

Follow-up action / initiatives as well as status-update on compliance to NGT Orders in O.A. 606 of 2018 and other related matters: State of Goa

STATUS UPDATE as on 25th July 2020

A. Compliance to Solid waste Rules including Legacy waste (as per NGT Order dated 12th September / 18th October 2019 in a matter of O.A.606 of 2018)							
Sr. No.	Clause as referred in SWM Rules, 2016	Action mandated	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	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	Integrated Solid Waste Management Facility (SWMF) (100 tons per day - TPD) and its enhancement from existing 150-TPD to 250-TPD (+20%). Council of Ministers has approved the escalation cost along with contract agreement on 01/07/2020. Subsequently, GWMC issued Letter of Award on 07/07/2020 and contract agreement was executed	Ongoing	It may be noted that the lockdown due to COVID 19, i.e. since March-end 2020, the plant is receiving approximately 100 TPD though the capacity is 150 TPD as of now. It is expected that the intake waste will gradually increase to pre-pandemic capacity after restaurant and tourism activity commences, to achieve pre-pandemic capacity it may require approximately one	The project was scheduled to commence in March 2020 however, due to administrative and financial approvals, and COVID 19 pandemic and consequent lockdowns, approval is expected to be completed by end of June 2020 and the project construction is expected to commence effectively post	Mr. Levinson J. Martins, Managing Director, Goa Waste Management Corporation (GWMC).

		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	on 07/07/2020. Integrated Solid Waste Management Facility – Cacora (100 TPD +20%) – Letter of Award has been issued and Concession Agreement has been executed. Construction work shall commence once the lock-down is lifted. Due to COVID 19, Pandemic and consequent lockdown pre-construction work at the site was	Ongoing	year. Post pandemic lockdown the construction work shall commence.	monsoons <i>i.e. Sept 2020</i> and to be completed in 12-months, for trial operations which requires another 03-months time. Therefore, the timeline for the effective operation of expanded Saligao plant to 250-TPD is Dec. 2021. The project was scheduled to commence in the month of March 2020 however due to COVID 19 pandemic, consequent lockdowns and monsoons, the work shall commence post monsoons in September 2020 and to be completed by December 2021, thereafter 03-months of	Mr. Levinson J. Martins, Managing Director, Goa Waste Management Corporation (GWMC).
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		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. g. Setting up solid waste processing facilities by all local bodies.	suspended since the mobilization of men and material to the site was hampered due to the lockdown. However, the site development works such as leveling and providing storm water drains, ground demarcation / marking for excavation etc., was done. After submission of BG letter of commencement issued and site handed over Integrated Solid Waste Management Facility- Bainguinim (250 TPD +20%) - Environmental Clearance (EC) has been granted. Tender documents based on RFQ and RFP is under final preparation and thereafter tender will be floated.	Ongoing	Being addressed	trial-operations. The tender for Solid Waste Management Facility at Bainguinim was proposed to be floated by December 2020 after incorporating estimates of GSR-2019 and tweaking the tender document accordingly	Mr. Levinson J. Martins, Managing Director, Goa Waste Management Corporation (GWMC).
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		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.	During the EFC meeting held on 05/05/2020 with regards to cost escalation in Saligao Enhancement project, it was decided to extend the Bainguinim project to next financial year. It was noted that due to COVID 19 pandemic and consequent lockdowns there is a drastic drop in waste generation in the State more so due to a sharp drop in tourism / commercial activity. Also, Corporation of the City of Panaji (CCP) floated tender for 30-TPD Bio-methanation facility to handle wet waste generated at CCP and Taliegao Panchayat. Also an Appeal for a stay on the operation of the impugned EC for SWMF Bainguinim has been filed by Bainguinim			and work towards same shall commence April 2021 and expected to be completed in 18 months <i>i.e. October 2022</i> which includes 3 months of trial operation.	
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			Citizen Forum before Hon'ble NGT, Principal Bench, New Delhi, IA No.23/2020. Solid Waste Management Facility – Verna (250 TPD + 20%) Tender for conducting Rapid EIA studies was floated and letter intent was issued on 15/06/2020. Work order to the bidder will be issued upon submission of Bank Guarantee and execution of contract agreement.	Ongoing	Being addressed	GWMC to complete EIA studies by December 2020. Upon grant of EC, GWMC shall float tender for SWMF with 250-TPD capacity.	Mr. Levinson J. Martins, Managing Director, Goa Waste Management Corporation (GWMC).
			i. Bio-remediation or capping of old and abandoned dump sites (<i>i.e. legacy-dumps</i>). Till date the State has remediated approximately 1,23,000 tons of waste from legacy dumps at Saligao, Cacora and Aradi. The status of remediation at eleven dump-sites may please be referred in Annexure – A below. Complied with	Ongoing	Being addressed	Two Years (<i>excluding Monsoon</i>) from the date of issue of work order <i>i.e. 28/09/2021</i> and 36-months from issue of work order for disposal of RDF in Cement Factories. <i>i.e. 28/02/2024.</i>	Mr. Levinson J. Martins, Managing Director, Goa Waste Management Corporation (GWMC).
	Compliance under Rule 24 of Solid Waste Management (SWM) Rules 2016.	j. Submission of Annual report by local bodies (<i>i.e. CCP / municipal councils / village panchayats</i>).					

					NIL	Not Applicable	Secretary, Village Panchayats / Chief Officer, Municipal Council / Commissioner, City Corporation.
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Annexure – A

Sr. No.	Location of dump	Estimated volume of dump (m³)	Status	Completion Schedule
1	Curca, Bambolim	7454.94	Yet to commence, which will commence post monsoons	Two Years (<i>excluding Monsoon</i>) from the date of issue of work order i.e. 28/09/2021 and 36 months from issue of work order for disposal of RDF in Cement Factories. i.e. 28/02/2024
2	Campal, Panjim	7555.25	As on 02/06/2020 ~ 7,500 m³ waste is remediated.	
3	Behind SBI, EDC, Patto	2524.2	Survey Completed , which will commence post monsoons	
4	Near Divja Circle, Panaji	1018.38	Survey Completed, which will commence post monsoons	
5	Sonsoddo, Margao	231239.76	As on 08/05/2020 ~ 1,05000 m³ is remediated.	
6	Opp. to MPT Hospital, Headland Sada	83661.41	As on 02/06/2020 ~ 1,10,000 m³ waste is remediated.	
7	Assagao Plateau (Mapusa)	127684.8	As on 02/06/2020 ~ 32,000 m³ waste is remediated.	
8	Lakherem (Bicholim)	3165.25	Survey Completed, which will commence post monsoons	
9	Pernem Municipal Council	210	Survey Completed, which will commence post monsoons	
10	DumaneShristhal, Canacona	493.21	Survey Completed, which will commence post monsoons	
11	Cuncolim	3616.95	Machinery mobilized and Preliminary work undertaken	

❖ *Note:*

- 1. The volume of dump shown above was estimated in December 2018 and remediation work started post-December 2019. During this period the local bodies have continuously dumped waste at the site. Further, the waste below the ground level in the dump could not be quantified initially.*
- 2. Due to COVID 19 and consequent lockdown the disposal of (Refused Derived Fuel) RDF to cement factories were hampered, However, 1st week of June , GWMC has made efforts to dispose RDF to cement factories. During monsoons RDF shall be covered as per the tender conditions.*

Department of Urban Development (*Municipal Administration*)

There is 100% door to door collection in all the Urban Local Bodies (*ULBs* ') and segregation is at 86%. The gap in Wet Waste Treatment Capacity is proposed to be covered through major plants being constructed through Goa Waste Management Corporation (GWMC). All ULB's have Material Recovery Facility (MRF) / sorting stations for segregating dry waste into recyclables and non-recyclables. The recyclables are sorted, baled and sold to recyclers while the non- recyclables are baled and transported to cement factories for co-incineration. Upgradation of MRF is proposed in ULB's namely Mormugao, Ponda, Valpoi, Mapusa, Cuncolim, Bicholim, Sankhali and Margao. This has been completed by March 2021. There is a ban on Plastics below 50 microns and there is 100% enforcement.

Status-update / further follow-up progress made w.r.t. Notification on three “Model Cities” – (i) Corporation of City of Panaji, (ii) Cuncolim and (iii) Valpoi.

Sr. No.	Urban Local Body / Model Cities	Present Status on treatment of MSW	Status Update /further progress made w.r.t.Notification
1.	Corporation of the City of Panaji (CCP)	Presently 100% Door-to-Door (D2D) collections is achieved in the city with 04-way segregated collection mechanism. Wet-waste treatment facility (De-centralised) – Heera petrol-pump – 05 TPD capacity LIC complex – 2.5 TPD capacity	For augmentation of Dry and Wet-waste Facility 1. The CCP has planned to set up a Bio-Methanation facility of cumulative capacity of 30 TPD. <i>Status</i> : Request for Proposal (RFP) has been floated inviting proposals. 2. The CCP & Taleigao Panchayat has also proposed for setting up of 30-TPD capacity bio-methanation facility through BITS Pilani Goa

		Panaji market – 3 TPD capacity Society composting – 1.5 TPD capacity Saligao Integrated solid waste management facility – 10 – 11 TPD. Dry waste – sorted through mechanised Material Recovery Facility (MRF). Which is run through United Nations Development Programme (UNDP) and non-recyclables are sent for co-incineration.	Campus, Sancoale. The CCP has sought for certain information from the agency / institution with reference to the proposed project. <i>Status</i> : Awaiting response from the agency / institution. <i>Estimate cost</i> : Rs. 8.00 cr. 3. Additional 06 sorting stations have been proposed for dry-waste management. <i>Status</i> : Estimates prepared. Awaiting administrative approval from the State Government for taking up the works under the 14th Financial Grants. <i>Estimated cost</i> : Rs. 82.57 lakhs 4. In association with Biotechnology Industry Research Assistance Council (BIRAC), a 05-TPD capacity cumulative units of Rhino digester system at identified 12-locations will be set up to augment the existing SWM infrastructure. <i>Status</i> : Awaiting administrative approval from the State Government for utilising the 14th Financial Grants for expenditure not covered under the Grants by BIRAC.
2.	Cuncolim Municipal Council (CMC)	100% Door-to-Door (D2D) collection is achieved in the town with two-way segregated collection mechanism. Wet waste – Method adopted is Aerobic Windrow Composting wherein 100% wet-waste is treated. In addition, Home-composting is being promoted and practiced on a larger scale. Dry waste – Functional Dry waste sorting stations wherein recyclables are sold to authorised recycler and non-recyclables are separated and sent for co-incineration.	For augmentation of Dry and Wet-waste Facility 1. New Material Recovery Facility (MRF) Shed. <i>Status</i> : Work has commenced. <i>Estimated cost</i> : Rs. 66.75 lakhs 2. 1.5-TPD incinerator to treat household hazardous wastes. <i>Status</i> : Civil work has commenced. <i>Estimated cost</i> : Rs.37.50 lakhs 3. Proposed Material Recovery Facility (MRF) equipment. <i>Status</i> : Work-order has been issued. <i>Estimated cost</i> : Rs. 30 lakhs.
3.	Valpoi Municipal Council (VMC)	100% Door-to-Door (D2D) collection is achieved in the town with two-way segregated collection mechanism. Wet waste – Method adopted is Aerobic Windrow Composting wherein 100% wet-waste	For augmentation of Dry and Wet-waste Facility 1. Shed expansion <i>Status</i> : Work is completed. <i>Estimated cost</i> : Rs. 28 lakhs. 2. Containerized Bio-Methanation plant (0.5-TPD capacity) through

		is treated. Dry waste – Functional Dry waste sorting stations wherein Non-recyclables are separated and sent for co-incineration.	GeM. <i>Status</i> : Work order has been issued. <i>Estimated cost</i> : Rs. 30 lakhs 3. Proposed Material Recovery Facility (MRF) equipment. <i>Status</i> : Work order has been issued. <i>Estimated cost</i> : Rs. 30 lakhs.
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SWM compliance by other eleven Municipal Councils may please be referred in Enclosure - 1

Compliance from Village Panchayats

1. Dry Waste Collection, Storage and Disposal

All 191 Village Panchayats collects Door to Door Dry waste, stores in shed/premises and sent to GWMC for scientific disposal.

2. Wet Waste Collection and Disposal

Out of 191 Village Panchayats, **127 village Panchayats** have mostly single dwelling units which dispose wet waste at source. Remaining **64 village Panchayats** are close proximity to the municipal jurisdiction, touristic places, and semi urban areas and generate wet waste, out of which 46 Village Panchayats collects Door to Door wet waste wherein 32 Village Panchayats sent waste to Saligao plant and other 14 Village Panchayats has set up wet waste disposal facilities. **15 Village Panchayats** have land available for set up facility for wet waste disposal which are in process and will be complied within 6 months. Remaining **12 Village Panchayats** are in process to identify land and in process to set up facilities which will require period of 1 year.

3. Village Waste Management Plan

All 191 Village Panchayats has prepared Village Waste Management Plan and submitted to GWMC. Village Panchayats strictly execute the plan prepared for proper collections, transportation and scientific disposal of waste.

4. Bulk Waste Generators

264 Nos. of Bulk waste generators were identified by Village Panchayats, out of which 223 Bulk Waste Generators have set up wet waste disposal facilities and the remaining 41 are in process to set up disposal facilities.

5. Ban on 50Microns and below Plastic

All 191 Village Panchayats have taken Gram Sabha Decision to BAN on plastic of 50 Microns and below thickness. For strict compliance, enforcement through imposing penalties is regularly done by the V.P. Secretaries. Public awareness is also done for educating public regarding ban on plastic of 50 microns and below.

6. *Sewage/waste water Discharge in Rivers*

3,273 nos. of notices issued for direct/indirect discharge of waste water in the river. Out of which 2083 nos. of violators have constructed soak pit. 05 nos. of water disconnections are carried out by Directorate of Health services on request of the village Panchayats under the Public Health Act (PHA) for non compliance. 1,190 nos. are in process to construct Soak pit /Septic tank.

7. *Model Village Panchayats*

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 compliant in respect of environmental norms.	Identification of Model Cities /Towns / Villages	With respect to <u>three identified Model Village Panchayats</u>, for each District i.e. North Goa and South Goa respectively the status is as given below:- South Goa District <u>V.P. Chicalim-</u> • Land Available in in Sy. No. 7/1, tender floated for setting up of MRF shed existing for garbage storage, proposal moved for extension of shed. • The wet waste is disposed by the Contractor in the composting facilities at S.No.7/1 and tender floated for setting up composting facilities of 10TPD bio digester/Composting Unit under CSR by GWMC. • 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 is collecting 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
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		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 composting units are installed. • Collect both the Dry waste and Wet waste from Door to Door collection from each Household on request of Households Also individual Household has set up Bt/ technical. • E-waste is collected regularly and disposed through Government empanelled agency . • 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. Nuvem-</u> • Shed is existing of Village Panchayat. The V.P has now proposed to setup MRF. • The wet waste is collected from the High rise building and commercial establishment. The wet waste collected is disposed using 200kg OWC. The V.P has also promoted disposal of wet waste at source. All high rise building are having composting kits installed in the premises. • The Dry waste is collected from all the households and wet waste is collected from 30% of the commercial establishment. The V.P after purchasing 1 TPD OWC will collect wet waste from all the households. • V.P has constituted Garbage Management Committee and it is
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		functional. • V.P is collecting all the E-waste through drives and is handed over to Karo Sambhav for scientific disposal. • The V.P impose fines regularly by conducting weekly raids along with the Police officials. • All the black spots are converted to green spots. • Street sweeping is done regularly. North Goa District <u>V.P. Old Goa-</u> • The V.P. Se Old Goa has procured an area of 500 Sq. Mts on lease for setting up of Material Recovery Facility under Sy. No. 62/4 A, Ella, belonging to Shri Premanand Naik and has executed the lease agreement with Shri Premanand Naik in respect of the said site for the period of 3 years. The proposal received from the V.P for preparation of estimate has returned to the Village Panchayat for want of Structural Liability Certificate of the RCC Consultant and the Architectural drawing, as per the observations raised by PWD. • The Village Panchayat collects door to door dry and wet waste from all the households within the jurisdiction of V.P. Se Old Goa on day to day basis by engaging daily wage labourers. • The wet waste collected is sent to the Piggery and for Bio gas within the jurisdiction of V.P. Se Old Goa for disposal. 1. St. Francis Xavier Academy Piggery Old Goa (Piggery)
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		2. ATLAS Fisheris Company,Dhauji (Biogas) 3. St. Cajetan Church Old Goa (Biogas) • Dry waste collected is sent to the Goa Solid Waste Management Corporation, Saligao Goa for disposal. • Street sweeping is done twice in a week near Tourist places within the jurisdiction of V.P. Se Old Goa. • V.P. constituted Garbage Management Committee and the same is functional. • No E-Waste is found by the Village Panchayat while collecting the garbage. • The V.P. has appointed daily wage supervisor for monitoring the black spots and as soon as blackspots are noticed the same are cleared by V.P. by engaging daily wage labourers. • The Village Panchayat does not collect any user charges. Once the MRF site is setup the necessary user charges will be imposed by the village Panchayat. <u>V.P. Oxel-</u> • Shed is available for storing and segregation of Dry waste. Proposal for extension of shed is in progress. • 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.
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		• V.P. levy fines for littering and burning of Garbage and also user charges are collected from all households. • Land identification of 500 Sq. mts for construction of MRF is in process <u>V.P. Morjim -</u> 1. Land is identified for M.R.F. i.e. survey no. 61/0 in Village Morjim (land owner Government land-Directorate of Education). Approval obtained from the Goa Pollution Control Board and fees are paid by the Village Panchayat Morjim for authorization. Proposal for M.R.F. shed is in process. 2. Wet waste collected from Commercial users is sent to GWMC Saligao on daily basis by the Village Panchayat Morjim. 3. Dry waste is collected from every household in the jurisdiction of Village Panchayat Morjim and wet waste is collected from commercial users only. The wet waste from the households is disposed by them in their own property. 4. Village Panchayat Morjim has purchased 10 lts dustbins (for wet waste), 20 lts dustbins (for dry waste) and 240 lts dustbins for commercial open spaces and market complexes. 5. Garbage management committee is constituted in the Village Panchayat Morjim and it is functional with the help of Village Panchayat Morjim. 6. No e-waste is collected by the Village Panchayat Morjim.
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		7. No garbage tax is collected by the Village Panchayat Morjim. 8. No fees are collected for littering and burning of garbage in the jurisdiction of Village Panchayat Morjim. 9. Every Black spot is cleared in the jurisdiction of Village Panchayat Morjim. 10. 04 no. of labourers are engaged in the street sweeping which is carried out on 10th, 20th and 30th of every month. In addition to above-referred six villages, following eight villages have been prioritized 1. Moira 2. Pilerne-Marra 3. Surla 4. Casnem-Ambere-Porsocodem 5. Veling -Priol 6. Cavelossim 7. Chicolna-Bogmalo 8. Nuem All the above village Panchayats are in process to set up necessary facilities for both Dry and Wet waste collection, segregation, transportation and scientific disposal.
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B. Compliance to Bio-Medical Waste Rules *(as per NGT Order dated 12th September / 18th October 2019 in a matter of O.A.606 of 2018)*

Sr. No.	Clause as referred in BMW Rules, 2018	Action mandated	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Compliance to Bio-medical waste (BMW) Management Rules, 2018	Setting up of Common BMW Treatment facility (CBMWTF) including 200 kgs.per. hour incinerators.	Health Care Facilities (HCFs') generate about 02 tons of BMW per day and are being disposed-off as per the provision of the Bio-medical Waste Rules, 2018. Goa Medical College (GMC) has commissioned incinerator having 100 Kg. per hour capacity, wherein incinerable BMW collected from Government as well as Private HCFs' is treated. In respect of setting-up a CBMWTF, letter of Award has been issued to M/s Biotech Waste on 04th February 2020 and GWMC has signed the Concession Agreement with M/s Biotic Waste Solutions Pvt. Ltd. Delhi to set up the Common Biomedical Waste Treatment Facility at Kundaim	Ongoing	Being addressed	The construction of the project was scheduled to commence in April 2020 however due to COVID-19 pandemic, consequent lockdowns and monsoons, the work shall commence in the month of September 2020 and to be completed in 15 months time i.e. December 2021 including trial operation.	Mr. Levinson J. Martins, Managing Director, Goa Waste Management Corporation (GWMC).

			Industrial Estate. Due to COVID-19 Pandemic and consequent lockdown mobilization of men and material at site to commence work has been hampered / delayed.				
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C. Compliance to Construction and Demolition Waste Rules, 2016

(as per NGT Order dated 12th September / 18th October 2019 in a matter of O.A.606 of 2018)

Sr. No.	Clause as referred in C & D waste Rules, 2016	Action mandated	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Compliance to Construction and Demolition (C & D) wastes Management Rules, 2016.	Ensure separate storage, collection and transportation of construction and demolition wastes Setting up of C & D facility	The State Government, vide Notification no. 28/14/GL/BICH/RB/2019/9 dated 23 rd June 2020 has allotted a revenue land admeasuring an area of ~ 44,478 m ² located at Curchirem village in Bicholim taluka, North Goa (<i>survey nos. 146/2, 146/3, 146/4, 146/6, 148/2 & 148/7</i>), to the Department of Science, Technology (<i>DST</i>) for setting up a C & D treatment facility for which SINTEF AS, by its Institute for Building and Infrastructure, a registered Scientific Research Organisation in Scandinavia is a consultant for GWMC. After DPR is prepared by a	Ongoing	Being addressed	The handing over of land to Department of Science, Technology (<i>DST</i>) & Waste Management is in process. After handing over of land, the consultant shall submit DPR within four-weeks and GWMC shall float tender for setting up C & D Waste Management Facility by November 2020 and construction work towards the same shall commence by January 2021 and to be completed in 18 months <i>i.e. July 2022</i> including trial operation.	Mr. Levinson J. Martins, Managing Director, Goa Waste Management Corporation (GWMC).

			consultant, the tender shall be floated. Goa-IDC has been instructed to identify and allot a land admeasuring 4,000 m² adjacent to plot no. U-06 at Verna Industrial Estate for setting up transfer station.				
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D. Compliance to Hazardous Waste Management Rules, 2018

(as per NGT Order dated 26th August 2019 in a matter of O.A.804 of 2017)

Sr. No.	Clause as referred in HW Rules, 2018	Action mandated	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Compliance to Hazardous wastes (HW) Management Rules, 2018.	Setting up of Common CHWTSD facility - 25,000 TPA Secured Landfill (SLF) & 1.5 ton/hr incinerators	Currently, the Hazardous Waste generated in the State are disposed of as per CPCB-guidelines / GSPCB-authorization for recycling and incineration at Maharashtra and Karnataka As regard to setting-up a Common HW treatment and storage facility at Pissurlem industrial estate, it is informed that M/s Ponda Envirocare – an SPV of M/s SMS Envirocare (<i>contractor</i>) has commenced the erection of PEB-structure of shed-1 on-site. Temporary laboratory facility on-site has been completed. Once the administration building is completed, the laboratory will be shifted accordingly. Due to COVID-19 Pandemic and	Ongoing	Being addressed	The laying of liners of the 1 st SLF was supposed to be completed in May 2020 however, due to COVID-19 pandemic, consequent lockdowns and oncoming monsoons, the laying of liners requires three- months of the dry season, hence the laying of liners for 1 st Secured Landfill (SLF) shall commence post monsoons <i>i.e. in the month of November 2020</i> and to be completed in by <u>February 2021</u> . The operations of the Landfill shall commence by March 2021.	Mr. Levinson J. Martins, Managing Director, Goa Waste Management Corporation (GWMC).

			consequent lockdown mobilization of men and material to the site was hampered/delayed, so also laying of liners got delayed. Laying of liners of the 1st Secured Landfill (SLF) will commence post-monsoon.				
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E. Compliance to E-Waste Rules, 2016

(as per NGT Order dated 02nd September 2019 in a matter of O.A.512 of 2018)

Sr. No.	Clause as referred in E-waste Rules, 2016	Action mandated	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Compliance to E-wastes Management Rules, 2016.	Setting up of E-waste treatment facility	The process to comply with the E-waste Rules, 2016 (<i>i.e. collection of E-waste, segregation and scientific disposal</i>) is in place through M/s Karo Sambhav wherein 'recyclable' waste is sent to Bengaluru, Karnataka. In addition, the proposal to set-up E-Waste Management (<i>Collection, Storage, and Dismantling</i>) facility on Design-Build and Operate has been approved by the GWMC Board and GWMC has floated a tender on 07/07/2020. Land admeasuring 4,000 m² has been procured through Goa Industrial Development Corporation (<i>Goa-IDC</i>) at Pissurlem Industrial Estate, Sattari taluka, North Goa.	100%	Being addressed	The tender was floated for selection of service provider for Design-Build and Operate an E-Waste Management (<i>Collection, Storage, and Dismantling</i>) for the State of Goa on 06/07/2020 and technical bid shall be opened on 20/08/2020	Mr. Levinson J. Martins, Managing Director, Goa Waste Management Corporation (GWMC).

F. Compliance to Plastic Waste Management Rules, 2016

(as per NGT Order dated 22nd July 2019 in a matter of O.A.247 of 2017)

Sr. No.	Clause as referred in PWM Rules, 2016	Action mandated	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Compliance to Plastic waste Management (PWM) Rules, 2016.	Ban on plastic below 50-microns	The Department of Environment has Notified the Goa Non-Biodegradable Garbage (<i>Control</i>) (Amendment) Act, 2019 in an Official Gazette (Extraordinary), Series I, No. 25 dated 23 rd September 2019, wherein vide clause 3(A), use of single-use plastics have been prohibited.	100%	0%	Being enforced through public-awareness, raids and fines	Commissioner, CCP / Chief Officer, Municipal Councils / Secretary, Village Panchayats.

G. 351 Polluted river-stretches and preparation of action plan towards its remediation

(as per NGT Order dated 06th December 2019 in a matter of O.A.673 of 2018)

Sr. No.	Compliance to be made in respect of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Submission of “Final” Action Plan for rejuvenation of polluted river-stretches for priority criteria III to V.	“Revised” action plans for priority criteria III & IV (<i>i.e. Sal / Mandovi and Talpona river</i>) were presented during the 11th Task Team Member meeting convened, <i>through video conference (VC)</i>, by the Central Pollution Control Board (CPCB) held on 21st May 2020 followed by 3rd Central Monitoring Committee (CMC) meeting convened, <i>through video conference (VC)</i>, by the National Mission for Clean Ganga (NMCG), Ministry of Jal Shakti, Department of Water Resources, New Delhi on 23rd June 2020. Based on the suggestions received during these VCs’ followed by relevant updates received from stakeholder department concerned (<i>i.e. SIDCGL / DMA / DoP / Directorate of Fisheries / GPCB / GWMC / CoP</i>) these actions plans have been updated and the same were discussed during the 20th RRC-Goa meeting held on 2nd July 2020 under the Chairmanship of Principal Secretary (Environment). Similar approach (<i>i.e. as has been suggested by the CPCB</i>	100%	Nil	Final action plans for priority criteria – V are being updated and are proposed to be discussed / deliberated during the next RRC-Goa meeting.	Principal Secretary, Environment

		/ NMCG) has been adopted to update remaining eight action plans in respect of river-stretches falling under priority criteria –V and the requisite data has been shared with the consultant – M/s Unity I.E., with instruction to update these report to be discussed /deliberated during next RRC-Goa meeting for approval, prior to its submission to the CPCB. Further, <i>in compliance to the NGT Order dated 6th December 2029 in the same matter</i>, the State has submitted its Monthly Progress Report (as per the NMCG's prescribed format) on 23rd June 2020 to which further update, as sought by Department of Water Resources, New Delhi, is being compiled and will be communicated by 17th July 2020. As regard to de-listing the Talpona river-stretch from the polluted river-stretches, <i>as per the NGT matter in O.A. no. 673 of 2018</i>, CPCB has informed that the State should affidavit-file to the NGT for further consideration once all final approved plans are submitted to the CPCB by the State.				
2	Submission of Performance Guarantee as per the Order dated 08 th April 2019.	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 8 th April 2019 in a same matter.	100%	0%	Not Applicable	

H. 100 Critically Polluted Industrial Estates (CPIE) / Clusters

(as per NGT Order dated 14th November 2019 in a matter of O.A.1038 of 2018)

Sr. No.	Compliance to be made in respect of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Submission of Action Plan to address the CPIE.	The State of Goa does not have any Critically Polluted Industrial Estate (CPIE) / Cluster. However, it is proposed to monitor the Ambient Air-Quality (AAQM) at regular intervals.	Goa State Pollution Control Board (GSPCB) will continue to carry-out AAQM. 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).	NIL	Not Applicable	Member Secretary, GSPCB

I. Status of CETP / STP / ETP and its operational compliance

(as per NGT Order dated 28th August 2019 in a matter of O.A.593 of 2017)

Sr. No.	Compliance / current-status in respect of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Operational status of STPs'	Currently, 09 Government STP's are operational, 05 are under construction and 03 are proposed at various locations. The total sewage treated in the commissioned STP's is around 46.60 MLD. While, in cases of Private-STPs' installed / operational for residential-cum-commercial complexes, the Board conduct 'Performance Evaluation' of selective STPs' to ascertain its compliance to CPCB-prescribed treated-water parameters (<i>as per consents granted by the GSPCB</i>).	100%	Nil	Performance Evaluation of industrial units is an on-going process as-and-when parameters are exceeding prescribed limits. Accordingly, Show cause Notice (SCN) / Directions and fines as per Polluter-Pay-Principle (PPP) are being levied.	Managing Director, Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL). Member Secretary, Goa State Pollution Control Board (GSPCB).

J. Action Plan for utilisation of treated-water <i>(as per NGT Order dated 11th September 2019 in a matter of M.A. 1688 of 2017 in O.A.148 of 2016)</i>						
Sr. No.	Compliance / current-status in respect of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Action Plan for utilisation of Treated water	Out of total availability of 23.81 MLD of treated water, although there is no agricultural demand, part utilisation has been proposed for (i) flushing of St. Inez creek, (ii) municipal gardening, (iii) social forestry, (iv) private-plantation, (v) dust-suppression measures. There is no Thermal power-plant in the State.	40%	60%	Local authorities / Municipal councils / Minor-mineral quarry operators / Real Estate Developers, etc., have been instructed to utilise STP-treated water.	Managing Director, Sewerage Infrastructure Development Corporation of Goa Limited (SIDCGL) / Principal Chief Engineer, Public Works Department (PWD)

J. Status of CETPs' / ETPs' including its Performance Evaluation and compliance

(as per NGT Order dated 28th August 2019 in a matter of O.A.593 of 2018) along with NGT Order dated 17th September 2019 in a matter of O.A. 829 of 2019 – Coastal water-monitoring).

Sr. No.	Compliance in respect of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Operational status of CETPs' / ETPs' in the State. <i>(O.A.no. 593 of 2018)</i>	The State of Goa does not have Common Effluent Treatment Plant (CETP). The ETPs' installed and operational by various industrial units are being monitored by the State Pollution Control Board (Goa-PCB) to verify its compliance with CPCB-prescribed outlet standards.	100%	Nil	Performance Evaluation of industrial units is an on-going process as-and-when parameters are exceeding prescribed limits. Accordingly, Show cause Notice (SCN) / Directions and fines as per Polluter-Pay-Principle (PPP) are being levied.	Member Secretary, Goa-PCB
2	Coastal Water Monitoring <i>(O.A. no. 829 of 2019)</i>	Kindly refer Enclosure - 2				

K. Groundwater extraction / Contamination and recharge

(as per NGT Order dated 11th September 2019 in a matter of O.A.496 of 2016 and as per NGT Order dated 15th October 2019 in a matter of O.A. 597 of 2019)

Sr. No.	Compliances in respect of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute																				
1	Action plan w.r.t. Rain-water Harvesting (RWH) initiatives	Ground Water Estimation, Monitoring & Recharge Regulations 1. <i>Dynamic Ground Water Estimation</i> There two districts in State namely North Goa and South Goa. Department has identified the ‘ground water harvesting structures’ in both districts, and are registering these ground water structures. <table><tr><td></td><td colspan="2">Ground water structures</td><td colspan="2">Ground Water harvesting structures</td></tr><tr><td></td><td>Open wells</td><td>Bore wells</td><td>Bandharas</td><td>Mining pits</td></tr><tr><td>North Goa</td><td>3026</td><td>324</td><td>178</td><td>15</td></tr><tr><td>South Goa</td><td>1479</td><td>525</td><td>152</td><td>25</td></tr></table> The state of Goa in collaboration with Central Ground Water Board (CGWB) is conducting study and estimation of Dynamic Ground Water Resources of the State. Accordingly - (i) 105 nos. of Ground water monitoring station are setup in the state to ascertain Pre- and Post-Monsoon study of groundwater availability and fluctuations. (ii) 44 nos. of hydrograph stations are maintained in the State to study the ground water fluctuations.		Ground water structures		Ground Water harvesting structures			Open wells	Bore wells	Bandharas	Mining pits	North Goa	3026	324	178	15	South Goa	1479	525	152	25	85% All the lakes, ponds and other ground water structures needs to identified and provided UID work.	15%	North Goa district completed. South Goa district to be completed by August 2020.	Mr. Srikant Patil, Chief Engineer Water Resources Department.
	Ground water structures		Ground Water harvesting structures																							
	Open wells	Bore wells	Bandharas	Mining pits																						
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South Goa	1479	525	152	25																						

	(iii)The water level below the ground level (BGL) is ranging from 1.18 mts bgl to 18.17 bgl of which 86.5 % of the wells have water level within 2 mts to 10 mts bgl in pre- monsoon and Post -monsoon the depth 95.2 % have of water depth of 2 to 10 mts bgl. (iv)From the data so collected from the monitoring stations and hydrograph stations Ground Water availability in the reporting year 2017, is estimated to be 16,033Ha-m. (v) There is increase in the ground water availability to the extent of 9.12 % over previous base year of 2013studies 14625 Ha –m. STAGE OF GROUND WATER DEVELOPMENT IN THE STATE <table><tr><th>Particulars</th><th>As in 2013</th><th>As in 2017</th></tr><tr><td>Annual extractable Ground water resources</td><td>14625</td><td>16033</td></tr><tr><td>Existing Ground water Extraction for Irrigation (<i>ha.m</i>)</td><td>2148</td><td>2058</td></tr><tr><td>Existing Ground water extraction for domestic and Industrial water Supply (<i>ha.m</i>)</td><td>3229</td><td>3314</td></tr><tr><td>Existing Ground water Extraction for all uses (<i>ha.m</i>)</td><td>5377</td><td>5371</td></tr><tr><td>Provision for domestic and Industrial requirement supply for 2025</td><td>3902</td><td>3669</td></tr><tr><td>Net Ground water availability for future irrigation development (<i>ha.m</i>)</td><td>8575</td><td>6993</td></tr><tr><td>Stage of ground water Extraction (%)</td><td>37%</td><td>34%</td></tr><tr><td>Category</td><td>Safe</td><td>Safe</td></tr></table>	Particulars	As in 2013	As in 2017	Annual extractable Ground water resources	14625	16033	Existing Ground water Extraction for Irrigation (<i>ha.m</i>)	2148	2058	Existing Ground water extraction for domestic and Industrial water Supply (<i>ha.m</i>)	3229	3314	Existing Ground water Extraction for all uses (<i>ha.m</i>)	5377	5371	Provision for domestic and Industrial requirement supply for 2025	3902	3669	Net Ground water availability for future irrigation development (<i>ha.m</i>)	8575	6993	Stage of ground water Extraction (%)	37%	34%	Category	Safe	Safe				
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		Stage of Ground Water Extraction 34 % hence is categorised as SAFE. <i>2. Ground Water quality</i> Ground water quality is monitored at different locations with the help of 48 nos. observation wells , 2 well out of 48 wells (4.16 %) are affected by salinity it being in low and tidal water affected areas. Rest of the wells are having fresh water and chlorides are in permissible limits. Entire Goa state is free from fluoride. <i>3.Ground Water Recharge and Water Harvesting Structures</i> State has constructed two Medium dams namely Salauli Dam and Anjunem Dam located in Sanguem (<i>South Goa district</i>) and Sattari taluka (<i>North Goa district</i>). a. Salauli Dam in Sanguam (South Goa) Monsoon water is harvested from the catchment area to the extent of 22,700 ha-m.to irrigate 9,686 ha of land in Sanguem, Qupem, Salcete taluka of South Goa. It supplies drinking Water to the extent of 200 mld to South Goa district. Ground water level in the entire command area of the Saluli Dam is safe. b. Anjunem Dam at Keri Sattari (North Goa) Monsoon water is harvested from the catchment area to the extent of 4485 ha-m. Supplies water for irrigating 1800 ha of land Sattari and Bicholim Taluka and drinking Water to the extent of 80 mld to North Goa district. Ground water level in the entire command area is safe. It was water stressed area prior to construction of the dam c. Tillari Dam (Inter- State project) North Goa Monsoon water is harvested from the catchment area to the extent of 11,350 ha- m to supply water for irrigation in the talukas of Bardez and				
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	Pernem, and drinking Water to the extent of 100 mld to North Goa district. d. Minor Irrigation Dams;- 4 nos. minor dams namely Amthane in North Goa and Panchwadi, Gawane, Chapoli in South Goa dist, harvesting 29,365 ha- m of water. These dams supply water for irrigation and drinking, for Bardez, Ponda and Canacona Taluks respectively. Due to supply of water for irrigation the ground water level in the command area is satisfactory. e. Lakes and Spring / Ponds;- State has taken up development of lakes , wells and other water storages structures for rejuvenation of water bodies have implemented over 1,500 nos. small projects . f. Bandharas;- 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. g. Mining Pits;- There over 100 open cast iron ore mining pit in the State, which are spread across over 50 kms. in Sattari, Bicholim. These abandoned mining pits are massive ground water recharge structures. An estimated 15,000 ha-m (approx) of rainwater is harvested in these pits. These pits are recharging the ground water, department is working out the proposal to use the harvested water to supply for drinking and irrigation. <i>4. Groundwater Regulations</i> ➤ 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 it is				
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		required to obtain prior permission of the ground water officer , for construction of new wells, withdrawal of ground water. All the existing the ground water structure registration is mandatory. ➤ To implement the provisions of the act, Ground Water Cell is constituted by the govt headed by the Chief Engineer, with Sr. Engineer, as members. The role of the ground water cell is 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 is implementing provisions of the act. ➤ The state of Goa first state in the Indian union, to levy tax on the commercial exploitation of water. The consumers are charged Rs.2/- per Cum during monsoon, and Rs 6/ m³ from Nov. to May of every year. Domestic purpose i.e. multi users are charges Rs. 0.1 / m³. <i>5. Rejuvenation of Water bodies</i> A subsidy scheme ‘named <i>Nital Goem Nital Baim</i>’ has been introduced for rejuvenation of wells where in the well owner is provide financial help upto Rs 50,000/- (max) Water Quality Lab:- Department has established full-fledged water quality lab under hydrology project which monitors water quality pre and post mason. Rejuvenation of Water bodies: - Under Jal Shakti, programme department has initiated work of identification and development of water rejuvenation of water bodies and rivers.				
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L. Air Pollution including Noise Pollution
(as per NGT Order dated 20th November 2019 in a matter of O.A.681 of 2018)

Sr. No.	Compliance / submission in respect of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Action plan for Non-attainment cities	The State of Goa does not have any city categorised under the “Non-Attainment Cities – NAC”.	Not Applicable	Not Applicable	Not Applicable	Not Applicable
2	Preparation of / noise-level zones and noise-mapping	The State has categorised the areas in the State into (i) Industrial, (ii) Commercial & Residential and (iii) Silent zones and has also notified the designated authorities in compliance with the provisions of the Noise Rules, 2000 and NGT Order dated 20th November 2019. The Department of Environment vide Order No.7/4/98/STE/DIR/PartIII/539 Dated 24/09/2019 in pursuance of the directives of the Hon'ble High Court has published the names and telephone numbers of the officers designated as "Authority" under the said rule, for information of the public			The Department of Environment (DoE) has sought the details of zoning in their jurisdiction from respective District Collector. The details of the same are awaited in view of prevailing monsoon in noise-level mapping cannot be carried out. The same is to be carried out in the month of October 2020 that is post-monsoon and the due report will be submitted by November 2020.	Director, Department of Environment in collaboration with District Collector (N & S).

M. Illegal Sand-mining / Illegal extraction of laterite-stones
(as per NGT Order through VC dated 26th November 2019 in a matter of O.A.77 of 1986)

Sr. No.	Compliance / submission in respect of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Institutional mechanism to address illegal / major-mineral sand-extraction	In respect of extraction of major minerals (i.e. Fe & Mn-ores), Hon'ble Supreme Court of India, vide its Order dated 07 th February 2019, has squashed the second-renewal granted to 88 mine-leases and at present, there is no extraction activities in the State. With regards to illegal sand-extraction, Flying Squads have been constituted empowering respective Taluka Mamlatdars for monitoring and to initiate legal action on illegal sand-extraction.	Not Applicable	Not Applicable	Not Applicable	Department of Mines and Geology (DMG).
2	Action plan for illegal extraction of laterite-stones in Pernem taluka.	Illegal extractions-sites have been identified in Pernem / Bicholim / Satari and Tiswadi talukas and the details have been shared with the District Collector (North Goa) for suitable action against the violators. to facilitate action plan by the Goa Waste Management Corporation	75%	25%	The WRD has tendered the work of fencing the abandoned mining-pits in Pernem on 26 th June 2020 (for 09 nos.).	Department of Mines and Geology (DMG) / Water Resources Department (WRD) / Goa Waste Management Corporation

		(GWMC) to utilise the same for dumping of inert-wastes. Simultaneously, Water Resources Department (WRD) has prepared the action plan for survey, estimation, utilisation of such-pits as water harvesting structures. In addition, WRD has initiated the work of fencing the abandoned pits by allotting work to different contractors, so that the work of fencing is expedited. Due to COVID-2019 and lockdown, the tenders could not be floated out.			Abandoned mining-pits as water-harvesting structure, 1. WRD has identified 05-mining pits in North Goa and 03- mining pits in South Goa as hater-harvesting structures for rejuvenation of nallah and agriculture. 2. Estimate for the same is prepared for an amount of Rs. 12 crore in North Goa, waiting expenditure sanction from the State Government.	(GWMC).
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N. Rejuvenation of Water bodies – Action plan for Restoration of Wetlands
(as per NGT Order dated 1st June 2020 in a matter of M.A.26 of 2019 in O.A. 325 of 2015)

Sr. No.	Compliance / submission of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Notifying the ‘Wetlands’ and preparation of action plan restoration of waterbodies.	The Draft Notification to declare Bondvol lake seeking suggestions / objections from the general public has been published on 01/05/2020. This is kept open for 60-days. As regards other wetlands, the National Institute of Oceanography (NIO), Goa has completed preliminary survey and ground-truthing of 26 water-bodies (<i>11 in North Goa & 15 in South Goa</i>) and the 1st quarterly report in respect of progress made has been tabled before the NGT in the 1st week of May 2020. Action Plan for restoration of water bodies, <i>proposed and drafted through Goa State Wetland Authority (GSWA)</i>, be referred at Enclosure – 3.	Ongoing	Ongoing	By October 2020	Water Resources Department (WRD) / Goa State Biodiversity Board (GSBB) / Department of Environment. As per NGT Order dated 1st June 2020, District Collector has to submit the action plan. DoE has been instructed to put-up a response stating that the compliance is being done by the GSBB through WRD.

O. District / State Environment Plan <i>(as per NGT Order dated 26th November 2019 in a matter of O.A.360 of 2018)</i>						
Sr. No.	Compliance in respect of	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Submission of District Environment Plan (DEP) and subsequent preparation of State Environment Plan.	District Environment Plan (DEP) has been uploaded on the website of the respective District Collector. However, due to prevailing COVID-19 conditions, comments of the public have not been obtained. The same will be done within 02-months and it will be submitted to the Central Pollution Control Board (CPCB).	Ongoing	Ongoing	By end-September 2020	District Collector (North and South Goa) / Department of Environment.

P. Estimate of value of environmental degradation and cost of restoration be prepared and compensation be planned and recovered from polluters for environmental restoration and Restitution on that basis on PPP basis.

(as per NGT Order dated 28th August 2019 in a matter of O.A. 593 of 2017)

Sr. No.	Follow-up action / compliance	Current status	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Implementation of Polluter-Pay-Principal / levy of fines	The Board has issued directions and levied fines under the Polluter-Pay-Principal (PPP). Subsequently, the Board has issued ‘reminders’ to defaulting / non-responsive units with instruction to pay the fine, failing which closure-proceeding to be initiated thereafter. As-on-date, the Board has collected fines to the tune of Rs. 61.56 lakh since April 2019 till April 2020.	Ongoing as it is a continuous process	Being addressed	Being a continuous process, follow-up is taken on regular basis.	Member Secretary, GSPCB

Q. Finalisation of ‘Approved Fuels’ in place of Pet-coke <i>(as per NGT Order dated 07th January 2020 in a matter of O.A. 67 of 2019)</i>						
Sr. No.	Follow-up action / compliance	Current status as in June 2020	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Approved fuels and its Gazette Notification	On the recommendation of the Goa State Pollution Control Board (GSPCB), a Notification for prohibited (<i>i.e. Pet-coke & Furnace-oil</i>) and approved fuels has been issued. The same will be published in the Official Gazette shortly.	100%	Nil	Complied with	Department of Environment, Goa.

R. Status of Pyrolysis plant using waste-rubbers as raw-material

(as per NGT Order in May 2019 2019 in a matter of O.A. 400 of 2019)

Sr. No.	Follow-up action / compliance	Current status as in June 2020	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Compliance to operational status of pyrolysis plant using waste-tyres as raw-material in the State	As there are no such waste-tyre pyrolysis plants in Goa, the GSPCB has accordingly informed the CPCB as its compliance update.	100%	NIL	Not Applicable	Not Applicable

S. Status of Dairies in the State and its compliance
(as per NGT Order dated 08th July 2019 in a matter of O.A. 46 of 2018)

Sr. No.	Follow-up action / compliance	Current status as in June 2020	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Dairies and its compliance status in the State.	The GSPCB, after seeking relevant inputs from Local Authorities (<i>i.e. CCP / Municipal Councils and Village Panchayats</i>), has compiled and forwarded the status to the CPCB as per the NGT Order in the said matter (refer Enclosure – 4).	100%	NIL	Not Applicable	Chief Officers, Local Authorities / Secretaries, village Panchayats.

T. Finalisation of Eco Sensitive Zones (ESZ) in the State and Notification by the MoEF & CC

(as per NGT Order dated 22nd November 2019 in a matter of E.A. 19 of 2018 in O.A. no.597 of 2018)

Sr. No.	Follow-up action / compliance	Current status as in June 2020	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Finalisation of villages falling under the purview of ESZ by the States.	The basic criteria for identification of areas under the Western Ghats Eco Sensitive Areas (ESAs') is altitude, forest and contiguity with ESAs' of the neighbouring States on preliminary studies and examination. It is been observed that there are 27 villages partially meeting the said criteria. Hence, the State Government has recommended to the Ministry of Environment, Forests & Climate Change (MoEF & CC) to Notify these villages as Western Ghat's ESAs' for the State of Goa.				The Director, Department of Environment.

U. Finalisation of Coastal Zone Management Plan (CZMP) by the State in compliance to CRZ Notification, 2011
(as per NGT Order)

Sr. No.	Follow-up action / compliance	Current status as in June 2020	Desirable level of compliance in terms of statute	Gap between current status and desired status	Proposal of attending the gap with the timeline	Name and designation of officer ensuring compliance to provisions under statute
1	Finalisation of Coastal Zone Management Plan (CZMP) by the State and its publication by the MoEF & CC in Official Gazette.	The Ministry of Environment, Forests & Climate Change (MoEF & CC) has 'Amended' the provision for demarcation of High Tide Line (HTL) in the CRZ Notification, 2011. In terms of social amendment, the Department of Environment & Climate Change (DoE&CC) has requested the Water Resources Department (WRD) to map the bunds existing prior to 1991 jointly with Bio-diversity Committee in respective jurisdiction of local-bodies. This exercise is expected to be completed by 22 nd July 2020, pursuant to which the details to be forwarded to National Center for Sustainable Coastal Management (NCSCM), Chennai to review the Coastal Zone Management Plan (CZMP) and place before the public for public consultation by September 2020. The delay is due to prevailing COVID-19 pandemic.				The Director, Department of Environment.

ENCLOSURE - 1

Status-update / further-progress made w.r.t. Other Municipal Councils – (i) Margao, (ii) Ponda, (iii) Bicholim, (iv) Mormugao, (v) Mapusa, (vi) Sankhalim, (vii) Pernem (viii) Canacona, (ix) Quepem, (x) Sanguem and (xi) Curchorem-Cacora

Sr. No.	Urban Local Body/Model Cities	Present Status on treatment of MSW	Status Update/ further progress made w.r.t Notification
1	Margao Municipal Council	Wet Waste Method adopted is Aerobic Windrow Composting wherein 100% wet waste is treated. Dry waste Functional Dry waste sorting stations wherein Non recyclables are separated and sent for co-incineration.(100% treatment)	<u>Dry Waste (For Augmentation Purpose)</u> 1. New Shed of 160 Sq.m (Status: NIT Approved, to be tendered by ULB) (Estimated Cost: 25 Lakhs) Timeline : February 2021 2. Margao IDC-1000 sqmt (UNDP to set up MRF to cater to 10 TPD) Timeline : February 2021 <u>Wet Waste (For Augmentation Purpose)</u> 1. Proposed Bio-Methanation 5 TPD (SGPDA wholesale fish mkt) (Status: Administrative Approval Accorded) (Estimated Cost: 2.65 Cr.) Timeline : June 2021 2. Proposed Bio-Methanation 5 TPD (SGPDA wholesale fish mkt (Status: Placed for AA) (Estimated Cost: 2.65 Cr.) Timeline : June 2021 3. Proposed Bio-Methanation 5 TPD (SGPDA retail mkt) (Status: Placed for AA) (Estimated Cost: 2.65 Cr.) Timeline : June 2021
2	Ponda Municipal Council	Wet Waste Method adopted is Aerobic Windrow	<u>For Augmentation of Dry and wet waste Facility</u> 1. Shed expansion(Status: Work Order Issued)

		Composting wherein 100% wet waste is treated. In addition the ULB also supports the neighbouring VPs for their treatment of wet waste. Dry waste Functional Dry waste sorting stations wherein Non recyclables are separated and sent for co-incineration.(100% treatment)	(Estimated Cost: 17.47 Lakhs) Timeline : March 2021 2. 1.5 TPD incinerator (Status: work commenced) (Estimated Cost: 37.5 Lakhs) Timeline : July 2020 3. Bio-Methanation plant (10 TPD) (Status: Placed for Administrative Approval) (Estimated Cost: 5.3 Cr.) Timeline : October 2021 4. Proposed MRF Equipment (Status: work commenced) (Estimated Cost: 30 Lakhs) Timeline : August 2020 5. Proposed containerised Bio-methanation (0.5 TPD (Through GeM) (Estimated Cost: 30 Lakhs) Timeline : October 2020
3	Bicholim Municipal Council	Wet Waste Method adopted is Aerobic Windrow Composting wherein 100% wet waste is treated. Dry Waste Sorted through mechanized MRF and non-recyclables are sent for co-incineration.	<u>For Augmentation of Dry and wet waste Facility</u> 1. Shed Expansion.(Status: Work Completed & run through UNDP) 2. Bio-Methanation Plant 5 TPD with 5 year O&M (Status: Tendering Process Ongoing (Estimated Cost: 2.65 Cr) Timeline : June 2021
4	Mormugao Municipal Council	Wet Waste: Mormugao Municipal Council has an	<u>For Augmentation of Dry and wet waste Facility</u> 1. MRF Shed through CSR(Status: work

		operational Bio-Methanation plant of 5TPD (Organic waste) & 5 TPD (Sewerage) which is operated by BITS Pilani at Headland Sada(MSW site-Mormugao MC.) Dry waste: Functional Dry waste sorting stations wherein Non recyclables are separated and sent for co-incineration.(100% treatment)	commenced)(Estimated cost: 66.75 Lakhs) Timeline : January 2021 2. Windrow Shed for composting (2 units)(Status: work commenced)(Estimated cost: 1.3 Cr) Timeline : January 2021 3. Proposed Bio-methanation plant- 10 TPD (Status: Tendering process ongoing) (Estimated Cost: 5.3 Cr.) Timeline : June 2021 4. Proposed MRF equipment(Status: Work Commenced)(Estimated cost: 30 Lakhs) Timeline : August 2020
5	Mapusa Municipal Council	Wet Waste: Centralised Facility at Assagao Plateau(Aerobic Windrow Composting)& Decentralised Composting Units (07 Nos.) which caters to 100% treatment of wet waste. Dry Waste- Functional Dry waste sorting stations wherein Non recyclables are separated and sent for co-incineration.(100% treatment)	<u>For Augmentation of Dry and wet waste Facility</u> 1. New MRF Shed (Status: Work Commenced) (Estimated cost- 2.75 cr) Timeline : January 2021 2. Proposed MRF equipment (Status- Tendering process ongoing)(Estimated cost- 30 Lakhs) Timeline : August 2020 3. Bio Methanation plant(05 TPD) (Status- Tendering process ongoing)(Estimated cost- 2.65 cr) Timeline : June 2021
6	Sankhalim Municipal Council	Wet Waste Method adopted is Aerobic Windrow Composting wherein 100% wet waste is treated.	<u>For Augmentation of Dry and wet waste Facility</u> 1. New MRF Shed (Status- Work Commenced) (Estimated cost- 66.50 Lakhs) Timeline : January 2021

		Dry waste Functional Dry waste sorting stations wherein Non recyclables are separated and sent for co-incineration.(100% treatment)	2. Proposed Bio Methanation 5 TPD (Status- Tendering process ongoing) (Estimated cost- 1.06 cr) Timeline : October 2021 3. Proposed MRF equipment (Status- work commenced.) (Estimated cost- 30 Lakhs) Timeline : August 2020
7	Pernem Municipal Council	Wet Waste: Method adopted is Aerobic Windrow Composting wherein 100% wet waste is treated. Dry waste: Functional Dry waste sorting stations wherein Non recyclables are separated and sent for co-incineration.(100% treatment)	<u>For Augmentation of Dry waste</u> 1. Plastic to Fuel Plant- (Status- To be commissioned) (Estimated cost- 15 Cr.) Timeline : October 2020
8	Canacona Municipal Council	Wet Waste: Method adopted is Aerobic Windrow Composting & in addition the council has functional decentralized composting pits wherein 100% wet waste is treated. Dry waste- Functional Dry waste sorting stations wherein Non recyclables are separated and sent for co-incineration.(100% treatment)	<u>For Augmentation of wet waste</u> 1. Proposal of Bio-Methanation (5TPD) (Status- Tendering process ongoing) (Estimated cost- 2.65 cr.) Timeline : June 2021

9	Quepem Municipal Council	Wet Waste: Method adopted is Aerobic Windrow Composting wherein 100% wet waste is treated Dry waste: Functional Dry waste sorting stations wherein recyclables are sold to authorized recycler and Non recyclables are separated and sent for co-incineration.(100% treatment)	(No Immediate Action Required)
10	Sanguem Municipal Council	Wet Waste Method adopted is Aerobic Windrow Composting wherein 100% wet waste is treated. Dry waste: Functional Dry waste sorting stations wherein Non recyclables are separated and sent for co-incineration.(100% treatment)	(No Immediate Action Required)
11	Curchorem – Cacora Municipal Council	Wet Waste Presently CCMC is practising open composting and decentralised functional pits are available for composting Dry waste The dry waste is sent to Dry waste sorting station at IDC Kakoda for further segregation of recyclables & Non-recyclables. The Non-Recyclables are being baled and sent for co-incineration.(100% treatment)	For (Integrated Solid Waste Management Facility) ISWMF at Curchorem, the timeline for commencement is 24 months from issue of work order. Letter of Award was issued on 19/02/2020 and Concession agreement was executed on 20/02/2020 between GWMC and Concessionaire Once the Integrated Solid Waste Management Facility (ISWMF) at Cacora is functional, it shall handle the waste from Quepem, Sanguem, Margao & Canacona Municipal Jurisdiction

ENCLOSURE – 2

Central Pollution Control Board

(Ministry of Environment, Forest and Climate Change)

VVQM-I Division, Parivesh Bhawan, East Arjun Nagar, Delhi-110032

FORMAT' FOR SUBMISSION OF INFORMATION ON "MUNICIPAL SEWAGE, INDUSTRIAL EFFLUENT AND WASTE MANAGEMENT SCENARIO IN COASTAL AREAS" IN COMPLIANCE TO HON'BLE NGT ORDER DATED 03.12.2019 PASSED IN O.A. NO. 829/2019

Sr. No.	Contents											
1.	Basic Information											
	Name of the SPCB/PCC								Goa State Pollution Control Board			
	Name of the Contact Person/Nodal Officer and Designation								Dr. Shamila Monteiro, Member Secretary (M.S.)			
	Telephone Number (Office)								0832-240770, 2407701, 2407702, 2407703			
	Mobile Number								-----			
	E-mail Id								gspcb.goa@nic.in			
2.	Categorization of Coastal Areas in the State/UT (Please indicate location -wise relevant category indicated below)											
	Coastal area location											
	SW-I (Salt Pans, Shell Fishing, Mariculture and Ecologically Sensitive Zone)	-----		-----		-----		-----		-----		
	S.W-II (Bathing, Contact Water Sports and Commercial Fishing)	Tiracol Beach	Morjim Beach	Miramar Beach	Calangute Beach	Vagator Beach	Velso Beach	Colva Beach	Mobor Beach	Galgibag Beach	Baina Beach	
	SW-III (Industrial cooling, Recreation (non-contact) and Aesthetics)	-----		-----		-----		-----		-----		
	SW-IV (Harbour)	-----		-----		-----		-----		-----		
	SW-V (Navigation and Controlled Waste Disposal)	-----		-----		-----		-----		-----		
	3.	Major Cities/Towns located in Coastal Areas in the State/UT										
(i)	Major Cities/Towns in Coastal Areas								:	03		
(ii)	Major Drains outfall into Creeks/ Estuaries/ Sea Water and their total numbers								:	-----		
**4	Status of Sewage Generation, its Treatment and Disposal in Coastal Areas											
(i)	Total Sewage Generation in Coastal Areas in the State/UT (in MLD)									388 MLD		
(ii)	Total No. of STPs in Coastal Areas									3		
(a)	Total No. of STPs obtained Consent under Water Act, 1974									0 (Consent expired issued direction)		
(b)	Total No. of STPs not Obtained Consent under Water Act, 1974									3		
(iii)	Total Installed Capacity of STPs (in MLD)									20 MLD		
(iv)	Actual total sewage treated in STPs at present (in MLD)									20 MLD		
(v)	Gap in Sewage Treatment in coastal areas (in MLD)									As per Annexure-1		
(vi)	No. of STPs presently under construction to meet the gap in Sewage treatment in Coastal areas in the State/UT									2		
(vii)	Compliance Status of STPs									Total no. of STPs: - 1		
(a)	No of STPs in Coastal areas complying to discharge norms									1		

(viii)	Quantity of untreated sewage discharged into Coastal water (in MLD)		NIL		
(ix)	Quantity of treated Sewage discharged in to Coastal water (in MLD) •		20 MLD		
**5	Status of Industries in Coastal Areas				
(i)	Total No. of industries located in Coastal areas		6		
(ii)	Category wise No. of Industries		Red – 929, Orange – 4266, Green – 2205		
(a)	Total No. of 17 Category Highly Polluting Industries		6		
(b)	Total No. of Grossly Polluting Industries		NIL		
I	Other Water Polluting Industries if any		NIL		
**6	Status on Industrial Effluent Generation and CE1 Ps in Coastal Areas				
(i)	Total Industrial Effluent generated by Industries (in MLD)		--		
(ii)	Total No. of industries having Captive ETPs		209		
(iii)	Total No. of Captive ETPs operating by Industries Complying with discharge norms		207		
(iv)	Total treated effluent discharged in Coastal areas (in MLD)		3470 KLD		
(v)	No. of CETPs located in the Coastal Areas		NIL		
(a)	Location-wise CETPs with Installed Capacity (in MLD)		NIL		
(b)	No of industries having membership of CETPs		NIL		
(vi)	Gap in Industrial Effluent Treatment in coastal areas (in MLD)		NIL		
(vii)	Total untreated industrial effluents discharged in Coastal Water(in MLD)		NIL		
(viii)	Status on Installation of OCEMS by the industries				
(a)	No. of Industries installed OCEMS		10		
(b)	No. of Industries yet to install OCEMS		01 (Non Operational since 2012)		
**7	Waste Management Scenario in Coastal Areas				
Sl. No.	Type of waste	Quantity of Waste Generation (MTA)	No. of Treatment and disposal Facilities Existing- and Capacity	Gap in Treatment - and .Disposal of Waste	Total waste', disposed into Coastal water (MTA).
(i)	Hazardous Waste	28,483.72	NIL However, State is in process of setting up for common TSDF a) Secured Landfill - - 25,000 MT/Year b) Incinerator - 1.5 Tons/hr.	N.A	NIL
(ii)	Bio-Medical Waste	670.54	The biomedical waste generated in State of Goa is partly disposed in the incinerator facility of Goa Medical college and remaining is disposed by individual HCFs through their captive facility such as encapsulated pit, deep burial pit after autoclaving and disinfection as applicable	NIL	NIL
(iii)	Municipal Solid Waste	235.35 MT	Treated at Saligao Plant 150- TPD which is catering to 25 coastal panchayats from North Goa, CCP, Mapusa. Other panchayats / Municipalities have their own facilities of composting in home composting to single dwelling units.		
(iv)	Plastic	4498	The total plastic waste		

	Waste	Tons/year	collected is send to cement bailing for co-incineration to Karnataka		
(v)	E-Waste	60 MT/year	E-waste is collected and transported to other states for recycling		
(vi)	C & D waste	NIL	-----	----	-----
**8	Status of Critically Polluted Areas in Coastal areas				
(i)	Name of Critically Polluted areas located in coastal areas			:	Nil
(ii)	CEPI Scores (Area Wise)			:	_____
(iii)	Major Industrial Sectors			:	Steel, Mining, Hotels
9.	Coastal Water Quality of Coastal Waters (Latest data from Jan, 2019 to till date) & Summary				
(i)	No. of Water Quality Monitoring Stations		:	10 (NWMP)	
(a)	CPCB		:	10	
(b)	SPCB		:	Nil	
(ii)	Water Quality Status (with respect to BOD)		:	Water Quality Data of Coastal Areas from Jan 2018 to October 2019 is given below as <u>Annexure 2</u>	
10	Standards stipulated for STPs/CETPs		:	Yes (Please attach details on stipulated standards for STPs and CETPs) <u>Annexure 3</u>	
11	Action Taken Report on CPCB directions dated 15.12.2016		:	PL attach ATR as <u>Annexure-4</u>	

**** The above data / information compiled pertain to the entire-State, being a costal State. An attempt will be made to compile the “Coastal area-specific data” based on the (i) Coastal Zone Management Plan (CZMP) which is in-process of its finalisation by the Department of Environment as well as (ii) Department-specific inputs being sought from the line-departments (i.e. DMA / DoP / SIDCGL / PWD / WRD)**

ANNEXURE – 1

GAP ANALYSIS of STP's

STATUS of STP's and Sewerage System in State of GOA

- 1 Sewerage Coverage in Goa is only 16% and only 3 towns are having proper sewerage System with Sewage treatment Plant (STP) i.e. Panaji, Margao and Vasco.
- 2 The sewerage Schemes are in progress in Mapusa, Calangute Baga, Porvorim, Tallegao, Sanquelim, Ponda, Colva, Navelim and their suburbs.
- 3 The Master Plan is prepared for State of Goa Covering Major Municipal areas / Towns in the state of Goa.
- 4 At present Treated water from STP's is released in Nallah, River or nearby water body, However action plan is prepared to utilise this water for gardening, Construction activities and other non potable purposes. The water will be provided free of cost to the desirable consumers provided the consumer shall make the arrangement of conveyance by tankers on their own.
- 5 The treated sludge is being taken as manure by desirable consumer, however the quantity utilised is minimal.
- 6 The Performance of the STP's are monitored regularly by GSPCB as well as by the department and the results are satisfactory.

Sr No.	Taluka	City / Town / Village	Status of Sewerage System / network / Scheme	Name/Location of STP	Status of STP	Technology Used for Treatment	Year of Commissioning	Installed/ proposed Capacity (MLD)	Average Flow received during last month (MLD)	Mode of Disposal of Effluent	Quantity received (KLD)	Quantity of Sludge Generated in STP (TPD)	Mode of Sludge Disposal	Average quantity of seepage received (KLD)
1	Bardez	Porvorim	80 % network is completed	2 Nos. 0.75MLD STP's at Porvorim	Proposed	SBR Technology	-	15.00	-	-	NIL	-	NIL	NIL
		Porvorim	Commissioned	80 KLD at DTB, Porvorim	Operational	NTS	2015	0.08	0.05	Used for Gardening	NIL	NIL	NIL	NIL
		Mapusa	Network is completed and House connections are to be done	5.4 MLD at Karamkhuran, Mapusa	Under Commissioning	SBR Technology	-	5.40	-	Nallah/River	NIL	NIL	NIL	NIL
		Calangute - Baga	Network is completed and House connections are to be done	5.6 MLD at Calangute - Baga	Under Commissioning	SBR Technology	-	5.60	-	Nallah/River	NIL	NIL	NIL	NIL
2	Sattari	Sanquelim	Commissioning in progress	0.8 MLD STP at Sanquelim	Under Commissioning	SBR Technology	-	0.80	-	-	NIL	-	NIL	NIL
3	Tiswadi	Panaji	Commissioned	12.5 MLD STP at Tiswadi	Operational	SBR Technology	2005	12.50	4.50	St. Inez Creek & small Qty is used for gardening	-	0.38	Given as Manure (part)	1600
		Panaji	Talagao Network is to be commissioned	15.00 MLD STP at Tiswadi	Operational	SBR Technology	2017	15.00	4.00		-	0.40		
		Panaji	Commissioned	2.00 MLD STP at Patto	Under Construction	SBR Technology	-	2.00	-	-	NIL	NIL	NIL	NIL
		Bambolim	Commissioned	1.35 MLD STP at Goa	Operational	SBR Technology	2010	1.35	0.50	Nallah / Gardening (part)	NIL	0.05	NIL	NIL
		St. Cruz	Commissioned	25 KLD at Santa Cruz - Bardez	Operational	MBR+MBRR	2015	0.025	0.017	Nallah	NIL	NIL	NIL	NIL
4	Ponda	Darbhat	Commissioned	1 MLD STP at Darbhat- Ponda	Operational	SBR Technology	2017	1.00	0.35	River	NIL	0.03	NIL	NIL
		Quezda	80 % network is completed in Ponda & Karvelim & House Connections are to be done	15 MLD STP at Quezda - Ponda	Under Construction	SBR Technology	-	15.00	-	-	NIL	-	NIL	NIL
		Undir	60 % network is completed & House Connections are to be done	15 MLD STP at Undir- Bandora, Ponda	Proposed	SBR Technology	-	15.00	-	-	NIL	-	NIL	NIL
		Curti	90 % network is completed & House Connections are to be done	8 MLD STP at Curti- Ponda	Proposed	SBR Technology	-	8.00	-	-	NIL	-	NIL	NIL
		Ponda	Commissioned	100 KLD at Venzdavan Society - Ponda	Operational	NTS	2014	0.10	0.10	Nallah	NIL	NIL	NIL	NIL
5	Mormugao	Vasco	Commissioned	20MLD STP at Kalem Baita-Mormugao	Operational	SBR Technology	2018	20.00	4.5-5	Nallah/Sea	NIL	0.35-0.4	NIL	1000
		Sancaole	Commissioned	1 MLD STP at Sancaole- Cortalim	Operational	NTS	2017	1.00	0.90	Nallah	NIL	NIL	NIL	NIL
6	Salema	Shirvodem Margao	Network is completed in Margao and House Connections are in progress, Scheme is 80% Commissioned	20MLD STP at Shirvodem Navelim	Operational	SBR Technology	2017	20.00	7.00	Nallah/River	NIL	0.60	Given as Manure (part)	1250

GAP ANALYSIS of STP's

		Shirvodem Margao		6.75 MLD STP at Shirvodem Margao	Operational	SBR Technology	2017	6.75	2.00-3.00	Nallah/River	NIL	NIL	NIL	
		Colva	70 % Network is completed	7.5 MLD STP at Colva	Under Construction	SBR Technology	-	7.50	-	-	NIL	-	NIL	NIL

Managing Director - SIDCGL

ANNEXURE – 2

Annexure 2

9.	Coastal Water Quality of Coastal Waters (Latest data from Jan 2019 to till date) & Summary	
(i)	No. of Water Quality Monitoring Stations	: 10 (NWMP)
(a)	CPCB	: 10
(b)	SPCB	: Nil
(ii)	Water Quality Status (with respect to BOD)	: Water Quality Data of Coastal Areas from Jan 2018 to October 2019 is given below as Annexure I

		Annexure-I																	
Sr. no.	Locations	Parameter	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
1	TiracolBeach	BOD	2.0	BDL	2.0	2.3	2.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	MorjimBeach		2.0	BDL	2.0	BDL	BDL	2.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	Miramar Beach		3.0	BDL	BDL	BDL	2.0	BDL	2.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.2
4	CalanguteBeach		BDL	BDL	BDL	2.6	2.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.1
5	VagatorBeach		2.0	3.0	BDL	2.4	2.2	BDL	BDL	BDL	BDL	BDL	BDL	2.1	BDL	BDL	BDL	BDL	BDL
6	VelsaoBeach		2.2	2.0	BDL	2.6	BDL	2.1	BDL	BDL	2.7	2.0	2.0	2.9	BDL	2.0	2.8	2.3	BDL
7	ColvaBeach		BDL	BDL	2.0	2.4	BDL	2.4	BDL	BDL	2.3	BDL	BDL	BDL	BDL	BDL	-	-	2.2
8	MoorBeach		BDL	BDL	2.3	2.0	BDL	BDL	BDL	BDL	2.5	BDL	BDL	BDL	BDL	BDL	2.4	BDL	BDL
9	GalgibagBeach		3.0	BDL	BDL	BDL	2.8	BDL	2.2	BDL	BDL	BDL	BDL	2.7	2.9	BDL	BDL	BDL	BDL
10	BainaBeach		2.1	BDL	BDL	2.7	BDL	2.0	BDL	BDL	2.4	2.2	BDL	2.3	BDL	2.0	BDL	2.1	BDL

Note: 1. Collection of Beach water sampling was started from the month of June 2018 onwards.
2. Colva Beach samples for the month of August and September 2019 were not collected.

ANNEXURE – 3

Annexure - 3

Sewage treatment plant standards:

pH	Between	5.5 & 9.0
Suspended Solids	Not to exceed	100 mg/l
BOD, 3 days, 27° C	Not to exceed	30 mg/l
COD	Not to exceed	250 mg/l
Oil & Grease	Not to exceed	10mg/l

In view of the directions issued by the Central Pollution Control Board vide order File No. A19014/43/06 – Mon dated 21st April 2015, the unit is required to upgrade its sewage treatment plant within five years from the date of the directions issued, ie 21st April 2015, to achieve following standards and submit the plan of action regarding the same, within six months from the date of issue of this consent.

pH	Between	5.5 & 9.0
Suspended Solids	Not to exceed	Not more than 20
BOD, 3 days, 27° C	Not to exceed	10 mg/l
COD	Not to exceed	50 mg/l
Oil & Grease	Not to exceed	10mg/l
NH4-N	Not to exceed	5mg/l
N-total	Not to exceed	10mg/l
Fecal Coliform	Less than	100mg/l
Bio-assay test		90% survival of fish after 96hours in 100%effluent

ANNEXURE – 4

Annexure 4

The directions issued by the Central Pollution Control Board vide order File No. A19014/43/06 – Mon dated 21st April 2015, the unit is required to upgrade its sewage treatment plant within five years from the date of the directions issued, ie 21st April 2015, to achieve following standards and submit the plan of action regarding the same, within six months from the date of issue of this consent.

pH	Between	5.5 & 9.0
Suspended Solids	Not to exceed	Not more than 20
BOD, 3 days, 27° C	Not to exceed	10 mg/l
COD	Not to exceed	50 mg/l
Oil & Grease	Not to exceed	10mg/l
NH4-N	Not to exceed	5mg/l
N-total	Not to exceed	10mg/l
Fecal Coliform	Less than	100 MPN/100ml
Bio-assay test		90% survival of fish after 96hours in 100%effluent

The Goa State Pollution control Board issues fresh Consent to establish and Consent to operate with the new standards. The exisiting Sewage Treatment Plants are directed through Consent to comply the new standards. Board will start verification if new standards by 15th of March, 2020-

ENCLOSURE – 3

ACTION PLAN FOR RESTORATION OF POLLUTED WATER BODIES

An ideal restoration and management strategies consists of five major Phases.

1. Recognition Phase
2. Planning and Restoration Phase
3. Protection
4. Improvement Phase
5. Sustenance Phase

The state of Goa needs to abide with all the phases with commitment and dedication towards the strategy for it to completely achieve its management plans to free waterbodies for pollution and degradation.

Recognition phase: The list of all the water bodies (including but not limited to Lakes and Ponds) in the State of Goa was prepared by the Water Resource Department (WRD) and submitted to Goa State Pollution control board (GSPCB) **Annexure 1**. Based on the list the GSPCB have conducted a thorough annual evaluation of seven major water bodies of Goa in the year of 2019 (**Annexure 2**). Based on all the studied parameters of these seven waterbodies, two waterbodies namely, Salaulim and Anjunem were found to have all parameters within the permissible limits and Water quality meeting the prescribed Class C classification of the CPCB. All the other five waterbodies namely Carambolim, Mayem, Saipem, Raia and curtorim, were observed to have coliform levels exceeding the permissible limits. While Raia and curtorim lakes had BOD levels exceeding the limits once a year.

Planning & Restoration Phase: Based on the data Goa State Wetland Authority (GSWA) and Goa State Biodiversity Board (GSBB) have prepared a restoration action plan for the waterbodies which will be executed by GSWA, WRD and GSPCB. The action plan is as follows:

1. WRD is in process of identifying the remaining water bodies in the state of Goa (South Goa) and study all the essential parameters and submit them to GSPCB and GSWA for further necessary action.
2. GSPCB will identify the source of the pollution leading to increase in coliform and BOD levels beyond permissible limits for identified water bodies. They will also prepare detailed report of water analysis of all the required parameters.

3. Major sources of pollution will be identified and categorized. So as to a basic approach for implementing a restoration strategy can be accomplished.
4. Pre- treatment of sources of pollution: No substance to be released into the water body without prior treatment of the substance and the same has to be certified to be pre-treated.
5. WRD will prepare and furnish the details of hydrological description, Catchment description and geographic details of the waterbody with digital mapping of the area.
6. Based on the data provided by GSPCB and WRD, GSWA with the help of GSBB will prepare site specific remediation and/or restoration plans for each individual prioritized water body.
7. Based on the action plan WRD will take adequate measure along with the help of department of agriculture and environment department to ensure execution of the plan by engaging an expert if required. The restoration activity should be conducted by engaging local agency or a local self help groups.
8. Lake management committees shall be constituted to oversee the restoration and management at ground level.
9. After implementation of plan WRD will ensure protection and sustenance of the same.
10. Experts to be appointed in the field of water resources, hydro-geology, fisheries etc.
11. Essential requirement of Environment friendly technology to be strictly implemented for restoration.
 - Protection - The waterbody will be protected by involving stakeholders, beneficiaries, dependants, local bodies and concerned authorities
 - Improvement Phase – The quality of water and ambience of water body will be improved for future sustenance.
 - Sustenance Phase – this is important phase to ensure the continued monitoring, protection of catchments and downstream areas and ecological character of water body including restoration of its sources of water

The stakeholders will be engaged along with departments and agencies with defined roles and responsibilities

ENCLOSURE - 4

GOA STATE POLLUTION CONTROL BOARD गोंय राज्य प्रदूषण नियंत्रण मंडळ

(An ISO 9001:2015, ISO 14001:2015. OHSAS 18001:2007 Certified Board)

Phone Nos. : 0832-2407700
2407701, 2407702
2407703

Tel/Fax No. : 0832-2407700



Email Ids:
Chairman, GSPCB: chairman-gspcb.goa@nic.in
Member Secretary GSPCB: ms-gspcb.goa@nic.in
Environment Engineer, GSPCB: ee-gspcb.goa.nic.in
Scientist, GSPCB: scientist-gspcb.goa@nic.in
Office: goapcb@gspcb.in

No. 1/20/19-PCB/9752

Date : 01/10/2019

To,
Shri. Ajay Aggarwal,
AD & Div Head IPC-IV,
Central Pollution Control Board,
Parivesh Bhawan, East Arjun ,
Nagar, Delhi – 110032

Sub: In the matter of Hon'ble NGT Order dated 08/07/2019 in OA no. 46/2018
regarding dairy industries operating in the state/UTs
Ref: 1. No. CPCB/IPC-IV/NGT/Dairy/2019/4924 dated 08/08/2019.
2. No. CPCB/IPC-IV/NGT/Dairy/2019/6177 dated 09/09/2019

Sir,

With reference to subject cited above, I am forwarding you the duly filled in Inventory performa about dairies and Gaushalas operating in the State of Goa for your information and necessary action at your end.

Yours Faithfully,

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

Copy to,

- 1... The Director, Department of Environment, 1st Floor, 1st Floor, Pt. Deendayal Upadhyay Bhavan, Pundalik Nagar, Porvorim, Bardez-Goa. ...for information
2. Office file
3. Guard file

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Inventory Performa for Dairies and Gaushalas in the State/UT				
Sr. No.	Description	Urban Area	Peri-Urban	Rural Area
1	Total no. of dairies			
	a) Small scale (upto 20 animals)	152	4	3949
	b) Medium scale (upto 21 to 100 animals)	27	3	254
	c) Large scale (above 100 animals)	1	1	3
	d) Total	180	8	4206
2	Total no. of animals in			
	a) Small scale dairies	1044	47	29808
	b) Medium scale dairies	830	115	8337
	c) Large scale dairies	102	310	1091
	d) Total	1976	472	39236
3	Total amount of cow/buffalo dung produced (Ton per day) by			
	a) Small scale dairies	18.661	0.77	518.657
	b) Medium scale dairies	14.53	1.92	140.154
	c) Large scale dairies	3.5	4	77.29
	d) Total	36.691	6.69	736.101
4	Methods of disposal /utilization of dung by dairies (to be enclosed)			

5	Total no. of Gaushalas			
	a) Category-I (upto 100 animals)	0	0	1
	b) Category-II (above 100 animals)	1	0	4
	c) Total	1	0	5
6	Total no. of animals in			
	a) Category-I Gaushalas	0	0	42
	b) Category-II Gaushalas	457	0	674
	c) Total	457	0	716
7	Total amount of cow dung produced (Ton per day) by			
	a) Category-I Gaushalas	0	0	0.4
	b) Category-II Gaushalas	4.57	0	19.2
	c) Total	4.57	0	19.6
8	Methods of disposal /utilization of dung by Gaushalas (to be enclosed)			

Note : Information at Sr. No.4 and 8 is as per separate encloseasd sheet

Methods of disposal /utilization of dung by dairies (to be enclosed)
1. Used as manure for Agriculture
2. Used for biogas
3. Used for compost and wormicompost
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