroda, Borim, Wadi – talaulim, Durbhat, Bandora, Marcaim, Neura, St. Lawrence (Agasaim), St. Andre (Velha), Siridao – pale, Curchorem kakora, Macasona, Curtorim, Rachol Lotolium, Cortalim, Quelosim, Sancoal,) all village panchayats have constructed the MRF facility except Rachol – Loutolim panchayat, which is in a process of tendering which is expected to be completed by 15th November 2022.

- iii. Proposed Solid Waste Management facility at Cacora having 100 TPD (+25%). Mr. Bento Thomas, Asst. Manager. GWMC informed that the said facility has been constructed and trial-operations are ongoing.

Chairman, RRC-Goa complemented the good work being initiated / undertaken by departments in the field of solid waste management and domestic sewage treatment / sewerage network especially by the Directorate of Panchayats (DoP) / Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL) / Goa Waste Management Corporation (GWMC) and Department of Urban Development (DUD).

The meeting ended with vote of thanks to the Chair.

Dr. Shamila Monteiro,
Member Secretary, Goa-PCB / M. S., (RRC-Goa)

ANNEXURE

1. Shri. Arun Kumar Mishra, IAS, Secretary, Environment, Chairman, RRC-Goa.
2. Dr. Pradip Sarmokadam, Member Secretary, Goa State Biodiversity Board (GSBB).
3. Mr. K. S. Pangam, Dy. Director (Admin.), Directorate of Panchayats.
4. Mr. Ganesh Barve, Addl. Director, Urban Development Department.
5. Dr. Gokuldas Sawant, CMO, Directorate of Health Services.
6. Mr. Ram Asre M. Gupta, Hydrographic Surveyor, Captain of Ports (CoP).
7. Mr. Sanjeev Joglekar, Senior Env. Engr., (GSPCB) & OSD to DoE & CC.
8. Mr. Rohit Naik, Technical Assistant, SIDCGL.
9. Mr. Rajendra khanna, Executive Engineer, (SE – VI), PWD.
10. Mr. Joao Francisco P. Dourado, Asst. Engr., SGPDA, Margao.
11. Mr. Bento Thomas, Assistant Manager, Goa Waste management Corporation (GWMC).
12. Mr. Shouken Teli, Engineer, Goa Waste Management Corporation (GWMC).
13. Mr. Gajanan Mahale, Assistant Director, Department of Tourism.
14. Mr. Sanket Faldessai, Field Manager, Goa Industrial Development Corporation (GIDC).
15. Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (RRC-Goa).

Minutes of the 32nd River Rejuvenation Committee (RRC -Goa) meeting held on 15th February 2024 under the Chairmanship of Secretary, Environment in the Conference hall of the Secretariat.

The 32nd meeting of the River Rejuvenation Committee (RRC-Goa) was held on 15/02/2024 in the conference hall of the Secretariat, Alto-Porvorim under the Chairmanship of Secretary, (*Environment*). The list of participant is annexed herewith.

The M. S. (*RRC-Goa*) welcomed the Chairman and members of the RRC-Goa (*hereinafter referred as Committee*). It was informed that the last RRC-Goa (*i.e. 31st meeting*) was held on 11th November 2022 wherein status of action plan in respect of Sal-river was reviewed in detail while, during the previous meeting (*i.e. 30th meeting held on 9th September 2022*), review in respect of other river-stretches was taken.

It was informed that although the NGT has disposed-off the matter (*O.A. 673 of 2018*) and later, CPCB has revised the status of polluted river stretches wherein the State of Goa has only six polluted river-stretches (*as compared to eleven stretches based on water-quality data reported during a period 2016 – 17*) based on the maximum value of Biochemical Oxygen Demand (BOD) reported during 2019 / 2021 – four in North Goa namely Kalna, Khandepar, Mandovi, Mapusa and two in South Goa namely Sal and Zuari with no river-stretch categorised under priority criteria – III. Accordingly, the Committee noted that Mandovi, Khandepar, Zuari and Sal river-stretches continue to be categorised under the polluted river-stretches while Talpona / Assonora / Bicholim / Chapora / Sinquerim / Tiracol & Volvanti river-stretches have been de-listed with an addition of Kalna and Mapusa river stretches.

In response to the revised categorisation of above-referred six polluted river-stretches, the Goa-PCB has replied to the CPCB stating the value of BoD against the Khandepar river-stretch is wrongly reported as 4.2. In fact, said stretch complies with the CPCB-prescribed criteria with BoD value as 2.8 and thus, needs to be delisted. While, the BoD value against Zuari river-stretch is also wrongly-reported as 6.4 which

is actually 5.0 and as such, the stretch falls under priority criteria – V and not IV. The Goa-PCB is yet to receive the response from the CPCB in spite of e-mail reminders.

Further, Chairman of the Committee sought follow-up status of pending-works as in response to the last minutes (*i.e. 30th meeting held on 9th September 2022*) from stakeholder departments-concerned.

Current status

1. Sal River: (Priority criteria – III)

River-stretch : Khareband to Mobor

- i. **Target:** Replacement of the Old Sewerage Network system, laying of new sewerage system, providing House connections to the existing sewerage system.*(i.e. Margao town, Navelim and other sub urban areas around Margao).*

Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).

Status: Shri. Nikhil Gawade, Asst. Manager, SIDCGL informed that out of 7.2 kms. of of sewer network about 7.17 kms of North trunk Main sewer line has been replaced. Balance 30 mts. Missing link is in progress along with construction of 13 manholes. Presently, 5.17 kms of sewer line is commissioned. Once missing link and 13 manholes are completed along with shifting of connection from old to New North Trunk Main balance stretch of 2.17 kms. will be commissioned. The targeted date of completion for balance work is May 2024.

Further, he informed that compilation of data regarding house-to-house sewer connections released by PWD & SIDCGL is under progress. As per the details obtained from the PWD, 4918 house sewer connections (*benefitting 21528 housing units*) are released in Margao Municipal Council area (*including Fatorda*). Maximum efforts are being made in coordination with Margao Municipal Council

for identification and release of balance house sewer connections to achieve 100% converge.

- ii. **Target:** Recycling and reuse of treated sewage from the STP at Colva for flushing and maintaining E-flow during dry-season.*(river-stretch –Khareband to Mobor)*.

Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).

Status: Shri. Nikhil Gawade, Asst. Manager, SIDCGL informed that the work of laying treated effluent disposal line from the STP at Colva to river Sal at Khareband for recycling and reuse of treated water for flushing and maintaining e-flow during dry season is completed. The STP at Colva has been commissioned and 15 house sewer connections are released. Once sufficient quantum of sewage is received in the STP, the treatment process will be carried out and treated effluent will be recycled and reused for maintaining e-flow.

In respect of installation of Online Continuous Effluent Monitoring System (OCEMS), he appraised that OCEMS has been installed for 20-MLD capacity STP at Shirvodem, Margao and 20-MLD capacity STP at Katem Baina, Vasco and same are linked to GSPCB & CPCB servers. Similarly, installation of OCEMS at 1-MLD capacity STP at Durbhat, 15-MLD capacity STP at Kavlem and 7.5-MLD capacity STP at Colva are completed and same are in commissioning stage. On commissioning the same, says OCEMS of additional STPs' will be linked to GSPCB & CPCB servers.

- iii. **Target:** Wet Waste is proposed to be treated by Bio-Methanation process to treat the wet-waste.
 - a. 05-TPD biomethanation at SGPDA wholesale fish market.
 - b. 05-TPD biomethanation at retail fish-market.

Agency: Directorate of Urban Development (DUD)

Status : Shri. Ganesh Barvem Additional Director, DUD informed that Margao Municipal Council (MMC) has set up 5-TPD capacity Bio-Methanation plant at SGPDA market through M/s Urja Bio System Pvt. Ltd., Pune. The plant was commissioned as from 01/01/2022 and since then; the digested slurry generated from the said plant was disposed-off through night soil tankers to the STP plant at Shirvodem, Navelim. Subsequently, the GSPCB, *vide its letter dated 24/07/2023*, permitted MMC for disposal of leachate generated from this plant to common sewerage treatment plant of the PWD. However, PWD, *vide its letter dated 07/09/2023*, stopped MMC from disposing the digested slurry at their STP. Later, the GSPCB directed the MMC to remain present before the Board (i.e. personal hearing) on 01/12/2023 and directed MMC to carry out alternate arrangement for disposal of digested slurry generated from the 5-TPD capacity Bio-Methanation plant and not to operate the plant till then. Subsequently, PWD, *vide its letter dated 29/02/2024*, has permitted MMC to discharge the digested slurry from this plant into the wet-well of the pumping station at Navelim and the GSPCB has granted consent to operate (CtO) the 5-TPD capacity Bio-Methanation plant at SGPDA market. Further, the GSPCB, *vide its letter dated 02/02/2024*, directed the MMC to install additional biodigester of sufficient capacity at solid waste treatment facility at Sonsodo and discontinue the operation of 5-TPD capacity Bio-Methanation plant at SGPDA market within a period of six-months and submit compliance report accordingly.

He further appraised that at present, entire wet-waste generated from the jurisdiction of MMC is sent to the Curchorem-Cacora solid waste treatment plant through specialised vehicles of the Goa Waste Management Corporation (GWMC) for further processing. Under such circumstances, 5-TPD capacity Bio-Methanation plant at SGPDA market is kept in readiness for being used in emergency situations and as a stop gap arrangement / backup facility.

He further informed that Hon'ble High Court of Bombat at Goa in a W.P. 45 of 2019 is monitoring day-to-day disposal of wet waste / dry waste from MMC jurisdiction as well as functioning of 5-TPD capacity Bio-Methanation plant at SGPDA market.

- iv. **Target:** De-silting of river Sal (*river-stretch –Talaulim to Varca*)

Agency: Captain of Ports (CoP)

Status: Shri. Octavio Rodrigues, MESS, CoPD informed that the desilting of river Sal has been completed.

- v. **Target:** Installation of Dissolved Oxygen (DO) control Measures.(*river-stretch – Khareband to Navelim*)

Agency:Water Resources Department(WRD)

Status: It is informed that installation of D.O measures has been completed and currently undergoing trial-run.

2. **Mandovi River: (Priority Criteria – IV).**

River-stretch : Panjim to Volvoi comprising of Betqui- Candola, Marcem -Tivrem- Orgao, Amona, Navelim, Candola, Volvoi, St. Estevam, Se-old Goa., Salvador-Do-Mundo, Penha-de-France, Reis-Magos,Nerul V.Ps'

- i. **Target: Disconnection of the direct discharge into the river/storm water drain/Nallahs has not been completed.**

Construction of septic tank and soak pits by owners of residential houses and monitoring regular cleaning of septic tanks to avoid untreated domestic sewage discharge in the natural drains has not been complied so far.

Agency: Public Works Department (PWD).

Status: PWD official informed that the Ribander area has been covered under Smart City project for sewerage network being within the jurisdiction of the Corporation of City of Panaji (CCP) and the work is in progress. While, in respect of Chimbél area, it was informed that subsequent to the issuance of Show Cause Notices (SCN), it needs to be reassessed jointly by the PWD and Directorate of Health Services (DHS) to understand the on-site status of compliance. Accordingly, status will be submitted within a month.

- ii. Installation of Bio-digester having 100 - TPD capacity at Bainguinim by the Goa Waste Management Corporation (GWMC). The total capacity of the facility is proposed to be increased to 250 TPD from its earlier capacity of 100 – TPD.

Agency: Goa Waste management Corporation (GWMC).

Status: Mr. Samir Natekar, Assistant Manager informed that the RFQ was floated for the proposed SWMF at Bainguinim with a revised capacity of 100 TPD. Three bidders have qualified. Accordingly, the GWMC is now in the process of floating RFP and the tendering process would be completed by June 2024. However, the EC granted for this project is challenged in the Hon'ble Supreme Court of India.

- iii. **Target:** The up gradation of Sewage Treatment Plant at Patto, Panaji involving setting up of SBR-based 02 MLD capacity STP.

Agency: PWD Goa

Status: Mr. Rajendra Khanna, S.E. (VI), PWD appraised that upgradation of STP at Patto involving setting up of SBR-based 02-MLD capacity STP has been commissioned and made operational from 6th February 2023.

- iv. **Target:** Goa Waste Management Corporation (GWMC) and Producer Responsibility organization are collecting the E-waste generated throughout the State and the E-waste is thereafter transported to authorized recyclers in other states.

Agency: Goa Waste Management Cooperation (GWMC).

Status: Mr. Samir Natekar, Assistant Manager informed that the GWMC has selected a contractor / Concessionaire – M/s CAM Industrial Services through E-tendering process. Currently, the work of setting up facility at Pissurlem Industrial Estate is in construction phase. The work order to the contractor was issued on 27/08/2021 and Sub sublease agreement and NOC from GIDC was received in December 2022. As per the concessionaire agreement, the Construction period was 10 months + the Plant Stabilization (1 Month) and successful Guaranteed Performance Run Period (1 Month), i.e. a total of 12 months from the date of issue of the “Certificate of Take Over”. Construction of the facility was to be completed by December 2023 as per the tender timelines. However, the contractor has failed to complete the work within the time frame and now, *vide letter dated 09/01/2024*, has requested to give the extension for completion of project till August 2024 for which the file has gone for legal inputs. Till then the contractor is collecting E-Waste as per the request received from Department/ Institutions.

3. Zuari River: (Priority Criteria – V)

River-stretch – Curchorem to Madkai

- i. **Target:** The underground sewerage scheme including 15-MLD capacity Sewage Treatment Plant (STP) at Kavelem for Ponda municipal areas.

Agency: Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL)

Status: The SIDCGL-representative informed that in respect of sewerage scheme for Ponda, Kavlem and Bandora, 15 MLD capacity STP at Kavlem is ready for commission and around 50 house sewer connections are made ready for release in areas surrounding STP. The connections will be released in a phased manner in Dhavli, Kapileshwari, Ponda city and surrounding areas immediately.

4. **Mapusa River: (Priority Criteria – V)**

The SIDCGL-representative appraised that sewerage scheme including laying of sewer network and construction of STP for Mapusa is being taken up by JICA / PWD while the SIDCGL has taken up the work of providing domestic house sewer connections only in Mapusa area. Road-crossings are done and house connections are being made ready. Once clearance with respect to laid network is given by PWD, house sewer connections will be released zonewise.

The PWD-representative informed that Mapusa STP of 5.4 MLD capacity is ready and commissioned and awaiting house-to-house sewer connections through the O/o SIDCGL as referred in para-above.

The meeting ended with vote of thanks to the Chair.

Dr. Shamila Monteiro,

Member Secretary, Goa-PCB / M. S., (RRC-Goa)

ANNEXURE

1. Shri. Arun Kumar Mishra, IAS, Secretary, Environment, Chairman, RRC-Goa.
2. Dr. Pradip Sarmokadam, Member Secretary, Goa State Biodiversity Board (GSBB).
3. Shri. Samir D. Natekar, Asst. Manager, Goa Waste management Corporation (GWMC).
4. Dr. Rupa Naik, Dy. Director, (Pr.), Directorate of Health Services (DHS).
5. Shri. Prasidh Naik, Dy. Director, Directorate of Panchayats (DoP), South.
6. Shri. Octavivo Rodrigues, MESS, Captain of Ports Dept., (CoPD)
7. Shri. Arjun L. Fadate, Technical Superintendant, Captain of Ports Dept., (CoPD).
8. Shri. Kabir Shirgaonkar, Dy. Director – I, Directorate of Mines and Geology (DMG).
9. Shri. Ganesh K. Barve, Additional Director, Department of Urban Development (DoUD).
10. Shri. Joaquim I. Vaz, Deputy General Manager (DGM). Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).
11. Shri. Nikhil Gawade, Asst. Manager, SIDCGL.
12. Shri. Rajendra Khanna, S. E. (VI), Public Works Department (PWD).
13. Shri. Nazareth Vaz, DHS.
14. Ms. Vidya P. S. Gauns Dessai, Department of Environment & Climate Change (DoE & CC), Goa.
15. Ms. Chriselda S. Rodrigues, Department of Environment & Climate Change (DoE & CC), Goa.
16. Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (RRC-Goa).

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Minutes of the 33rd River Rejuvenation Committee (RRC -Goa) meeting held on 4th December 2024 under the Chairmanship of Secretary, Environment in the Conference Hall of the O/o Commissioner, Rajya Kar Bhavan, Altinho.

The 33rd meeting of the River Rejuvenation Committee (RRC-Goa) was held on 04/12/2024 in the Conference Hall of the O/o Commissioner, Rajya Kar Bhavan, Altinho under the Chairmanship of Secretary, (*Environment*). The list of participants is annexed herewith (*Annexure – I*). The representatives of Water Resources Department (WRD), Goa Waste Management Corporation (GWMC) could not attend the meeting owing to their pre-occupation.

The M. S. (*RRC-Goa*) welcomed the Chairman and members of the RRC-Goa (*hereinafter referred as Committee*). It was informed that the last RRC-Goa (*i.e. 32nd meeting*) was held on 15th February 2024 wherein status update in response to various ongoing works related to various action plan strategies enumerated in respect of polluted river-stretches on (a) Sal, (b) Mandovi, (c) Zuari and (d) Mapusa rivers were reviewed in detail.

It was reiterated that although the NGT has disposed-off the matter (*O.A. 673 of 2018*) and later, CPCB has revised the status of polluted river stretches during year 2022 wherein the State of Goa has only six polluted river-stretches (*as against 11 during 2018*) – four in North Goa namely Kalna, Khandepar, Mandovi, Mapusa and two in South Goa namely Sal and Zuari with no river-stretch categorised under priority criteria – III.

It was also appraised to the Committee that the Board, *in response to the revised categorisation with specific reference to Khandepar river*, had clarified with the CPCB that the value of BoD in the **Khandepar river-stretch** is wrongly reported as 4.2. In fact, said stretch complies with the CPCB-prescribed criteria with BoD value as 2.8 and thus, **needs to be delisted**. While, the BoD value against **Zuari river-stretch** is also wrongly-reported as 6.4 which is actually 5.0 and as such, the stretch **falls under priority criteria – V and not IV**. The Goa-PCB is yet to receive the response from the CPCB.

Later, as directed by the Chairman, RRC-Goa, Dr. Mohan R. Sci.-C, Goa-PCB appraised and sought follow-up status to various ongoing action plan strategies in respect of (i) Sal, (ii) Mandovi, (iii) Zuari and (iv) Mapusa rivers from stakeholder departments concerned, *as applicable*, namely – (a) Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL), (b) Public Works Department (PWD), (iii) Department of Urban Development (DUD), (iv) South Goa Development and Development Authority (SGPDA), (v) Captain of Ports (CoP), (vi) Water Resources Department (WRD), (vii) Goa Waste Management Corporation (GWMC) and Directorate of health Services (DHS) within a weeks time.

Further, while reviewing on-site status in respect of one of the interventions along the Mandovi river-stretch to be implemented / executed within the municipal jurisdiction of Panaji city (*i.e. related to 'disconnection of the direct discharge into the river/storm water drain/Nallahs*), it was informed by the official representing the Corporation of City of Panaji (CCP) that the said works is being implemented through Imagine Panaji Smart City Development Limited (IPSCDL) under smart city developmental works. As such, Chairman, RRC-Goa directed the CCP to seek the current-status / update from the said office and communicate the same to the Goa-PCB.

Chairman, RRC-Goa further instructed that the Goa-PCB should seek status-update from above-referred stakeholder departments at a regular interval of three-months while, the RRC-Goa can meet once in every six-months hereinafter. All member agreed to the said suggestion.

Later, Shri. Rajendra Khanna, M.D., SIDCGL, in response to a letter received from the Ministry of Jal Shakti, D/o Water Resources, River Development and Ganga Rejuvenation, National River Conservation Directorate (NRCD), New Delhi (*refer Annexure – 2*) about the execution of the Phase-III of the NRCP project titled “Pollution Abatement and Conservation of Zuari river at Curchorem and surrounding areas in Goa”, briefed the Committee about the detailed project report (DPR) towards

setting up a sewerage network and sewage treatment plant (STP) in Curchorem & its surroundings in three phases. He further elaborated that Phase-I of the said scheme (for Curchorem covering Curchorem Municipal area and surrounding) was taken up during 2021 under State Government Funding and around 36-kms of sewer line is laid and work is in completion stages. Then, proposal of Phase-II (NRCD Part I) amounting to Rs. 99.56 Cr was submitted to the Ministry of Jal Shakti, New Delhi during 2023 and the administrative approval and Sanction for cost of Rs. 81.14 Cr. was accorded by the Ministry on 60:40 basis. The scope included laying of 13-kms sewer line in Cuppamodi, Kamral, Khammamol and surrounding areas along with a construction of 7.5 MLD capacity STP. The work is under progress and 10 kms sewer line has been laid. Subsequently, this office has prepared the proposal to cover balance areas of Curchorem surrounding the Zuari river with sewer network and connect to the under-construction 7.5 MLD capacity STP. The proposal of Phase-III (NRCD Part II) was submitted to the Ministry of Jal Shakti, New Delhi during August 2024 amounting to **Rs. 425.05 Cr (incl. of 18% GST)** covering balance areas of Assolda, Xelvona, Karmaliwada, Xeldam etc. with sewer network of 58 kms.

M.D., SIDCGL appraised that the said project was initially conceptualised in 2021 (Phase-I) as the stretch of the Zuari river (*from Curchorem to Madkai*) was identified under priority criteria-V by the CPCB (*based on water-quality in 2016*) and was later re-categorised under priority criteria-IV during 2022 based on water-quality in 2019-21. In view of the same, SIDCGL desires to expand the scope of the sewerage network to treat the wastewater from the habitations from balance areas of Assolda, Xelvona, Karmaliwada, Xeldam, etc., of Curchorem (*as proposed in Phase-III (NRCD Part II)*) to prevent any further deterioration in water-quality in the absence of proper sewerage facilities in these areas. He further also explained the justification of components proposed along with the estimated costs based on similar works undertaken in the State (*refer Annexure – 3*).

Accordingly, and based on the discussion and deliberation held thereafter on the

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said project, the Committee has examined the phase-III (*NRCD part-II*) proposal of the SIDCGL and agreed its applicability under NRCP so as to proceed with the same and accordingly, the Ministry of Jal Shakti be suitably responded by the SIDCGL.

The meeting ended with vote of thanks to the Chair.


Dr. Shamila Monteiro,
Member Secretary, Goa-PCB / M. S., (RRC-Goa)

1. Shri. Sarjeet Singh Gill, IAS, Secretary, Environment, Chairman, RRC-Goa.
2. Dr. Pradip Sarmokadam, Member Secretary, Goa State Biodiversity Board (GSBB).
3. Shri. Prasid P. Naik, Dy. Director of Panchayats (South), Directorate of Panchayats.
4. Mrs. Megha Kerkar, Superintendent of Fisheries, Dept. of Fisheries.
5. Dr. Cheryl de Souza, Directorate of Health Services (DHS).
6. Shri. V. J. Bhende, SE-V/VI, Public Works Department (PWD).
7. Shri. Rajendra K. Khanna, Managing Director (M.D.), Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL).
8. Shri. Ram Asre M. Gupta, Hydrographic Surveyor, Captain of Ports (CoP).
9. Mrs. Darshana S. Narulkar, Addl. Director, Directorate of Industries (DITC).
10. Ms. Nadia Shekoli, Dy. Director, Department of Urban Development (DUD).
11. Shri. S. R. Belgaonkar, General Manager (Eng.), Industrial Development Corporation (IDC).
12. Shri. Sandip K. Prabhu Chodnekar, General Manager (B), Goa State Industrial Development Corporation (GSIDC).
13. Shri. Sailesh P. Vaigankar, Asst. Engr., WD – XXVII (Sewerage), PWD, Panaji.
14. Shri. Vishal S. Patil, Technical Assistant (T.A.), XXVII (Sewerage), PWD, Panaji.
15. Shri. Nikhil Gawade, Asst. Manager, SIDCGL.
16. Shri. Vaibhav P. Pai, Technical Assistant (T.A.), WD-III, (Water Supply), PWD, Panaji.
17. Ms. Chriselda S. Rodrigues, Department of Environment & Climate Change (DoE & CC), Goa.
18. Dr. (Mrs.) Shamila Monteiro, M. S., Goa State Pollution Control Board (GSPCB) / Member Secretary, (RRC-Goa).

F. No.J 24031/1/2022-NRCD-II

Government of India

Ministry of Jal Shakti

D/o Water Resources, River Development and Ga

National River Conservation Direct

Pt. Deendayal A

C.G.O. Cor

Date

To,

The Managing Director,
Sewerage & Infrastructural Development Corpora
Ishan Building, 2nd Floor
Opposite CCP,
Panaji - Goa - 403001 (info@siddcgl.com)

**Sub: Pollution abatement and conservati
at Curchorem and surrounding areas in Goa,
NRCP - reg.**

Sir,

This refers to the above mentioned proposal sub
River Conservation Directorate by Sewerage
Development Corporation of Goa Ltd (SIDCGL),
13/8/2024 for consideration and financial assistance
River Conservation Plan (NRCP).

2. It is noted that stretches on Zuari river in Goa ha

COST JUSTIFICATION FOR PHASE-III (NRCD Part II) : ZUARI RIVER

Curcholem-Cacora is a Municipal Council city in district of South Goa, Goa. The Curcholem-Cacora city is divided into 12 wards for which elections are held every 5 years. The Curcholem-Cacora Municipal Council along with Sanvoram, Cuppamoddi, Karmaliwada, Xelvona, Assolda, Xeldem has total population of 40385 as per report released by Census India 2011.

The whole area of Curcholem and Its Surrounding areas are divided into Three Phases as per the conditions and topography as follows:

1. **Phase I: - On Going Work (Sewerage Network Funded by State Government)**
 - Sewerage Network is ongoing.
 - Curcholem City area.
2. **Phase II: - On Going Work - Funded by NRCP Scheme (Part I :- Sewerage Network and STP)**
 - Sewerage Network
 - a. Areas of Kakoda.
 - b. Areas of Above Railway Line and Below River.
 - c. Area of Cuppamoddi.
 - Sewage Treatment Plant
 - Pumping Station
 - Rising Main
3. **Phase III: - Proposed Work - NRCP Scheme (Part II :- Sewerage Network)**
 - *Proposed work in this report.*
 - Sewerage Network of 58 kms
 - *Area of Assolda, Xelvona, Karmaliwada, Xeldam etc. (Zone 5 to Zone 18)*
 - Pumping Station
 - Rising Main

TABLE: -DESIGN CAPACITY OF STP AND SEWER NETWORK (Phase wise)

Sr. No	Sewerage Zones	Total Length of Sewer Network (KM)	Pumping Stations	STP	Estimated Cost sanctioned / proposed
Phase I: - Phase I: - On Going Work (Sewerage Network Funded by State Government)					
1.	Curchorem City area	36.00	PS 3 & PS 4 LPS 1 & LPS 2		Rs. 113.87 Cr
	Total (A)	36.00			
Phase II: - On Going Work - Funded by NRCP Scheme (Part I :- Sewerage Network and STP)					
2.	Kamral and surrounding	2.21	PS 1		Rs. 81.14 Cr
3.	Khammamol (Area Above Sanvordem) Railway Line and Below River)	3.21	PS 2	7.5 MLD**	
4.	Cuppamoddi	8.31	--	-	
	Total (B)	13.73			
Phase III :- Proposed Work - NRCP Scheme (Part II :- Sewerage Network)					
5.	Zone 5 to Zone 18 (Assolda, Xelvona, Karmaliwada, Xeldametc)	58.29	PS 4 to PS 14 & LPS 3 to LPS 6	-	Rs. 337.34 Cr
	Total (C)	58.29			
	Total (A+B+C)	108.02			

➤ ****Note:-** 7.50 MLD (Million Liters per Day) Sewage Treatment Plant (STP) is combined STP for all three phases and same has been approved under NRCD Part I (National River

Cost Justification:

- **Phase I (Ongoing):** The total cost for the sewerage network over 36 km is Rs. 113.87 Cr, which works out to **Rs. 3.16 Cr / Km of Sewer network**. The works for Phase I were taken up based on the Schedule of Rates of year 2021.
- **Phase II (Ongoing):** For a total network length of 13.73 km, the project cost is Rs.63.72 crore, which works out to **Rs. 4.64 Cr / Km of Sewer network**. The works for Phase I were taken up based on the Schedule of Rates of year 2023 & there has be revision in rates in SOR as compared with SOR prevailing in year 2021. The tender for Phase II was floated in 2023 & work is in progress.
- **Phase III (Proposed):** The proposed cost for a 58.29 km sewerage network is Rs. 337.34 Cr, which works out to **Rs. 5.78 Cr / Km of Sewer network**. The Detailed Project Report (DPR) for Phase III was submitted to the National River Conservation Directorate (NRCD) in August 2024. The estimates of Phase III are based on the prevailing Schedule of Rates of year 2024.

Comparison of Costs for Sewer Network Laying:

1. Open Trench Method:

- In most parts of India, the cost of constructing a sewerage network through open trenching typically ranges from Rs. 1.50 Cr to 2.00 Cr per kilometre. However, this method is not feasible in Goa due to the narrow roads and the tourist-centric nature of the region.

2. Trenchless Method i.e. Horizontal Directional Drilling (HDD):

- The cost for sewerage network installation using HDD ranges from 2.00 Cr to Rs. 3.00 Cr per kilometre in most parts of India.
- In Goa, the cost for HDD is significantly higher due to various factors like higher demand for infrastructure, topography and soil conditions in Goa, use of higher material such as HDPE pipes instead of RCC pipes, and logistical challenges. Hence, HDD costs range from Rs. 3.50 Cr to 5.00 Cr per kilometre, as per the prevailing SOR's in State of Goa.
- Considering the narrow road and Site Conditions in Goa trenchless method i.e. HDD is adopted for laying of entire sewer network. Whereas HDD is used for road crossing and other crossings only in other States in India.

- **Material Costs:** The cost of materials such as **PVC, and HDPE pipes** and other construction components tends to be **higher** in coastal and tourist-heavy areas like Goa.
- **Terrain Complexity & variation in Soil Strata:** Goa's **varied terrain with varied Soil strata (Soft Soil, Sandy, clayey, mixed, Rocky etc)**, which includes coastal areas and hilly or rocky regions, requires more extensive and sometimes **deeper excavation** with specialized drilling equipments, further driving up the costs.
- **Labour Costs:** In Goa, **labour costs** are generally **higher** than in rural areas of India due to the increased cost of living and the influx of workers in tourist areas.
 - **Unskilled labour:** **Rs. 500 to Rs. 1000 per day.**
 - **Skilled labor** (e.g., machine operators, supervisors): **Rs. 1,000 to Rs. 2,500 per day.**
- **Transportation Costs:** Transporting materials to construction sites, especially in **remote or rural areas** of Goa, incurs significant costs. This includes **long-distance transportation** of materials, which adds to the overall cost of construction due to the logistics involved.

Above factors combined result in a **higher cost of laying of sewerage network in the State of Goa** compared to the Rest of India, particularly for projects using the trenchless method i.e. HDD method.
