

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA
ORIGINAL JURISDICTION
ORIGINAL APPLICATION NO.172 (EZ) of 2016

IN THE MATTER OF:

Sanjay Laloo ...Applicant

Versus

State of Meghalaya & Ors. ...Respondents

STATUS REPORT ON AFFIDAVIT ON BEHALF OF
RESPONDENT NO.1- STATE OF MEGHALAYA

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Filed by:

Dated 16.08.2021

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STATUS REPORT ON BEHALF OF RESPONDENT NO.1-
STATE OF MEGHALAYA

I, Sh. Manjunatha C., s/o Channabasappa T., aged about 43 yrs, the Secretary to the Government of Meghalaya, Forest and Environment Department having office at Secretariat, Shillong – 793001 do hereby solemnly affirm and state as under:

1. That at present I am working as the Secretary to the Government of Meghalaya, Forest and Environment Department and as such in my official capacity I am conversant with the facts and records of the case and competent and authorized to swear this affidavit on behalf of Respondent No.1- State of Meghalaya.

2. That the present status report is being filed in pursuance of the directions issued by this Hon'ble Tribunal vide its order dated 07.07.2021 in the captioned case to place on record the updated status of the efforts made by the State to keep rivers of the State of Meghalaya, including Myntdu pollution free.
 3. That it is most respectfully submitted that the captioned case was filed in the year 2016 and Respondent No.1 had filed its reply affidavit way back on 17.01.2018, however, the case could not be heard after 2019.
 4. That it is to bring to kind notice of this Hon'ble Tribunal that several other cases related to the issues raised in the present original application regarding prevention and control of pollution in rivers and cleaning of rivers have been taken up in the meanwhile by the Hon'ble Principal Bench of this Hon'ble Tribunal. The case numbers of the same are as follows:
 - a. O.A. No.593 of 2017 titled as *Paryavaran Suraksha Samiti v. Union of India & Ors.*
 - b. Suo-Moto O.A. No.606 of 2018 titled as *Compliance of Municipal Solid Waste Management Rules, 2016 (State of Arunachal Pradesh, Nagaland, Manipur, Mizoram and Meghalaya)*
 - c. Suo Moto O.A. No.673 of 2018 titled as *In re: News item published in "The Hindu" authored by Shri Jacob Koshy*
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*titled "More river stretches are now critically polluted:
CPCB*

5. That Suo-Moto O.A. No.606 of 2018 is still being monitored by the Principal Bench of this Hon'ble Tribunal and the State Government is filing its quarterly status report on compliance of directions issued by this Hon'ble Tribunal in that case, which shall be discussed later in this affidavit.
6. That later on O.A. No.593 of 2017 and O.A. No.673 of 2018 were clubbed and heard together by the Principal Bench of this Hon'ble Tribunal and have been disposed of vide a detailed judgment and order passed by the Principal Bench of this Hon'ble Tribunal dated 22.02.2021 which covers the issues raised in the present original application as well and the same may be disposed of in light of directions issued by the Principal Bench of this Hon'ble Tribunal in final judgment and order dated 22.02.2021 passed in O.A. No.673 of 2018.
7. That before pointing out the directions issued by the Hon'ble Principal Bench in aforesaid judgment dated 22.02.2021, it is necessary to summarize the developments that have taken place since the last date of hearing of the present original application in respect of cleaning of rivers in Meghalaya, including Myntdu.

8. That in September 2018, the Central Pollution Control Board (CPCB) analyzed the water quality data statistically and by monitoring locations and has declared 351 river stretches in the country as exceeding the water quality criteria and were identified as polluted. As per the level of pollution, and emergent need for restoration of water quality these river stretches, they were classified in 5 categories and river Myntdu was kept in category-V, i.e. mildly polluted. A copy of CPCB report published in September 2018 regarding restoration of polluted river stretches is annexed herewith and marked as **ANNEXURE R/1**.
9. That the aforesaid CPCB report was quoted and referred in a news article published in the Hindu newspaper and the Principal Bench took suo-moto cognizance of the findings of the CPCB and took over the implementation and monitoring of the efforts to make the river stretches pollution free. In its first order dated 20.09.2018 the Hon'ble Principal Bench of this Tribunal has directed the States and Pollution Control Board to immediately constitute 'River Rejuvenation Committees' as prescribed and prepare 'river rejuvenation plans' which are then to be approved by the CPCB and placed before the Hon'ble Tribunal for its approval. The Principal Bench took pains to even detail the content of the River Rejuvenation plans to be prepared by the committees so constituted.

The Principal Bench of this Hon'ble Tribunal passed following directions in order dated:

"50. In view of above, we consider it necessary to issue the following directions:

i) All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e BOD < 3 mg/L and FC < 500 MPN/100 ml) within six months from the date of finalisation of the action plans.

ii) The action plans may be prepared by four-member Committee comprising, **Director, Environment., Director, Urban Development., Director, Industries., Member Secretary, State Pollution Control Board of concerned State.** This Committee will also be the Monitoring Committee for execution of the action plan. The Committee may be called "River Rejuvenation Committee" (RRC). The RRC will function under the overall supervision and coordination of Principal Secretary, Environment of the concerned State/Union Territory.

iii) The action plan will include components like identification of polluting sources including functioning/status of STPs/ETPs/CETP and solid waste management and processing facilities, quantification and characterisation of solid waste, trade and sewage generated in the catchment area of polluted river stretch. The action plan will address issues relating to; ground water extraction, adopting good irrigation practices, protection and management of Flood Plain Zones (FPZ), rain water harvesting, ground water charging, maintaining minimum environmental flow of river and plantation on both sides of the river. Setting up of biodiversity parks on flood plains by removing encroachment shall also be considered as an important

component for river rejuvenation. The action plan should focus on proper interception and diversion of sewage carrying drains to the Sewage Treatment Plant (STP) and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water. The action plan should have speedy, definite or specific timelines for execution of steps. Provision may be made to pool the resources, utilizing funds from State budgets, local bodies, State Pollution Control Board/ Committee and out of Central Schemes.

iv) The Action Plans may be subjected to a random scrutiny by a task team of the CPCB.

v) The Chief Secretaries of the State and Administrators/ Advisors to Administrators of the Union Territories will be personally accountable for failure to formulate action plan, as directed.

vi) All States and Union Territories are required to send a copy of Action Plan to CPCB especially w.r.t Priority I & Priority II stretches for approval.

vii) The States and the Union Territories concern are directed to set up Special Environment Surveillance Task Force, comprising nominees of District Magistrate, Superintendent of Police, Regional Officer of State Pollution Control Board and one person to be nominated by District Judge in his capacity as Chairman of Legal Services Authority on the pattern of direction of this Tribunal dated 07.08.2018, in Original Application No. 138/2016 (TNHRC), "Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu Case).

viii) The Task Force will also ensure that no illegal mining takes place in river beds of such polluted stretches.

ix) The RRC will have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement

and failure may also be published on such website. The Committee may consider suitably rewarding those contributing significantly to the success of the project.

x) The RRCs will have the authority to recover the cost of rejuvenation in Polluter Pays Principle from those who may be responsible for the pollution, to the extent found necessary. In this regard, principle laid down by this Tribunal in order dated 13.07.2017 in O.A No. 200 of 2014, M.C Mehta Vs. U.O.I will apply. Voluntary donations, CSR contribution, voluntary services and private participation may be considered in consultation with the RRC."

A copy of order dated 20.09.2018 passed by the Principal Bench of this Hon'ble Tribunal in O.A. No.673 of 2018 is annexed herewith and marked as **ANNEXURE R/2.**

10. That in pursuance thereto the State of Meghalaya notified the constitution of River Rejuvenation Committee vide notification No.ENV.5/2018/44 dated 24.01.2019 with the Principal Chief Conservator of Forest & HoFF as its Chairperson and Director Urban Development, Director Industries and Member Secretary of Meghalaya State Pollution Control Board (MSPCB) as its members. In compliance with directions of this Hon'ble Tribunal terms of reference of the said committee were also published vide the same notification. A copy of notification issued by the Government of

Meghalaya bearing No. ENV.5/2018/44 dated 24.01.2019 is annexed herewith and marked as **ANNEXURE R/3**.

11. That the Principal Bench of this Hon'ble Tribunal has passed several orders in O.A. No.673 of 2018 while monitoring the progress of constitution of committees, preparation of action plans and their implementation and some notable and detailed orders are dated 19.12.2018, 18.04.2019, 04.09.2019, 18.09.2019, 11.10.2019, 29.10.2019, 06.12.2019, 12.06.2020, 26.09.2020, 06.02.2021 and finally 22.02.2021. The Respondent herein are just referring to these orders to show the anxious and careful consideration given to the issue in hand by the Principal Bench of this Hon'ble Tribunal seeking liberty to refer to these order during the course of hearing without annexing them herein which will otherwise make this affidavit very bulky.
12. That the River Rejuvenation Committee (RRC) has formulated the Rejuvenation plans for all seven river stretches identified by CPCB and submitted the same to CPCB for approval. There were several rounds of discussion between the RRC, CPCB, State Government including some meetings in Shillong and site-visits by the CPCB officials before the River Rejuvenation Plans formulated by the RRC were approved by CPCB and subsequently by the Principal Bench of this Hon'ble Tribunal and its progress was being monitored by this

Hon'ble Tribunal till 22.02.2021. A copy of River Rejuvenation Plan prepared by the RRC of Meghalaya and approved by the Principal Bench of this Hon'ble Tribunal in respect of river Myntdu is annexed herewith and marked as **ANNEXURE R/4**.

13. That the above position is clear from the chart downloaded from the website of CPCB showing State-wise Identified Polluted Rivers and the Status of Action Plans approved by CPCB in compliance to Hon'ble NGT Orders dated 20.09.2018, 19.12.2018, 08.04.2019, 6.12.2019 & 29.6.2020 in OA No. 673 of 2018 (as on 31.10.2020), which includes plans from the State of Meghalaya as well. Since Myntdu falls in category-V, the plan was required to be approved by the RRC itself before approval of this Hon'ble Tribunal. A copy of chart downloaded from CPCB website showing Status of Action Plans approved by CPCB dated NIL is annexed herewith and marked as **ANNEXURE R/5**.
14. That a report of CPCB on progress of implementation of the River Rejuvenation plans has also been published on the website of CPCB in June 2020 including the progress made in the State of Meghalaya by that date. A copy of relevant portion of the CPCB report dated 19.06.2020 is annexed herewith and marked as **ANNEXURE R/6**.
15. That further, in O.A. No.606 of 2018 titled as *Compliance of Municipal Solid Waste Management Rules, 2016 (State of Arunachal*

Pradesh, Nagaland, Manipur, Mizoram and Meghalaya the State is filing quarterly reports in relation to management and disposal of municipal solid waste. Copies of reports submitted by the State Government in O.A. No.606 of 2018 for third and fourth quarters of the year 2020 are annexed herewith and marked as **ANNEXURE R/7** and **ANNEXURE R/8** respectively.

16. That similarly, the State has filed status report on 16.02.2021 in O.A. No.593 of 2017 titled as *Paryavaran Suraksha Samiti v. Union of India & Ors.* on the status of ETPs in the Meghalaya and revocation of consent from units which are functioning without ETPs. The said O.A. No. 593 of 2017 which has been tagged with O.A. No.673 of 2018 by the Principal Bench has now been disposed of by the Hon'ble Principal Bench vide detailed judgment and order dated 22.02.2021. A copy of status report filed by the State Government in O.A. No.593 of 2021 on 16.02.2021 is annexed herewith and marked as **ANNEXURE R/9**.

17. That ultimately, vide detailed judgment and order dated 22.02.2021, the Principal Bench of this Hon'ble Tribunal was pleased to dispose of O.A. No.673 of 2018 along with O.A. No.593 of 2017 considering the same issues raised in the present original application. The Principal Bench was considering the rejuvenation of more than 350 polluted river stretches, including river Myntdu in

Meghalaya and detailed directions have been passed for preparation, implementation and monitoring of the River Rejuvenation plans prepared by the RRCs of each State constituted by this Hon'ble Tribunal. The progress of implementation of plans were being regularly monitored by the Principal Bench of this Hon'ble Tribunal till 22.02.2021 and thereafter the responsibility has been handed over the Department of Jal Shakti, Government of India to monitor the progress and take appropriate action, including seeking compensation from and prosecution of erring persons and those violating the directive of this Hon'ble Tribunal. Liberty has been granted to any aggrieved person to move the Principal Bench of this Hon'ble Tribunal for violation of directives of this Hon'ble Tribunal. A copy of final judgment and order passed by this Hon'ble Tribunal in O.A. No.673 of 2018 dated 22.02.2021 is annexed herewith and marked as **ANNEXURE R/10**.

18. That the monthly water quality index published on the website of MSPCB for the month of April 2021 shows the improvement of water quality in all polluted river stretches of Meghalaya including Myntdu. A copy of information relating to Water Quality Index of Identified Polluted River Stretches in Meghalaya for April 2021 downloaded from the website of

MSPCB is annexed herewith and marked as **ANNEXURE R/11**.

19. That in light of the submissions made in the above affidavit and those reflected from the documents annexed with the present affidavit, it is most respectfully submitted that the present original application may also be disposed of in view of directions as passed by the Principal Bench of this Hon'ble Tribunal in O.A. NO.673 OF 2018.

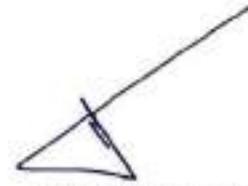
It is prayed accordingly.



DEPONENT

VERIFICATION

Verified at Shillong on this 16th day of August, 2021 that the content of the above affidavit is true and correct to the best of my knowledge and belief based on official records of Respondent No.1 and that nothing is false and nothing material has been concealed therefrom.



DEPONENT

RIVER STRETCHES FOR RESTORATION OF WATER QUALITY

(State wise and Priority wise)



Central Pollution Control Board

(Ministry of Environment, Forest & Climate Change, Govt. of India)

Parivesh Bhawan, East Arjun Nagar,

Delhi – 110032

SEPTEMBER 2018

1.0 IDENTIFICATION OF POLLUTED RIVER STRETCHES

The water quality data under national water quality monitoring programme for the year 2016 and 2017 is analysed statistically and monitoring locations exceeding the water quality criteria are identified as polluted.

The polluted locations in a continuous sequence are defined as polluted river stretches and categorised in five priority classes based on BOD concentration exceeding to BOD levels >30 mg/l, BOD between 20&30 mg/l, BOD between 10&20mg/l, BOD between 6-10 mg/l and BOD between 3& 6 mg/l.

Criteria for Priority 1

- ◆ Monitoring locations exceeding BOD 30 mg/l has been considered as it is the standard for discharge of treated sewage from sewage treatment plants and general standard for effluent discharge from effluent treatment plants to rivers/streams it appears without dilution.(River locations having water quality exceeding discharge standards for BOD to fresh water sources)
- ◆ All monitoring locations exceeding BOD concentration 6 mg/l on all occasions.
- ◆ Monitoring locations exceeding 3 mg/l BOD are not meeting desired water quality criteria but does not affect to Dissolved Oxygen level in water bodies. If BOD exceeds 6mg/l in water body, the Dissolved Oxygen is reduced below desired levels.
- ◆ The raw water having BOD levels upto 5 mg/l are does not form complex chemicals on chlorination for municipal water supplies. Hence the water bodies having BOD more than 6 mg/l are considered as polluted and identified for remedial action.
- ◆ List of identified stretches enclosed.

Criteria for Priority 2

- ◆ Monitoring locations having BOD between 20-30 mg/l.
- ◆ All monitoring locations exceeding BOD concentration 6 mg/l on all occasions.
- ◆ List of identified stretches enclosed.

Criteria for Priority 3

- ◆ Monitoring locations having BOD between 10-20 mg/l.
- ◆ All monitoring locations exceeding BOD concentration 6 mg/l on all occasions.
- ◆ List of identified stretches enclosed.

Criteria for Priority 4

- ◆ Monitoring locations having BOD between 6-10 mg/l.

- ◆ List of identified stretches enclosed.

Criteria for Priority 5

- ◆ Monitoring locations having BOD between 3-6 mg/l.
- ◆ The locations exceeding desired water quality of 3mg/l BOD.
- ◆ List of identified stretches enclosed.

OUTCOME:- The priority wise number of river stretches are given in Table 1.

Table1: Priority wise Number of Polluted River Stretches

Priority	Number of Stretches
Priority 1	45
Priority 2	16
Priority 3	43
Priority 4	72
Priority 5	175
Total	351

2.0 STATUS OF POLLUTED RIVER STRETCHES IN INDIA

The assessment of water quality for identification of Polluted River Stretches has found that there are 31 States and Union Territories having rivers and streams not meeting water quality criteria.

The state of Maharashtra has highest number of 53 polluted river stretches followed by the Assam, Madhya Pradesh, Kerala, Gujarat, Odisha, West Bengal, Karnataka Uttar Pradesh, Goa, Uttarakhand, Mizoram, Manipur, Jammu & Kashmir, Telangana, Meghalaya, Jharkhand, Himachal Pradesh, Tripura, Tamilnadu, Nagaland, Bihar, Chattisgarh, Andhra Pradesh, Sikkim, Punjab, Rajasthan, Puducherry, Haryana and Delhi. The state-wise numbers of Polluted river stretches are given in Table 2.

3.0 PRIORITY WISE POLLUTED RIVER STRETCHES IN STATES AND UNION TERRITORIES

The 351 river stretches on 323 rivers are prioritised based on BOD vales in five classes. Polluted River Stretches of Priority 1 and 2 are located in 20 States and Union Territories and the names of rivers alongwith stretches is provided in Table 3. The polluted stretches of Priority 3,4 and 5 are located in 28 States and Union Territories and the names of rivers alongwith stretches is listed in Table 4.

Table – 2: State-wise & Priority wise number of Polluted River Stretches

S.No.	STATE/UNION TERRITORY	PRIORITY					Grand Total
		I	II	III	IV	V	
1	ANDHRA PRADESH				2	3	5
2	ASSAM	3	1	4	3	33	44
3	BIHAR			1		5	6
4	CHHATTISGARH				4	1	5
5	DAMAN, DIU AND DADRA NAGAR HAVELI	1					1
6	DELHI	1					1
7	GOA			1	2	8	11
8	GUJARAT	5	1	2	6	6	20
9	HARYANA	2					2
10	HIMACHAL PRADESH	1	1	1		4	7
11	JAMMU & KASHMIR		1	2	2	4	9
12	JHARKHAND				3	4	7
13	KARNATAKA			4	7	6	17
14	KERALA	1			5	15	21
15	MADHYA PRADESH	3	1	1	3	14	22
16	MAHARASHTRA	9	6	14	10	14	53
17	MANIPUR		1			8	9
18	MEGHALAYA	2			3	2	7
19	MIZORAM			1	3	5	9
20	NAGALAND	1		1	2	2	6
21	ODISHA	1		3	2	13	19
22	PUDUCHERRY				1	1	2
23	PUNJAB	2			1	1	4
24	RAJASTHAN			1		1	2
25	SIKKIM					4	4
26	TAMIL NADU	4			1	1	6
27	TELANGANA	1	2	2	2	1	8
28	TRIPURA					6	6
29	UTTAR PRADESH	4		1	2	5	12
30	UTTARAKHAND	3	1	1	4		9
31	WEST BENGAL	1	1	3	4	8	17
	Grand Total	45	16	43	72	175	351

Tab3 3: Polluted River Stretches- Priority I & Priority II				
STATE	RIVER NAME	RIVER STRETCH	BOD RANGE/ MAX VALUE (mg/l)	PRIORITY
ASSAM	BHARALU	GUWAHATI TO CHILARAI NAGAR	52.0	I
	BORSOLA	Along SARABBHATTI, GUWAHATI	34.0	I
	SILSAKO	Along chachal, Guwahati	34.0	I
	SORUSOLA	Along Paltan Bazar, Guwahati	30.0	II
DAMAN, DIU AND DADRA NAGAR HAVELI	DAMANGANG A	SILVASSA TO DAMAN JETTY, MOTI DAMAN	10 - 80	I
DELHI	YAMUNA	WAZIRABAD TO ASGARPUR	9 - 80	I
GUJARAT	AMLAKHADI	PUNGUM TO BHARUCH	40 - 45	I
	BHADAR	JETPUR VILLAGE TO SARAN VILLAGE	426.0	I
	BHOGAVO	SURENDRANAGAR TO NANA KERALA	67.0	I
	KHARI	LALI VILLAGE TO KASHIPURA	235.0	I
	SABARMATI	KHEROJ TO VAUTHA	4 - 147	I
	VISHWAMITRI	Vadodara to Asod	6 - 21	II
HARYANA	GHAGGAR	RORKI TO SIRSA	6 - 482	I
	YAMUNA	PANIPAT TO SONEPAT	4 - 55	I
HIMACHAL PRADESH	SUKHANA	SUKHNA TO PARWANOO	54.0	I
	MARKANDA	KALA AMB TO NARAYANPUR	3.2 - 24	II
JAMMU & KASHMIR	DEVIKA	GURU RAVIDAS TEMPLE TO NAINSU	3.4-22	II
KERALA	KARAMANA	MALEKKDU TO THIRUVALLAM	56.0	I
MADHYA PRADESH	CHAMBAL	NAGDA TO RAMPURA	12 - 80	I
	KHAN	KABIT KHEDI TO KHAJRANA	30.8 - 80	I
	KSHIPRA	SIDDHAWAT TO TRIVENISANGAM	4 - 38	I
	BETWA	MANDIDEEP TO VIDISHA	3.3 - 20.2	II
MAHARASH TRA	GODAVARI	SOMESHWAR TEMPLE TO RAHED	5.0-88	I
	KALU	Along ATALE VILLAGE	75.0	I
	KUNDALIKA	SALAV TO ROHA	3.8-65	I
	MITHI	POWAI TO DHARAVI	250.0	I
	MORNA	AKOLA TO TAKALIJALAM	52.8	I
	MULA	BOPODI TO AUNDH GAON	33-35	I
	MUTHA	SHIVAJI NAGAR TO KHADAKWASLA DAM	5.0-42.5	I
	NIRA	SANGAVI TO SHINDEWADI	12.5-35	I
	VEL	NHAVARE TO SHIKARPUR	30.2	I
	BHIMA	VITHALWADI TO TAKLI	8.0-22.0	II
	INDRAYANI	MOSHIGAON TO ALANDIGAON	12.5-22	II
	MULA-MUTHA	THEUR TO MUNDHWA BRIDGE	14-22	II
	PAWANA	DAPODI TO RAVET	15.5-24	II
	WAINGANGA	TUMSA TO ASHTI	10.4-22.4	II
WARDHA	GHUGHUS TO RAJURA	7.0-22.0	II	
MANIPUR	NAMBUL	SINGDA DAM TO BISHNUPUR	3.6-23.7	II
MEGHALAY A	UMKHRAH	MAWLAI TO SHILLONG	30-90.2	I
	UMSHYRPI	UMSHYRPI BRIDGE TO DHANKETI	38.5-95.0	I
NAGALAND	DHANSIRI	CHECK GATE TO DIPHU BDG	7.0-50.0	I

ODISHA	GANGUA	D/s Bhuwaneshwar	14-39	I
PUNJAB	GHAGGAR	SARDULGARH TO MUBARAKPUR	9.0-380	I
	SATLUJ	RUPNAGAR TO HARIKA BRIDGE	3.8-108	I
TAMIL NADU	CAUVERY	METTUR TO MAYILADUTHURAI	3.3-32	I
	SARABANGA	THATHAYAMPATTI TO T.KONAGAPADI	78.0	I
	THIRUMANIM UTHAR	SALEM TO PAPPARAPATTI	190.0	I
	VASISTA	MANIVILUNDHAN TO THIYAGANUR	675.0	I
TELANGANA	MUSI	HYDRABAD TO NALGONDA	4.0-60.0	I
	MANJEERA	GOWDICHARLA TO NAKKAVAGU	5.0-26	II
	NAKKAVAGU	GANDILACHAPET TO SEVALAL THANDA	26.0	II
UTTAR PRADESH	HINDON	SAHARANPUR TO GHAZIABAD	48-120	I
	KALINADI	MUZAFFAR NAGARTO GULAOTHI TOWN	8 - 78	I
	VARUNA	Rameshwar to conf with Ganga, Varanasi	4.5-45.2	I
	YAMUNA	ASGARPUR TO ETAWAH SHAHPUR TO ALLAHABAD (BALUA GHAT)	12.0-55	I
UTTARAKHAND	BHELA	KASHIPUR TO RAJPURA ATNDA	6.0-76.0	I
	DHELA	KASHIPUR TO GARHUWALA, THAKURDWARA	12 - 80	I
	SUSWA	MOTROWALA TO RAIWALA	37.0	I
	KICHHA	Along Kichha	28.0	II
WEST BENGAL	VINDHADHAR I	HAROA BRIDGE TO MALANCHA BURNING GHAT	26.7-45.0	I
	MAHANANDA	SILIGURI TO BINAGURI	6.5-25	II

Table 4: Polluted River Stretches- Priority III, IV & V

STATE	RIVER NAME	RIVER STRETCH	BOD RANGE/ MAX VALUE (mg/l)	PRIORITY
ANDHRA PRADESH	KUNDU	NANDYAL TO MADDURU	7.7	IV
	TUNGABHADRA	MANTHRALAYAM TO BAVAPURAM	3.2 - 6.7	IV
	GODAVARI	RAYANPETA TO RAJAHMUNDRI	3.1 - 3.4	V
	KRISHNA	AMRAVATHI TO HAMSALA DEEVI	3.2	V
	NAGAVALI	Along Thotapalli	3.2	V
ASSAM	DEEPAR BILL	DEEPAR BILL TO GUWAHATI	10.6	III
	DIGBOI	LAKHIPATHE, RESERVE FOREST	14.0	III
	KAMALPUR	Along Kamalpur	18.6	III
	PANCHNAI	ORANG TO BORSALA	11.4	III
	BRAHAMPUTRA	KHERGHAT TO DHUBRI	3.2 - 6.4	IV
	KHARSANG	ASSAM-ARUNANCHAL BORDER TO LONGTOM-1	7.2	IV
	PAGLDIA	NALBARI TO KHUDRA SANKARA	8.2	IV
	BARAK	PANCHGRAM TO SILCHAR	3.5 - 4.2	V
BAROI	DOWNSTREAM OF BRIDGE	3.6	V	

	AT NH-52			
	BEGA	Along Mangaldoi	4.5	V
	BEKI	BARPETA ROAD TO JYOTI GAON	3.5	V
	BHOGDOI	JORHAT TO DULIAGAON	4.5	V
	BOGINADI	LAKHIMPUR TO DIBRUGARH	4.2	V
	BORBEEL	Along Ramnagar, Digboi	3.8	V
	BORDOIBAM BEELMUKH	Along BEELMUKH BIRD SANCTUARY, DHEMAJI	5.2	V
	BURHIDIHING	MARGHERITA TO TINSUKIA	4 - 4.6	V
	DHANSIRI	GOLAGHAT TO KATHKETIA	4.3 - 5.6	V
	DIKHOW	NAGINI MORA to Dikhomukh	3.2	V
	DIKRONG	Along BANDARDEWA	3.2	V
	DIPLAI	Along SILGARA, KOKRAJHAR	3.2	V
	DISANG	DILLIGHAT TO GUNDAMGHAT	4.2	V
	GABHARU	Along TUMIUKI, SONITPUR	5.4	V
	HOLUDUNGA	Along SOMARAJAN, DHEMAJI	4.8	V
	Jai Bharali	Along SONITPUR	3.1	V
	JHANJI	JORHAT TO CHAWDANG	3.8	V
	KALONG	NAGAON TO MORI KALONG	3.7 - 4.3	V
	KAPILI	NAGAON TO KAMPUR TOWN	5.5	V
	KILLING	Along Moregaon	5.8	V
	KOHORA	KOHORA TO MOHPARA	4.4	V
	KULSI	Along Chaygaon	3.6	V
	MALINI	Along Ramnagar, Silchar	5.3	V
	MORA BHARALI	Along Tezpur	5.2	V
	PARASHALI	Along DEMORIA	4.0	V
	PUTHIMARI	Along PUTHIMARI	4.8	V
	RANGA	Along Geramukh	3.8	V
	SAMAGURI	Along Samaguri, nagaon	4.0	V
	SANKOSH	Along Golakganj	3.3	V
	SON	Along Deodhar, KARIMGANJ	4.3	V
	SONAI	SONAI TO DAKSHIN MOHANPUR	4.4	V
	TENGA PUKHURI	Along Kukurachowa Gaon	4.0	V
BIHAR	SIRSIA	RUXOL TO KOIREA TOLA (RAXAUL)	20.0	III
	FARMAR	Along JOGBANI	3.6	V
	GANGA	BUXAR TO BHAGALPUR	3.2 - 4.2	V
	POONPUN	Gaurichak to Fatuha	3.3	V
	RAM REKHA	HARINAGAR TO RAMNAGAR	5.0	V
	SIKRAHNA	Along Narkatiaganj	4.5	V
CHHATTISGARH	HASDEO	KORBA TO URGA	3.6 - 7	IV
	KHAROON	BUNDRI TO RAIPUR	3.3 - 7.2	IV
	MAHANADI	ARRANG TO SIHAWA	3.3 - 8	IV
	SEONATH	SHIMGA TO BEMTA	3.4 - 8.4	IV
	KELO	RAIGARH TO KANAKTORA	3.8	V
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
GUJARAT	DHADAR	KHOTDA TO CHANDPURA	16.0	III
	TRIVENI	TRIVENI SANGAM TO BADALPARA	11.0	III
	AMRAVATI (TRIBUTARY OF NARMADA)	Along Dadhal, Ankaleshwar	10.0	IV
	DAMANGANGA	KACHIGAON TO VAPI	8.0	IV
	KOLAK	KIKARLA TO SALVAV	8.0	IV
	MAHI	SEVALIA TO BAHADARPUR	4.5 - 7	IV
	SHEDHI	DHAMOD TO KHEDA	9.0	IV
	TAPI	KHADOD (BARDOLI) TO SURAT	8.0	IV
	ANAS	DAHOD TO FATEHPURA	5.0	V
	BALEHWAR KHADI	PANDESARA TO KAPLETHA	4.0	V
	KIM	SAHOL BRIDGE TO HANSOL	3.1	V
	MESHWA	Along Shamlaji	4.0	V
	MINDHOLA	Along Sachin	6.0	V
	NARMADA	GARUDESHWAR TO BHARUCH	5.0	V
HIMACHAL PRADESH	SIRSA	NALAGARH TO SOLAN	8 - 16	III
	ASHWANI	Along YASHWANT NAGAR	3.2	V
	BEAS	KULLU TO DEHRAGOPIPUR	6.0	V
	GIRI	Along Sainj	4.4 - 6	V
	PABBAR	Along Rohru	3.6 - 4	V
JAMMU & KASHMIR	BANGANGA	PONY SHED TO BATHING GHAT	6 - 14	III
	CHUNT KOL	MAULANA AZAD BRIDGE TO KANIKADAL	14.5	III
	GAWKADAL	GAWKADAL BRIDGE TO NOHATA	9.0	IV
	TAWI	SURAJNAGAR TO BELICHARANA	5 - 8.3	IV
	BASANTER	SAMBA TO CHAKMANGARAKWAL	5 - 6	V
	CHENAB	JAL PATAN TO PARGAWAL	5.0	V
	JHELAM	CHATTABAL WEIR TO ANANTNAG	3.2 - 5.5	V
	SINDH	ALONG DUDERHAMA	3.7	V
JHARKHAND	GARGA	Along Talmuchu	6.2	IV
	SANKH	KONGSERABASAR TO BOLBA	8.4	IV
	SUBARNAREKHA	HATIA DAM TO JAMSHEDPUR	3.4 - 10	IV

	DAMODAR	PHUSRO ROAD BDG TO TURIO	3.9	V
	JUMAR	KANKE DAM TO KADAL	3.3	V
	KONAR	Along Tilaya and konar	3.4 - 3.6	V
	NALKARI	Along Patratu	3.8	V
KARNATAKA	ARKAVATHI	HALLI RESERVOIR TO KANAKAPURA TOWN	14.0	III
	LAKSHMANTIRTHA	KATTEMALAVADI TO HUNSUR	7.1 - 12.4	III
	MALPRBHA	KHANAPUR TO DHARWAD	7.3 - 17.3	III
	TUNGABHADRA	HARIHAR TO KORLAHALLI	4 - 19	III
	BHADRA	HOLEHUNNUR TO BHADRAVATHI	5.5 - 7.8	IV
	CAUVERY	RANGANATHITTU TO SATHYAMANGALAM BRIDGE	3.1 - 6.7	IV
	KABINI	NANJANAGUD TO HEJJIGE	3.6 - 6.5	IV
	KAGINA	SHAHABAD TO HONGUNTA	4.6 - 7.4	IV
	KALI	HASAN MAAD (WEST COAST PAPER MILL) TO BOMMANAHALLI RESERVOIR	6.5	IV
	KRISHNA	YADURWADI TO TINTINI BRIDGE	3.1 - 6.2	IV
	SHIMSHA	YEDIYAR TO HALAGUR	4 - 10	IV
	ASANGI NALLA	Along Asangi	4.4	V
	BHIMA	GHANAPUR TO YADGIR	3.3 - 6	V
	KUMARDHARA	along Uppinangadi	4.0	V
	NETRAVATHI	Uppinangadi to Mangaluru	4.0	V
	TUNGA	SHIVAMOGA TO KUDLI	4.3	V
YAGACHI	Along Yagachi, Hassan	4.0	V	
KERALA	BHARATHAPUZHA	Along Patambi	6.6	IV
	KADAMBAYAR	MANCKAKADAVU TO BRAHMAPURAM	5.9 - 6.4	IV
	KEECHERI	PULIYANNOR TO KECHERY	6.4	IV
	MANIMALA	KALLOOPARA TO THONDRA	6.3 - 6.4	IV
	PAMBA	Mannar to THAKAZHY	3.3 - 7.8	IV
	BHAVANI	Along Elachivazhy	5.4	V
	CHITRAPUZHA	IRUMPANAM TO KARINGACHIRA	4.6	V
	KADALUNDY	along HAJIRAPPALLY/ Hajiyarpalli	3.6	V
	KALLAI	THEKEPURAM TO ARAKKINAR	4.5	V
	KARUVANNUR	Along KARUVANNUR	3.5	V
	KAVVAI	Along Kavvai	3.9	V
	KUPPAM	THALIPARAMBA TO VELICHANGOOL	3.1 - 3.8	V
	KUTTIYADY	Along Kuttியady	5.0	V
	MOGRAL	Along Mogral	3.1	V
	PERIYAR	ALWAYE-ELOOR TO KALAMASSERY	3.2 - 5.1	V
	PERUVAMBA	Along PERUVAMBA	3.9	V
PUZHACKAL	OLARIKKARA TO PUZHACKAL	3.8	V	

	RAMAPURAM	Along Ramapuram	3.3	V
	THIRUR	NADUVILANGADI TO THALAKKADATHUR	3.6	V
	UPPALA	POYYA TO MULINJA	3.2	V
MADHYA PRADESH	SONE	Along amlai	12.4	III
	GOHAD	GOHAD DAM TO GORMI	6.3	IV
	KOLAR	SURAJNAGAR TO SHIRDIPURAM	7.5	IV
	TAPI	NEPANAGAR TO BURHANPUR	4.6 - 8	IV
	BICHIA	SILPARI TO GADHAWA	3.5	V
	CHAMLA	Along BADNAGAR, UJJAIN	4.0	V
	CHOUPAN	Along Vijaipur	3.4	V
	KALISOT	MANDIDEEP TO SAMARDHA VILLAGE	4.1	V
	KANHAN	Kanhan in Chindwara district boundry	3.2	V
	KATNI	Along Katni	3.5	V
	KUNDA	KHARGONE TO KHEDI KHURD	4.0	V
	MALEI	JAORA TO BARAUDA	3.5	V
	MANDAKINI (MP)	Along CHITRAKUT	5.8	V
	NEWAJ	Along Shujalpur	4.0	V
	PARVATI	BATAWADA TO PILUKHEDI	3.2	V
	SIMRAR	along katni	3.9	V
	TONS	CHAKGHAT TO CHAPPAR	3.5	V
	WAINGANGA	CHINDWARA TO BALAGHAT	3.2	V
MAHARASHTRA	GHOD	ANNAPUR TO SHISHUR	10.2	III
	KANHAN	BHANDARA TO NAGPUR	9.8-16.4	III
	KOLAR (MAH)	Along Koradi	18.0	III
	KRISHNA	SHINDI TO KURUNDWAD	3.4-14.0	III
	MOR	JALGAON TO AMODA	16.0	III
	PATALGANGA	KHADEPADA TO KOPOLI	5.0-18	III
	PEDHI	NARAYANPUR TO BHATKULI	20.0	III
	PENGANGA	MEHKAR TO UMARKHED	8.6-20	III
	PURNA	DHUPESHWAR TO ASEGAON	10.2-18.4	III
	TAPI	RAVER TO SHAHADA	8.0-12.0	III
	URMODI	DHANGARWADI TO NAGTHANE	12.4	III
	VENNA	MAHABALESHWAR TO MAHULI	7.2-12.5	III
	WAGHUR	SUNASGAON TO SAKEGAON	18.0	III
	WENA	KAWADGHAT TO HINDANGHAT	10.2-13.8	III
	BINDUSAR	SWARAJ NAGAR TO SNEHNAGAR	8.0	IV
	BORI	Along AMALNER	9.2	IV
	CHANDRABHAGA	PANDHARPUR TO SHEGAON DHUMALA	7.5-9.5	IV
	DARNA	IGATPURI TO SANSARI	5.0-9.0	IV
GIRNA	MALEGAON TO JALGAON	6.6-9.0	IV	
HIWARA	PACHORA TO NIMBORA	8.6	IV	

	KOYNA	KARAD TO PAPDARDE	8.6	IV
	PEHLAR	PELHAR DAM TO GOLANI NAKA	7.0	IV
	SINA	SOLAPUR TO BANKALAGI	8.5	IV
	TITUR	Along CHALISGAON, JALGAON	7.8	IV
	AMBA	BENSE TO ROHA	4.8	V
	BHATSA	SHAHAPUR TO BHADANE	4.8-6.0	V
	GOMAI	LONKHEDA TO SHAHDA	6.0	V
	KAN	KAVATHE TO SAKARI	5.0	V
	MANJEERA	LATUR TO NANDED BRIDGE	5.0	V
	PANCHGANGA	SHIROL TO KOLHAPUR	3.2-5.8	V
	PANZARA	VARKHEDE TO DHULE	6.0	V
	RANGAVALI	TINTEMBA TO NAVAPUR	5.0	V
	SAVITRI	DADLI TO MUTHAVALI	3.2-5.0	V
	SURYA	DHAMNI DAM TO PALGHAR	4.4-5.0	V
	TANSA	Along Thane	6.0	V
	ULHAS	KALYAN TO BADLAPUR	4.0-5.0	V
	VAITARNA	GANDHRE TO SARASHI	4.0	V
	VASHISTI	KHERDI TO DALVATNE	3.2-3.4	V
MANIPUR	IMPHAL	KANGLA MOAT TO SAMUROU	3.4-6.4	V
	IRIL	KANGLA SIPHAI TO UKHRUL	3.2	V
	KHUGA	KHUGA LAKE TO CHURACHANDPUR	3.1-3.6	V
	KHUJAIROK	MOREH TO MAOJANG	4.3	V
	LOKCHAO	BISHNUPUR TO LOKTAK LAKE	4.5	V
	MANIPUR	SEKMAIJAN TO THOUBAL	3.6-4.3	V
	THOUBAL	SHONG KONG TO PHADOM	3.5	V
	WANGJING	WANGJING TO HEIROK	4.1-4.3	V
MEGHALAYA	KYRHUKHLA	SUTNGA TO KHLIERIAT	10.0	IV
	NONBAH	NANGSTOIN TO WAHRIAT	6.0-7.5	IV
	UMTREW	BYRNIHAT TO MORANG DALA	6.2-8.0	IV
	LUKHA	MYNDIHATI TO SHYMPLONG	6.0	V
	MYNTDU	JOWAI TO PAMHADEM	5.2	V
MIZORAM	TIAU	Along CHAMPHAI	11.3	III
	TLAWNG	Along Zobawk, Sairang to Bairabi	3.1-6.7	IV
	TUIPUI	Along CHAMPHAI	8.2	IV
	TUIVAWL	Along KEIFANG	6.8	IV
	CHITE	Along ARMED VENG	3.7	V
	MAT	Along Serchhip	5.5	V
	SAIKAH	Along LAWNGTLAI	4.4	V
	TUIKUAL	Along SERCHHIP	6.0	V
	TUIRIAL	Along TUIRIAL, Aizwal	3.4-4.6	V
NAGALAND	DZUNA	Along Kohima	6.0-13.0	III
	CHATHE	MEDZIPHEMA TO, DIMAPUR	7.0	IV
	DZU	KOHIMA TO DZUKO VALLEY	7.0	IV
	DZUCHA	Along Kohima	4.0	V

	SANO	Along Kohima	4.0	V
ODISHA	GURADIH NALLAH	Along Rourkela	11.3	III
	KATHAJODI	CUTTACK TO URALI	5.8-11.2	III
	NANDIRAJHOR	D/s Talcher	2.7 - 13	III
	DAYA	BHUBANESWAR TO BARAGARH	4.0-7.3	IV
	KUAKHAI	URALI TO BHUBANESWAR	6.7-7.7	IV
	BANGURU NALLAH	Along Talcher Rengali	3.2	V
	BHEDEN	Along Bheden	3.6	V
	BRAHAMANI	ROURKELA TO BIRITOL	5.8-6.0	V
	BUDHABALNAGA	MAHULIA TO BARIPADA	3.5	V
	KUSUMI	Along Angul Talcher	3.2	V
	MAHANADI	SAMBALPUR TO PARADEEP	3.6	V
	MANGALA	Along Puri	5.7	V
	NAGAVALLI	JAYKAYPUR TO RAYAGADA	3.5	V
	NUNA	Along Bijipur, Puri	3.1	V
	RATNACHIRA	Along Bhubhneswar, Puri	3.3	V
	RUSHIKULYA	PRATAPPUR TO GANJAM	3.4	V
	SABULIA	Along JAGANNATHPATNA, Rambha	5.0	V
SERUA	KHANDAETA TO SANKHATRASA	4.8	V	
PUDUCHERRY	ARASALAR	Along KARAİKAL	7.0	IV
	CHUNNAMBAR	Along Ariyankuppam	6.0	V
PUNJAB	KALI BEIN	Sultanpur lodhi to conf to Beas	9.0	IV
	BEAS	Along MUKERIAN	3.8	V
RAJASTHAN	BANAS	ALONG BISALPUR DAM, SWAROOPGANJ, NEWTA DAM	13.2	III
	CHAMBAL	SAWAIMADHOPUR TO KOTA	3.2-4.8	V
SIKKIM	MANEY KHOLA	ADAMPOOL TO BURTUKK	3.2-4.5	V
	RANGIT	DAM SITE (NHPC) TO TREVENI	3.2-3.8	V
	RANICHU	NAMLI TO SINGTAM	3.8-4.0	V
	TEESTA	MELLI TO CHUNGTHANG	4.0-4.3	V
TAMIL NADU	BHAVANI	SIRUMUGAI TO KALINGARAYAN	3.3-6.6	IV
	TAMBIRAPANI	PAPPANKULAM TO ARUMUGANERI	3.1-4.0	V
TELANGANA	KARAKAVAGU	Along Palwancha	18.0	III
	MANER	WARANGAL TO SOMNAPALLI	6-20.0	III
	GODAVARI	BASAR TO KHAMMAM	4.0-9.0	IV
	KINNERSANI	Along Palwancha	10.0	IV
	KRISHNA	THANGADIGI TO WADAPALLY	5.0-6.0	V
TRIPURA	BURIGAON	Along BISHALGARH	3.9	V
	GUMTI	TELKAJILA TO AMARPUR	3.9	V
	HAORA	AGARTALA TO BISHRAMGANJ	3.2-4.0	V
	JURI	Along DHARMANAGAR	4.9	V

	KHOWAI	Along TELIAMURA	3.3	V
	MANU	Along KAILASHAHAR	3.5-3.6	V
UTTAR PRADESH	GOMTI	SITAPUR TO VARANASI	3.1-18.0	III
	GANGA	KANNAUJ TO VARANASI	3.5-8.8	IV
	RAMGANGA	MURADABAD TO KANNAUJ	6.6	IV
	BETWA	HAMIRPUR TO WAGPURA	3.5-4.2	V
	GHAGHARA	BARHALGANJ TO DEORIA	4.0-4.5	V
	RAPTI	DOMINGARH TO RAJGHAT	4.7-5.9	V
	SAI	UNNAO TO JAUNPUR	4.0-4.5	V
	SARYU	AYODHYA TO ELAFATGANJ	4.3	V
UTTARAKHAND	KALYANI	D/s Pant Nagar	16.0	III
	GANGA	HARIDWAR TO SULTANPUR	6.6	IV
	KOSI	SULTANPUR TO PATTIKALAN	6.4	IV
	NANDOUR	Along Sitarganj	5.6-8.0	IV
	PILKHAR	in the vicinity of Rudrapur	10.0	IV
WEST BENGAL	CHURNI	SANTIPUR TOWN TO MAJHADIA	10.3-11.3	III
	DWARKA	TARAPITH TO SADHAK BAMDEB GHAT	5.6-17.0	III
	GANGA	TRIBENI TO DIAMOND HARBOUR	5.0-12.2	III
	DAMODAR	DURGACHAKM TO DISHERGARH	4.4-8.2	IV
	JALANGI	LAAL DIGHI TO KRISHNA NAGAR	8.3	IV
	KANSI	MIDNAPORE TO RAMNAGAR	9.9	IV
	MATHABHANGA	MADHUPUR TO GOBINDAPUR	8.5	IV
	BARAKAR	KULTI TO ASANSOL	5.7	V
	DWARAKESHWAR	Along Bankura	1-5.6	V
	KALJANI	BITALA TO ALIPURDWAR	6.0	V
	KAROLA	JALPAIGURI TO THAKURER KAMAT	3.9	V
	MAYURKASHI	SURI TO DURGAPUR	5.2	V
	RUPNARAYAN	KOLAGHAT TO BENAPUR	3.1-5.8	V
	SILABATI	GHATAL TO NISCHINDIPUR	3.8	V
TEESTA	SILIGURI TO PAHARPUR	3.3	V	

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

ANNEXURE R/2

Original Application No. 673/2018

IN THE MATTER OF:

NEWS ITEM PUBLISHED IN 'THE HINDU' AUTHORED BY SHRI. JACOB KOSHY

Titled

"More river stretches are now critically polluted: CPCB"

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

DATED: 20TH SEPTEMBER, 2018.

ORDER

1. This application has been registered on the basis of a news item dated 17.09.2018 in "The Hindu" under the heading "More river stretches are now critically polluted: CPCB"¹.
2. According to the news item, 351 polluted river stretches have been noted by the Central Pollution Control Board (CPCB). 117 such stretches are in the States of Assam, Gujarat, and Maharashtra. The CPCB has apprised the concerned States of the extent of pollution in the rivers. According to the news item, most polluted stretches are from Powai to Dharavi – with Biochemical Oxygen Demand (BOD) 250 mg/L; the Godavari - from Someshwar to Rahed – with BOD of 5.0-80 mg/L; the Sabarmati – Kheroj to Vautha – with BOD from 4.0-147 mg/L; and the Hindon – Saharanpur to Ghaziabad – with a BOD of 48-120 mg/L. The CPCB has a programme to monitor the quality of rivers by measuring BOD. BOD greater than or equal to 30mg/L is termed as 'Priority I', while that between 3.1-6 mg/L is 'Priority V'. The CPCB considers a BOD less than 3mg/L an indicator of a healthy river. In its 2015 Report², the CPCB had identified 302 polluted stretches on 275 rivers, spanning 28 States and six Union Territories. The number of such stretches has now been found to be 351.

¹ <https://www.thehindu.com/news/national/more-river-stretches-critically-polluted-cpcb/article24962440.ece>

² <http://cpcb.nic.in/cpcb/RESTORATION-OF-POLLUTED-RIVER-STRETCHES.pdf>

3. The question for consideration is whether any direction is necessary by this Tribunal, if river stretches are polluted as per the report of CPCB, which is a statutory body under the Water (Prevention and Control of Pollution) Act, 1974, (the Water Act).
4. The matter has been considered by the Hon'ble Supreme Court and this Tribunal in several cases to which reference will be made at appropriate place in the order. The matter was recently reviewed in a Chamber Meeting held on 10.09.2018 amongst all the Members of the Tribunal and the representatives of the CPCB, the Department of Water Resources, the Ministry of Environment, Forest & Climate Change, the Niti Ayog, the National Mission for Clean Ganga, Ministry of Housing and Urban Affairs, the representatives of the States of Maharashtra, Gujarat, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Bihar, Punjab, Uttar Pradesh, NCT of Delhi and the Union Territory of Daman & Diu. The object of the meeting was to discuss as to how the level of fitness for bathing in all the rivers must be achieved at the earliest. The Tribunal was open to consider the matter on judicial side. Accordingly, we proceed to consider the same in the light of inputs available in public domain.
5. There is no dispute with the proposition that the water is the lifeline for existence. Shortage of clean water is a matter of serious concern. Checking of pollution in the rivers is integrally linked not only to the availability of clean potable water but also to the protection of environment.
6. Article 48A of the Constitution casts a duty on the State to protect and improve the environment. Article 51A imposes a fundamental duty on every citizen to protect and improve the environment. The Stockholm Declaration (1972) recommended prevention of pollution by adopting the 'Precautionary Principle', the 'Polluter Pays Principle' and the principle of 'Sustainable Development'.
7. The Water Act was enacted to provide for prevention and control of water pollution. The Central and State Boards have been established under the said Act. The Act

prohibits use of any stream or well for disposal of polluting matter. Standards to be maintained can be laid down. The Parliament has passed the Environment (Protection) Act, 1986 to protect and improve the quality of environment. The Central Government is authorized to issue appropriate directions for protection of environment to the concerned authorities.

8. Considering the issue of pollution in River Ganga by the leather industry at Kanpur, the Hon'ble Supreme Court of India in *M.C. Mehta Vs. Union of India & Ors.*³, held that the discharge of the pollutants in Ganga could not be permitted directly or indirectly.

9. Again, in *M.C. Mehta Vs. Union of India & Ors.*⁴, directions to enforce the statutory provisions by the municipal bodies and the industries by stopping discharge of untreated sewage and effluents in River Ganga were issued. It was noted that the water pollution caused serious diseases, including Cholera and Typhoid. Water pollution could not be ignored and adequate measures for prevention and control are necessary. It was also observed that the educational institutions must teach atleast for one hour in a week lessons relating to protection and improvement of environment. Awareness should be created by organizing suitable awareness programs. In the same matter, the issue of Calcutta tanneries was considered in *M.C Mehta Vs. Union of India And Ors.*⁵, (*Calcutta Tanneries' Matter*). The tanneries were directed to be shifted by adopting the 'Precautionary Principle' so as to prevent discharge of effluents in the River Ganga.

10. Dealing with the control of pollution in river Pallar in Tamil Nadu, the Hon'ble Supreme Court in *Vellore Citizen' Welfare Forum Vs. Union of India*, (1996) 5 SSC 647 observed:

"13. The Precautionary Principle and the Polluter Pays Principle have been accepted as part of the law of the land. Article 21 of the Constitution of India guarantees protection of life and personal liberty. Articles 47, 48-A and 51-A(g) of the Constitution are as under:

³ (1987) 4 SCC 463 ¶14

⁴ (1988) 1 SCC 471

⁵ (1997) 2 SSC 411

“47. Duty of the State to raise the level of nutrition and the standard of living and to improve public health.—The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health.

48-A. Protection and improvement of environment and safeguarding of forests and wildlife.—The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.

51-A. (g) to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures.”

Apart from the constitutional mandate to protect and improve the environment there are plenty of post-independence legislations on the subject but more relevant enactments for our purpose are: the Water (Prevention and Control of Pollution) Act, 1974 (the Water Act), the Air (Prevention and Control of Pollution) Act, 1981 (the Air Act) and the Environment (Protection) Act, 1986 (the Environment Act). The Water Act provides for the constitution of the Central Pollution Control Board by the Central Government and the constitution of the State Pollution Control Boards by various State Governments in the country. The Boards function under the control of the Governments concerned. The Water Act prohibits the use of streams and wells for disposal of polluting matters. It also provides for restrictions on outlets and discharge of effluents without obtaining consent from the Board. Prosecution and penalties have been provided which include sentence of imprisonment. The Air Act provides that the Central Pollution Control Board and the State Pollution Control Boards constituted under the Water Act shall also perform the powers and functions under the Air Act. The main function of the Boards, under the Air Act, is to improve the quality of the air and to prevent, control and abate air pollution in the country. We shall deal with the Environment Act in the latter part of this judgment.

16. The constitutional and statutory provisions protect a person's right to fresh air, clean water and pollution-free environment, but the source of the right is the inalienable common law right of clean environment. It would be useful to quote a paragraph from Blackstone's commentaries on the Laws of England (Commentaries on the Laws of England of Sir William Blackstone) Vol. III, fourth edition published in 1876. Chapter XIII, "Of Nuisance" depicts the law on the subject in the following words:

“Also, if a person keeps his hogs, or other noisome animals, or allows filth to accumulate on his premises, so near the house of another, that the stench incommodes him and makes the air unwholesome, this is an injurious nuisance, as it tends to deprive him of the use and benefit of his house. A like injury is, if one's neighbour sets up and exercises any offensive trade; as a tanner's, a tallow-chandler's, or the like; for though these are lawful and necessary trades, yet they should be exercised in remote places; for the rule is, 'sic uteretur, ut alienum non leadas'; this therefore is an actionable nuisance. And on a similar principle a constant ringing of bells in one's immediate neighbourhood may be a nuisance.

... With regard to other corporeal hereditaments; it is a nuisance to stop or divert water that used to run to another's meadow or mill; to corrupt or poison a watercourse, by erecting a dye-house or a lime-pit, for the use of trade, in the upper part of the stream; to pollute a pond, from which another is entitled to water his cattle; to obstruct a drain; or in short to do any act in common property, that in its consequences must necessarily tend to the prejudice of one's neighbour. So closely does the law of England enforce that excellent rule of gospel-morality, of 'doing to others, as we would they should do unto ourselves'."

11. The Central Government was directed to constitute an Authority under section 3 (3) of the Environment Act which can take measures to reverse the damage and recover the cost from the individuals responsible.
12. In *S. Jagannath Vs. Union of India & Ors.*⁶, effluents discharged by commercial shrimp culture farms were directed to be controlled. An authority was directed to be constituted headed by former Judge of the High Court to protect fragile coastal areas.
13. In the news item published in Hindustan Times titled "And Quiet Flows The Maily Yamuna"⁷, steps were directed to be taken to check pollution in river Yamuna.
14. In *Tirupur Dyeing Factory Owners Association Vs. Noyyal River Ayacutdars Protection Association & Ors.*⁸, directions were issued to check pollution in river Noyyal in the State of Tamil Nadu. A Committee headed by a former Judge of the High Court was appointed to assess the extent of damage and to identify the victims and based on the said report direction to cover damages and to stop pollution were issued by the High Court. Upholding the said directions, it was observed that if the pollution is not checked, the industrial activity has to be closed; cost for restoration has to be covered from those responsible for the pollution.
15. In spite of directions in several Judgments, discharge of untreated sewage and industrial effluents in rivers and water bodies is continuing at a large scale. Sewage treatment capacity is disproportionate to the sewage generated. Reports have

⁶ (1997) 2 SCC 87

⁷ (2009) 17 SSC 720

⁸ (2009) 9 SSC 737

found high level of Coliform in water bodies. According to some estimates, 75 to 80 % water is polluted in India. Number of polluted river stretches is on the increase. It is patent that statutory framework is inadequate or those who man the statutory authorities are not able to perform the duties assigned to them. This aspect has to be reviewed by the concerned Governments.

16. We may also refer to some of orders of this Tribunal on the subject.

17. In *Manoj Mishra Vs. Union of India*⁹, the Tribunal dealt with the pollution of river Yamuna in the light of directions of the Hon'ble Supreme Court. The Tribunal noted that right to clean and healthy environment was a Fundamental Right of the inhabitants. In violation of the said Right, the debris and solid waste were being dumped on the river bed. Encroachments have taken place, resulting in damage to the environment. Storm water drains which were polluted, were meeting the river at several points without being cleaned. The failure to manage extraction of ground water and diverting the river water for irrigation and other purposes beyond reasonable norms was resulting in obstructing the flow of the river. Dumping of untreated sewerage and industrial effluents was a major source of pollution.

18. An Expert Committee was appointed which suggested setting up of STPs to tackle this problem. It was seen that on account of pollution, vegetables grown in the area, irrigated by the polluted water were a health hazard and caused diseases like cancer. The Committee appointed by the Tribunal recommended that solid waste dump should be removed from the flood plains and construction activities on the flood plains should be stopped. All Settlements on the flood plains should be relocated. Construction of new barrages and roads, railways and metro bridges, and embankments and bunds should not be permitted. In exceptional cases, if it is permitted, a critical assessment of their potential impact should be assessed. Environmental clearance should be made necessary. High level of lead was found in 23% of the children as a result of pollution adversely affecting their health. The food crops were contaminated. The ground water was contaminated. Mercury

⁹ O.A. No. 6/2012, 2015 ALL(I) NGT REPORTER (1) (DELHI) 139

concentration was 200 times the standards on account of location of thermal power plant. The Faecal Coliform- bacteria were 30 times the standards. There was presence of high level of pesticides, heavy metals and other harmful matters in the vegetables/vegetation grown on the river bank.

19. Accordingly, the Tribunal issued several directions for cleaning the river and protecting the flood plains. The implementation of above directions was monitored from time to time in the last three years.

20. On 26.07.2018, the Tribunal recorded that there was a failure of the Administration in complying with the directions, even after more than three years, which made it necessary for the Tribunal to exercise power as an Executing Court under Section 25 of the National Green Tribunal Act, 2010. The Tribunal directed constitution of a two-member Monitoring Committee, comprising a former Chief Secretary of Delhi and a former Expert Member of the Tribunal so that the said Committee could prepare a time bound action plan and closely oversee the execution of the order of this Tribunal on a regular basis.

21. The Tribunal also dealt with the problem of level of pollution in river Ganga which is 2025 km. The two main sources of pollution, which were noted, are the industrial pollution and the municipal sewage. Apart from this, diversion of water and extraction of groundwater reduced the flow of the river which adversely affected its eco-system and vitality. The serious industrial pollution was caused by the leather industries at Jajmau, Kanpur and Unnao. The Tribunal considered the initiatives taken by the Central Government by way of Ganga Action Plan-I and Ganga Action Plan-II. It was also noted that the said initiatives had failed to bring about the desired results. The Tribunal disposed of the matter on 10.12.2015 with regard to Phase-I, Segment-A i.e. from Gaumukh to Haridwar. The rest of the matter was dealt with by subsequent Judgement dated 13.07.2017 in *M.C. Mehta Vs. Union of India*¹⁰.

¹⁰O.A No. 200 of 2014, 2017 NGTR (3) PB 1

The directions issued by the Tribunal included regulation of dumping of municipal solid waste and other wastes, prevention and control of sewage and industrial effluents, encroachments of floodplains, regulation of diversion of water and extraction of groundwater, cleaning of the drains meeting the river Ganga, maintaining environmental flow of the river, checking constructions on floodplains, setting up of regulating or stopping industrial activity of polluting nature, checking mining activities and disposal of bio-medical and other wastes, etc.

22. The implementation of the above directions was taken up from time to time. It was found that inspite of huge expenditure already incurred and efforts of the Committees monitoring the directions of this Tribunal as well as initiatives of the Government authorities, the requisite result has not been achieved. The water did not meet the requisite standards. The Tribunal had to appoint a Committee headed by a former High Court Judge vide order dated 06.08.2018.

23. On an earlier date on 27.07.2018, the Tribunal directed that the results of tests of water samples at various locations should be displayed on the website of Central Pollution Control Board (CPCB). It was noted that water from Haridwar to Kanpur was unfit for drinking and with few exceptions, even unfit for bathing. There was dumping of Chromium at and around Jajmau and Kanpur. There was violation of provisions of the Water Act, 1974 requiring closing of industries and prosecution. The Tribunal hoped that at one point of time the red sign in the map which was displayed on the website of the CPCB will be converted to green with the improvement in water quality. Till then, the progress could not be held to be satisfactory.

24. On 13.07.2018, in *Mahendra Pandey Vs. Union of India &Ors.*¹¹, pollution in river Ramganga was considered. River Ramganga is a tributary of River Ganga. It was found that in surface water samples, there was presence of heavy metals like Iron (Fe), Zinc (Zn), Copper (Cu) and Mercury (Hg). The level of Mercury was found above the screening levels (i.e. Indian Drinking Water standard). The stand of the

¹¹O.A. No. 58/2017

Uttar Pradesh Pollution Control Board was that there was difficulty in locating the site for construction of secured landfill. The Tribunal noted that the hazardous waste was required to be disposed of in a scientific manner. Illegal dumping of e-waste was required to be stopped. It was noted that pollution was being caused by electronic waste processing which was generating Milled Black Powder. This resulted in contamination of water with heavy metals.

25. On 24.07.2018 in *Sobha Singh &Ors. Vs. State of Punjab &Ors.*¹², the Tribunal considered the issue of pollution of River Sutlej and River Beas. The pollution resulted in toxicity and accumulation of Chromium, Nickel, Zinc and pesticides. The polluted drains were found meeting River Sutlej. The untreated industrial waste as well as the domestic waste was being dumped without any adequate action being taken by the Pollution Control Boards. Failure to check pollution was established by various inspections. In spite of steps taken in four years, with almost fifty adjournments and the directions of the Tribunal, the situation did not improve as expected. Accordingly, the Tribunal constituted an Independent Monitoring Committee which included a social activist to oversee the execution of directions of the Tribunal.

26. On 31.07.2018 in *Nityanand Mishra Vs. State of M.P. &Ors.*¹³, pollution of Son river was considered. Illegal sand mining activity was found to be resulting in affecting the flow of the river. Construction of barrage and operation of industries were affecting the habitat and breeding of *Gharials*. The Tribunal issued directions to stop illegal pollution for protection of the river and the wildlife near the Bansagar Dam and constituted a Committee to oversee the compliance of the directions of the Tribunal.

27. As already noted, on 06.08.2018, after reviewing the progress in the matter of River Ganga and finding that the progress did not meet the expectations of the Tribunal, the Tribunal exercised its jurisdiction under Section 25 of the National Green Tribunal Act, 2010 and constituted a Monitoring Committee headed by a former

¹²O.A.No. 101/2014

¹³O.A. No. 456/2018

Judge of the High Court to execute the directions already issued in a time bound manner. It was also observed that public education and public involvement were required to be considered.

28. On 07.08.2018 in “Stench Grips Mansa’s Sacred Ghaggar River (Suo-Moto Case)¹⁴”, this Tribunal considered pollution of river Ghaggar and failure of the authorities to check the same. The report of the Joint Inspection Committee showed that the pollution in the river was beyond the prescribed standards. There was failure on the part of the Pollution Boards in checking the pollution. In spite of several directions in the last four years by the Tribunal, the situation has not improved. The Tribunal directed that a Special Task Force (STF) must be constituted in every District and in every State. In a District, the STFs should comprise of District Magistrate, Superintendent of Police, Regional Officer of the State Pollution Control Boards in concerned District and one person to be nominated by the District Judge in every District in his capacity as Head of the District Legal Services Authority. At the State level, it was to comprise of the Chief Secretary, the Environment Secretary, the Secretary of Urban Development and Secretary of Local Bodies. The STFs were required to publish reports on the website. The Tribunal also constituted a Committee headed by a former Judge to oversee the compliance of the directions.

29. On 08.08.2018, in *Doaba Paryavaran Samiti Vs. State of U.P. & Ors.*¹⁵, pollution in river Hindon was the subject matter of consideration. The matter was taken up on the allegation that 71 persons in Baghpat district died and more than 1000 persons were affected by diseases on account of pollution. The Tribunal noted that there was contamination of groundwater on account of pollution caused by sugar, paper, distilleries and tannery industries. An inspection team, appointed by the Tribunal, found that 124 industries were causing pollution. It was noted that no punitive action has been initiated. The pollution caused included discharge of Mercury. The Tribunal observed that sources of contaminated water are required to be closed. The victims of diseases are required to be rehabilitated. A statement that there are

¹⁴O.A. No. 138/2016 (T_{NHRC})

¹⁵ O.A. No. 231/2014

302 river stretches in the country was noted and the CPCB was directed to identify atleast 10 most critical stretches and prepare an action plan, in similar format as that of river Hindon.¹⁶ The directions issued by the Tribunal include making functionaries of the statutory authorities accountable for their failure, making potable water available, sources of contamination being closed, action plans being prepared at District, State and National levels for restoration of water quality and reversing the damage. The Committee headed by a former Judge of High Court was also constituted to oversee the execution of the directions.

30. On 17.08.2018, in *Arvind Pundalik Mhatre Vs. Ministry of Environment, Forest and Climate Change &Ors.*¹⁷, the matter of pollution of River Kasardi was considered and directions were issued to remedy the situation and the Tribunal appointed a Committee headed by a former Judge of the High Court to oversee the compliance of the directions.

31. On 23.08.2018 in *Meera Shukla Vs. Municipal Corporation, Gorakhpur &Ors.*¹⁸, pollution of Ramgarh Lake, Ami River, Rapti River and Rohani River in and around District Gorakhpur on account of discharge of untreated sewage and industrial effluents was considered. It was noted that there was no proper management of solid waste disposal, leading to vector borne diseases and health problems. The pollution was caused, inter-alia, by sugar industries and other factories. The underground water was contaminated with arsenic. In the year 2012, 557 persons died with encephalitis deaths. In the last 30 years, 50,000 people had died. A financial package of Rs. 4,000 crore was given by the Central Government to fight the said diseases but there is no proper utilization of the amount. Apart from the 557 death in Gorakhpur District, more deaths had taken place in the area as stated in the news report dated 16.07.2013. The total deaths reported were 1256 in the year 2012. The Tribunal accordingly directed necessary steps to be taken to remedy

¹⁶ Hindon action plan prepared by CPCB is explained in para 46

¹⁷ O.A. No. 125/2018,

¹⁸ O.A. No. 116/2014,

the situation and also appointed a Committee headed by a former Judge of the High Court to oversee the compliance of directions of the Tribunal.

32. On 24.08.2018, in *Amresh Singh Vs. Union of India &Ors.*¹⁹, the matter of pollution of the Chenab and Tawi Rivers was considered and directions were issued to remedy the situation which was to be overseen by a Committee headed by a former High Court Judge.

33. Similarly, in respect of river *Subarnarekha in Sudarsan Das Vs. State of West Bengal &Ors.*²⁰, this Tribunal considered the matter and also appointed a Committee headed by a former Judge of the High Court to oversee the compliance of the directions.

34. There are instances of many other cases involving pollution of rivers which have come up for consideration before this Tribunal. It is not necessary to refer to all the cases.

35. We are of the view that the situation is far from satisfactory and action is required to be taken on war footing. Once statutory framework in the form of Water Act and the Environment Act is in place and the standards have been laid down by the Central Pollution Control Board, the matter cannot rest at ascertaining and identification of polluted stretches. There has to be meaningful further action to restore the minimum prescribed standards for all the rivers of the country. The polluter has to pay the cost of restoring the damage.

36. Without casting any aspersions on the statutory bodies, it is an acknowledged fact that the Pollution Control Boards have not been able to take adequate steps for keeping the standards of water within the prescribed limits. They have not been able to stop dumping of wastes, discharge of municipal or industrial effluents in rivers and water bodies. One of the reasons which has been frequently highlighted is the unsatisfactory manning of the Pollution Control Boards. This aspect was

¹⁹ Execution Application No. 32/2016 in O.A. No. 295/2016,

²⁰O.A.No. 173 of 2018

considered by the Hon'ble Supreme Court in *TechiTagi Tara Vs. Rajendra Singh Bhandari &Ors.*²¹ as follows:

"33. Unfortunately, notwithstanding all these suggestions, recommendations and guidelines the SPCBs continue to be manned by persons who do not necessarily have the necessary expertise or professional experience to address the issues for which the SPCBs were established by law. The Tata Institute of Social Sciences in a Report published quite recently in 2013 titled "Environmental Regulatory Authorities in India: An Assessment of State Pollution Control Boards" had this to say about some of the appointments to the SPCBs: "An analysis of data collected from State Pollution Control Boards, however, gives a contrasting picture. It has been observed that time and again across state governments have not been able to choose a qualified, impartial, and politically neutral person of high standing to this crucial regulatory post. The recent appointments of chairpersons of various State Pollution Control Boards like Karnataka (A a senior BJP leader), Himachal Pradesh (B a Congress party leader and former MLA), Uttar Pradesh (C appointed on the recommendation of SP leader X), Arunachal Pradesh (D a sitting NCP party MLA), Manipur Pollution Control Board (E a sitting MLA), Maharashtra Pollution Control Board (F a former bureaucrat) are in blatant violation of the apex court guidelines. The apex court has recommended that the appointees should be qualified in the field of environment or should have special knowledge of the subject. It is unfortunate that in a democratic set up, key enterprises and boards are headed by bureaucrats for over a decade. In this connection, it is very important for State Governments to understand that filling a key regulatory post with the primary intention to reward an ex-official through his or her appointment upon retirement, to a position 9 Item Nos. 07-08 July 20, 2018 dv for which he or she may not possess the essential overall qualifications, does not do justice to the people of their own states and also staffs working in the State Pollution Control Boards. The primary lacuna with this kind of appointment was that it did not evoke any trust in the people that decisions taken by an ex-official of the State or a former political leader, appointed to this regulatory post through what appeared to be a totally non-transparent unilateral decision. Many senior environmental scientists and other officers of various State Pollution Control Boards have expressed their concern for appointing bureaucrats and political leader as Chairpersons who they feel not able to create a favourable atmosphere and an effective work culture in the functioning of the board. It has also been argued by various environmental groups that if the government is unable to find a competent person, then it should advertise the post, as has been done recently by states like Odisha. However, State Governments have been defending their decision to appoint bureaucrats to the post of Chairperson as they believe that the vast experience of IAS officers in handling responsibilities would be easy. Another major challenge has been appointing people without having any knowledge in this field. For example, the appointment of G with maximum qualification of Class X as Chairperson of State Pollution Control Board of Sikkim was clear violation of Water Pollution and Prevention Act, 1974."

34. The concern really is not one of a lack of professional expertise – there is plenty of it available in the country – but the lack of dedication and willingness to take advantage of the resources available and instead benefit someone close to the powers that be. With this couldn't care-less attitude, the environment and public trust are the immediate casualties. It is unlikely that with such an attitude, any substantive effort can be made to

²¹ (2018) 11 SCC 734

tackle the issues of environment degradation and issues of pollution. Since the NGT was faced with this situation, we can appreciate its frustration at the scant regard for the law by some State Governments, but it is still necessary in such situations to exercise restraint as cautioned in State of U.P. v. Jeet S. Bisht.

35.. Keeping the above in mind, we are of the view that it would be appropriate, while setting aside the judgment and order of the NGT, to direct the Executive in all the States to frame appropriate guidelines or recruitment rules within six months, considering the institutional requirements of the SPCBs and the law laid down by statute, by this Court and as per the reports of various committees and authorities and ensure that suitable professionals and experts are appointed to the SPCBs. Any damage to the environment could be permanent and irreversible or at least long-lasting. Unless (2007) 6 SCC 586 corrective measures are taken at the earliest, the State Governments should not be surprised if petitions are filed against the State for the issuance of a writ of quo warranto in respect of the appointment of the Chairperson and members of the SPCBs. We make it clear that it is left open to public spirited individuals to move the appropriate High Court for the issuance of a writ of quo warranto if any person who does not meet the statutory or constitutional requirements is appointed as a Chairperson or a member of any SPCB or is presently continuing as such."

37. This Tribunal also considered this matter in order dated 20.07.2018, in the case of *Satish Kumar vs. U.O.I & Ors.*,²² and observed as follows:

"Accordingly, we suggest that the Central Government as well as State Governments may appoint persons with judicial background to deal with the issues which may require the knowledge of legal and judicial system in the Pollution Control Boards and the local authorities. Such persons can also advise such bodies on manner of compliance of law so that such bodies can be saved from unnecessary litigation and charges of failure to comply with law.

24. Presence of a person with judicial background will help the Pollution Control Boards as well as local bodies to effectively discharge their administrative and judicial functions in an efficient manner. We are informed that in some of the Pollution Control Boards and Local Bodies, Judicial officers are already being engaged.

*25. We thus call upon the Central Government and all the State Governments to take a call on this issue consistent with the observation of the Hon'ble Supreme Court in *Techi Tagi Tara (Supra)*"*

38. In order to do so, an officer of Superior Judicial Services may have to be taken on deputation by requesting the concerned High Court on the pattern of Law Secretaries of States.

39. As already noted, well known causes of pollution of rivers are dumping of untreated sewage and industrial waste, garbage, plastic waste, e-waste, bio-medical waste, municipal solid waste, diversion of river waters, encroachments of catchment areas and floodplains, over drawl of groundwater, river bank erosion on account of illegal sand mining. In spite of directions to install Effluent Treatment Plants (ETPs),

²²O.A No. 56 (T_{HC}) of 2013

Common Effluent Treatment Plants (CETPs), Sewage Treatment Plants (STPs), and adopting other anti-pollution measures, satisfactory situation has not been achieved. Tough governance is the need of the hour. If pollution does not stop, the industry has to be stopped. If sewage dumping does not stop, locals have to be made accountable and their heads are to be prosecuted. Steps have to be taken for awareness and public involvement.

40. River Water is considered to be fit for bathing when it meets the criteria of having Bio-chemical Oxygen Demand (BOD) less than 3.0 mg/L, Dissolved Oxygen more than 5.0 mg/L and Faecal Coliform bacteria to be less than 500 MPN/100 ml.

41. According to the "Restoration of Polluted River Stretches- Concept & Plan" published by CPCB in January, 2018, 30,042 million litres per day (MLD) of domestic sewage is generated from urban areas along the polluted river stretches. The installed sewage treatment capacity is about 16,846 MLD, leaving a gap of about 13,196 MLD (43.9%). There is a large gap in sewage treatment capacity and generation of sewage in urban areas.

42. As already noted, according to latest assessment by the CPCB, there are 351 polluted river stretches in India i.e. where the BOD content is more than 3mg/L. The plan of CPCB is to target enhancement of river flow. The plan for restoration of polluted river stretches is proposed to be executed through two-fold concepts. One concept is to target enhancement of river flow through interventions on the water sheds/catchment areas for conservation and recharge of rain water for subsequent releases during lean flow period in a year. This concept will work on dilution of pollutants in the rivers and streams to reduce concentration to meet desired level of water quality. Other concept is of regulation and enforcement of standards in conjunction with the available flow in rivers /streams and allocation of discharges with stipulated norms.

43. The water quality assessment of aquatic resources by CPCB, on long term basis, has provided information on the segments of rivers that are not meeting water quality

criteria and have been identified as polluted. Assessment studies carried out on the sources of Restoration of Polluted River Stretches pollution in the rivers has highlighted the need for creation of infrastructure facilities (STPs /CETPs/ETPs) for management of wastewater in line with low flow or no flow of fresh water in the rivers and streams. In order to have a practical solution to augment non-monsoon availability of water, CPCB has suggested four phases for full scale water shed management in the upper reaches of catchment of the rivers and streams. The suggested phases for water shed management may be (a) Recognition phase (b) Restoration phase (c) Protection phase (d) Improvement phase.

(a) Recognition Phase is identification and recognition of the problem, analysis of the cause of the problem and its effect and development of alternative solutions of problem.

(b) Restoration Phase includes two main steps viz. selection of best solution to problems identified and application of the solution to the problems of the land.

(c) Protection Phase takes care of the general health of the watershed and ensures normal functioning. The protection is against all factors, which may cause determined in watershed condition.

(d) Improvement Phase deals with overall improvement in the watershed and all land is covered.

44. Attention is paid to agriculture and forest management and production, forage production and pasture management, socio-economic conditions to achieve the objectives of watershed management.

45. The river action plans are designed for control of pollution and to restore the water quality of the rivers. The infrastructure development for treatment of sewage always remains short of the waste water generation. The ever growing population and increasing water use in the urban centres has outpaced the plan for creation of infrastructure. The river action plans although have not improved the quality of the

water resources, however in absence of such plans, the quality of aquatic resources would have been further deteriorated.

46. River Hindon has been taken up as a model for preparation of action plan for restoration of water quality.²³ Salient features of the Action Plan are:

- i. Execution of field surveys to assess pollution load generated by industries and sewage generated in a city or town discharging sewage and trade effluent into river Hindon and its tributaries.
- ii. Collating water quality monitoring data of Hindon and its tributaries and assigning the class as per primary water quality criteria.
- iii. Water quality assessment of river in context of sewage/industrial drain outfalls with dilution and distance factors.
- iv. Laying time-limes for regulating industrial pollution control by ensuring consent compliance and closing the defaulting industries till they comply with the norms stipulated to them.
- v. Setting up of STPs in towns located in the river catchment and emphasis on utilization of treated sewage.
- vi. Adopting water conservation practices, ground water regulation, flood plain zone management and maintaining environmental flow.

47. The polluted river stretches have been divided in five priority categories i.e., I, II, III, IV, V depending upon the level of BOD. Following are the parameters for assessing the criteria:

I. Criteria for Priority I

- (a) Monitoring locations exceeding BOD concentration 30 mg/L has been considered as it is the standard of sewage treatment plant and in river it appears without dilution.(River locations having water quality exceeding discharge standards for BOD to fresh water sources)
- (b) All monitoring locations exceeding BOD concentration 6 mg/L on all occasions.
- (c) Monitoring locations exceeding 3 mg/L BOD are not meeting desired water quality criteria but does not affect to Dissolved

²³ <http://cpcb.nic.in/NGT/CPCB-Reply-Affidavit-Report-on-Hindon-Action-Plan.pdf>

Oxygen level in water bodies. If BOD exceeds 6mg/L in water body, the Dissolved Oxygen is reduced below desired levels.

- (d) The raw water having BOD levels upto 5 mg/L are does not form complex chemicals on chlorination for municipal water supplies. Hence the water bodies having BOD more than 6 mg/L are considered as polluted and identified for remedial action.

II. Criteria for Priority II

- (a) Monitoring locations having BOD between 20-30 mg/L.
(b) All monitoring locations exceeding BOD concentration 6 mg/L on all occasions.

III. Criteria for Priority III

- (a) Monitoring locations having BOD between 10-20 mg/L.
(b) All monitoring locations exceeding BOD concentration 6 mg/L on all occasions.

IV. Criteria for Priority IV

- (a) Monitoring locations having BOD between 6-10 mg/L.

V. Criteria for Priority V

- (a) Monitoring locations having BOD between 3-6 mg/l.
(b) The locations exceeding desired water quality of 3mg/l BOD.

Polluted River Stretches- State wise-Priority wise						
STATE	I	II	III	IV	V	Grand Total
ANDHRA PRADESH				2	3	5
ASSAM	3	1	4	3	33	44
BIHAR			1		5	6
CHHATTISGARH				4	1	5
DAMAN, DIU AND DADRA NAGAR HAVELI	1					1
DELHI	1					1
GOA			1	2	8	11
GUJARAT	5	1	2	6	6	20
HARYANA	2					2
HIMACHAL PRADESH	1	1	1		4	7
JAMMU & KASHMIR		1	2	2	4	9
JHARKHAND				3	4	7
KARNATAKA			4	7	6	17
KERALA	1			5	15	21
MADHYA PRADESH	3	1	1	3	14	22
MAHARASHTRA	9	6	14	10	14	53
MANIPUR		1			8	9
MEGHALAYA	2			3	2	7
MIZORAM			1	3	5	9
NAGALAND	1		1	2	2	6
ODISHA	1		3	2	13	19
PUDUCHERRY				1	1	2

PUNJAB	2			1	1	4
RAJASTHAN			1		1	2
SIKKIM					4	4
TAMIL NADU	4			1	1	6
TELANGANA	1	2	2	2	1	8
TRIPURA					6	6
UTTAR PRADESH	4		1	2	5	12
UTTARAKHAND	3	1	1	4		9
WEST BENGAL	1	1	3	4	8	17
Grand Total	45	16	43	72	175	351

Polluted River Stretches- Priority I & Priority II				
STATE	RIVER NAME	RIVER STRETCH	BOD RANGE/ MAX VALUE (mg/L)	PRIORITY
ASSAM	BHARALU	GUWAHATI TO CHILARAI NAGAR	52.0	I
	BORSOLA	ALONG SARABBHATTI, GUWAHATI	34.0	I
	SILSAKO	ALONG CHACHAL, GUWAHATI	34.0	I
	SORUSOLA	ALONG PALTAN BAZAR, GUWAHATI	30.0	II
DAMAN, DIU AND DADRA NAGAR HAVELI	DAMANGANGA	SILVASSA TO DAMAN JETTY, MOTI DAMAN	10 - 80	I
DELHI	YAMUNA	WAZIRABAD TO ASGARPUR	9 - 80	I
GUJARAT	AMLAKHADI	PUNGUM TO BHARUCH	40 - 45	I
	BHADAR	JETPUR VILLAGE TO SARAN VILLAGE	426.0	I
	BHOGAVO	SURENDRANAGAR TO NANA KERALA	67.0	I
	KHARI	LALI VILLAGE TO KASHIPURA	235.0	I
	SABARMATI	KHEROJ TO VAUTHA	4 - 147	I
	VISHWAMITRI	VADODARA TO ASOD	6 - 21	II
HARYANA	GHAGGAR	RORKI TO SIRSA	6 - 482	I
	YAMUNA	PANIPAT TO SONEPAT	4 - 55	I
HIMACHAL PRADESH	SUKHANA	SUKHNA TO PARWANOO	54.0	I
	MARKANDA	KALA AMB TO NARAYANPUR	3.2 - 24	II
JAMMU & KASHMIR	DEVIKA	GURU RAVIDAS TEMPLE TO NAINSU	3.4-22	II
KERALA	KARAMANA	MALEKKDU TO THIRUVALLAM	56.0	I
MADHYA PRADESH	CHAMBAL	NAGDA TO RAMPURA	12 - 80	I
	KHAN	KABIT KHEDI TO KHAJRANA	30.8 - 80	I
	KSHIPRA	SIDDHAWAT TO TRIVENISANGAM	4 - 38	I
	BETWA	MANDIDEEP TO VIDISHA	3.3 - 20.2	II
MAHARASHTRA	GODAVARI	SOMESHWAR TEMPLE TO RAHED	5.0-88	I
	KALU	ALONG ATALE VILLAGE	75.0	I
	KUNDALIKA	SALAV TO ROHA	3.8-65	I
	MITHI	POWAI TO	250.0	I

		DHARAVI		
	MORNA	AKOLA TO TAKALIJALAM	52.8	I
	MULA	BOPODI TO AUNDH GAON	33-35	I
	MUTHA	SHIVAJI NAGAR TO KHADAKWASLA DAM	5.0-42.5	I
	NIRA	SANGAVI TO SHINDEWADI	12.5-35	I
	VEL	NHAVARE TO SHIKARPUR	30.2	I
	BHIMA	VITHALWADI TO TAKLI	8.0-22.0	II
	INDRAYANI	MOSHIGAON TO ALANDIGAON	12.5-22	II
	MULA-MUTHA	THEUR TO MUNDHWA BRIDGE	14-22	II
	PAWANA	DAPODI TO RAVET	15.5-24	II
	WAINGANGA	TUMSA TO ASHTI	10.4-22.4	II
	WARDHA	GHUGHUS TO RAJURA	7.0-22.0	II
MANIPUR	NAMBUL	SINGDA DAM TO BISHNUPUR	3.6-23.7	II
MEGHALAYA	UMKHAH	MAWLAI TO SHILLONG	30-90.2	I
	UMSHYRPI	UMSHYRPI BRIDGE TO DHANKETI	38.5-95.0	I
NAGALAND	DHANSIRI	CHECK GATE TO DIPHU BDG	7.0-50.0	I
ODISHA	GANGUA	D/S BHUWANESHWAR	14-39	I
PUNJAB	GHAGGAR	SARDULGARH TO MUBARAKPUR	9.0-380	I
	SATLUJ	RUPNAGAR TO HARIKA BRIDGE	3.8-108	I
TAMIL NADU	CAUVERY	METTUR TO MAYILADUTHURAI	3.3-32	I
	SARABANGA	THATHAYAMPATTI TO T.KONAGAPADI	78.0	I
	THIRUMANIMUTHAR	SALEM TO PAPPARAPATTI	190.0	I
	VASISTA	MANIVILUNDHAN TO THIYAGANUR	675.0	I
TELANGANA	MUSI	HYDRABAD TO NALGONDA	4.0-60.0	I
	MANJEERA	GOWDICHARLA TO NAKKAVAGU	5.0-26	II
	NAKKAVAGU	GANDILACHAPET TO SEVALAL THANDA	26.0	II
UTTAR PRADESH	HINDON	SAHARANPUR TO GHAZIABAD	48-120	I
	KALINADI	MUZAFFAR NAGAR TO GULAOTHI TOWN	8 - 78	I
	VARUNA	RAMESHWAR TO CONF WITH GANGA, VARANASI	4.5-45.2	I
	YAMUNA	ASGARPUR TO ETAWAH SHAHPUR TO ALLAHABAD (BALUA GHAT)	12.0-55	I
UTTARAKHAND	BHELA	KASHIPUR TO RAJPURA ATNDA	6.0-76.0	I
	DHELA	KASHIPUR TO GARHUWALA, THAKURDWARA	12 - 80	I
	SUSWA	MOTHROWALA TO RAIWALA	37.0	I
	KICHHA	ALONG KICHHA	28.0	II
WEST BENGAL	VINDHADHARI	HAROA BRIDGE TO MALANCHA BURNING GHAT	26.7-45.0	I
	MAHANANDA	SILIGURI TO BINAGURI	6.5-25	II

Polluted River Stretches- Priority III, IV & V				
STATE	RIVER NAME	RIVER STRETCH	BOD RANGE/ MAX VALUE (mg/L)	PRIORITY
ANDHRA PRADESH	KUNDU	NANDYAL TO MADDURU	7.7	IV
	TUNGABHADRA	MANTHRALAYAM TO BAVAPURAM	3.2 - 6.7	IV
	GODAVARI	RAYANPETA TO RAJAHMUNDRI	3.1 - 3.4	V
	KRISHNA	AMRAVATHI TO HAMSALA DEEVI	3.2	V
	NAGAVALI	ALONG THOTAPALLI	3.2	V
ASSAM	DEEPAR BILL	DEEPAR BILL TO GUWAHATI	10.6	III
	DIGBOI	LAKHIPATHE, RESERVE FOREST	14.0	III
	KAMALPUR	ALONG KAMALPUR	18.6	III
	PANCHNAI	ORANG TO BORSALA	11.4	III
	BRAHAMPUTRA	KHERGHAT TO DHUBRI	3.2 - 6.4	IV
	KHARSANG	ASSAM-ARUNANCHAL BORDER TO LONGTOM-1	7.2	IV
	PAGLDIA	NALBARI TO KHUDRA SANKARA	8.2	IV
	BARAK	PANCHGRAM TO SILCHAR	3.5 - 4.2	V
	BAROI	DOWNSTREAM OF BRIDGE AT NH-52	3.6	V
	BEGA	ALONG MANGALDOI	4.5	V
	BEKI	BARPETA ROAD TO JYOTI GAON	3.5	V
	BHOGDOI	JORHAT TO DULIAGAON	4.5	V
	BOGINADI	LAKHIMPUR TO DIBRUGARH	4.2	V
	BORBEEL	ALONG RAMNAGAR, DIGBOI	3.8	V
	BORDOIBAM BEELMUKH	ALONG BEELMUKH BIRD SANCTUARY, DHEMAJI	5.2	V
	BURHIDIHING	MARGHERITA TO TINSUKIA	4 - 4.6	V
	DHANSIRI	GOLAGHAT TO KATHKETIA	4.3 - 5.6	V
	DIKHOW	NAGINI MORA TO DIKHOMUKH	3.2	V
	DIKRONG	ALONG BANDARDEWA	3.2	V
	DIPLAI	ALONG SILGARA, KOKRAJHAR	3.2	V
	DISANG	DILLIGHAT TO GUNDAMGHAT	4.2	V
	GABHARU	ALONG TUMIUKI, SONITPUR	5.4	V
	HOLUDUNGA	ALONG SOMARAJAN, DHEMA JI	4.8	V
	Jai Bharali	ALONG SONITPUR	3.1	V
	JHANJI	JORHAT TO CHAWDANG	3.8	V
	KALONG	NAGAON TO MORI KALONG	3.7 - 4.3	V
	KAPILI	NAGAON TO KAMPUR TOWN	5.5	V
	KILLING	ALONG MOREGAON	5.8	V
	KOHORA	KOHORA TO MOHPARA	4.4	V
	KULSI	ALONG CHAYGAON	3.6	V
MALINI	ALONG RAMNAGAR, SILCHAR	5.3	V	
MORA BHARALI	ALONG TEZPUR	5.2	V	

	PARASHALI	ALONG DEMORIA	4.0	V	
	PUTHIMARI	ALONG PUTHIMARI	4.8	V	
	RANGA	ALONG GERAMUKH	3.8	V	
	SAMAGURI	ALONG SAMAGURI, NAGAON	4.0	V	
	SANKOSH	ALONG GOLAKGANJ	3.3	V	
	SON	ALONG DEODHAR, KARIMGANJ	4.3	V	
	SONAI	SONAI TO DAKSHIN MOHANPUR	4.4	V	
	TENGA PUKHURI	ALONG KUKURACHOWA GAON	4.0	V	
BIHAR	SIRSIA	RUXOL TO KOIREA TOLA (RAXAUL)	20.0	III	
	FARMAR	ALONG JOGBANI	3.6	V	
	GANGA	BUXAR TO BHAGALPUR	3.2 - 4.2	V	
	POONPUN	GAURICHAK TO FATUHA	3.3	V	
	RAM REKHA	HARINAGAR TO RAMNAGAR	5.0	V	
	SIKRAHNA	ALONG NARKATIAGANJ	4.5	V	
CHHATTISGARH	HASDEO	KORBA TO URG	3.6 - 7	IV	
	KHAROON	BUNDRI TO RAIPUR	3.3 - 7.2	IV	
	MAHANADI	ARRANG TO SIHAWA	3.3 - 8	IV	
	SEONATH	SHIMGA TO BEMTA	3.4 - 8.4	IV	
	KELO	RAIGARH TO KANAKTORA	3.8	V	
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	CURCHOREM TO MADKAI	3.2 - 5.1	V	
	GUJARAT	DHADAR	KHOTDA TO CHANDPURA	16.0	III
		TRIVENI	TRIVENI SANGAM TO BADALPARA	11.0	III
AMRAVATI (TRIBUTARY OF NARMADA)		ALONG DADHAL, ANKALESHWAR	10.0	IV	
DAMANGANGA		KACHIGAON TO VAPI	8.0	IV	
KOLAK		KIKARLA TO SALVAV	8.0	IV	
MAHI		SEVALIA TO BAHADARPUR	4.5 - 7	IV	
SHEDHI		DHAMOD TO KHEDA	9.0	IV	
TAPI		KHADOD (BARDOLI) TO SURAT	8.0	IV	
ANAS		DAHOD TO FATEHPURA	5.0	V	
BALEHWAR KHADI		PANDESARA TO KAPLETHA	4.0	V	
KIM		SAHOL BRIDGE TO HANSOL	3.1	V	
MESHW		ALONG SHAMLAJI	4.0	V	
MINDHOLA		ALONG SACHIN	6.0	V	
NARMADA		GARUDESHWAR TO BHARUCH	5.0	V	
HIMACHAL PRADESH		SIRSA	NALAGARH TO SOLAN	8 - 16	III
	ASHWANI	ALONG YASHWANT NAGAR	3.2	V	
	BEAS	KULLU TO DEHRAGOPIPUR	6.0	V	

	GIRI	ALONG SAINJ	4.4 - 6	V
	PABBAR	ALONG ROHRU	3.6 - 4	V
JAMMU & KASHMIR	BANGANGA	PONY SHED TO BATHING GHAT	6 - 14	III
	CHUNT KOL	MAULANA AZAD BRIDGE TO KANIKADAL	14.5	III
	GAWKADAL	GAWKADAL BRIDGE TO NOHATA	9.0	IV
	TAWI	SURAJNAGAR TO BELICHARANA	5 - 8.3	IV
	BASANTER	SAMBA TO CHAKMANGARAKWAL	5 - 6	V
	CHENAB	JAL PATAN TO PARGAWAL	5.0	V
	JHELAM	CHATTABAL WEIR TO ANANTNAG	3.2 - 5.5	V
	SINDH	ALONG DUDERHAMA	3.7	V
JHARKHAND	GARGA	ALONG TALMUCHU	6.2	IV
	SANKH	KONGSERABASAR TO BOLBA	8.4	IV
	SUBARNAREKHA	HATIA DAM TO JAMSHEDPUR	3.4 - 10	IV
	DAMODAR	PHUSRO ROAD BDG TO TURIO	3.9	V
	JUMAR	KANKE DAM TO KADAL	3.3	V
	KONAR	ALONG TILAYA AND KONAR	3.4 - 3.6	V
	NALKARI	ALONG PATRATU	3.8	V
KARNATAKA	ARKAVATHI	HALLI RESERVOIR TO KANAKAPURA TOWN	14.0	III
	LAKSHMANTIRTHA	KATTEMALAVADI TO HUNSUR	7.1 - 12.4	III
	MALPRBHA	KHANAPUR TO DHARWAD	7.3 - 17.3	III
	TUNGABHADRA	HARIHAR TO KORLAHALLI	4 - 19	III
	BHADRA	HOLEHUNNUR TO BHADRAVATHI	5.5 - 7.8	IV
	CAUVERY	RANGANATHITTU TO SATHYAMANGALAM BRIDGE	3.1 - 6.7	IV
	KABINI	NANJANAGUD TO HEJJIGE	3.6 - 6.5	IV
	KAGINA	SHAHABAD TO HONGUNTA	4.6 - 7.4	IV
	KALI	HASAN MAAD (WEST COAST PAPER MILL) TO BOMMANAHALLI RESERVOIR	6.5	IV
	KRISHNA	YADURWADI TO TINTINI BRIDGE	3.1 - 6.2	IV
	SHIMSHA	YEDIYAR TO HALAGUR	4 - 10	IV
	ASANGI NALLA	ALONG ASANGI	4.4	V
	BHIMA	GHANAPUR TO YADGIR	3.3 - 6	V
	KUMARDHARA	ALONG UPPINANGADI	4.0	V
	NETRAVATHI	UPPINANGADI TO MANGALURU	4.0	V
	TUNGA	SHIVAMOGA TO KUDLI	4.3	V
YAGACHI	ALONG YAGACHI, HASSAN	4.0	V	
KERALA	BHARATHAPUZHA	ALONG PATAMBI	6.6	IV
	KADAMBAYAR	MANCKAKADAVU TO BRAHMAPURAM	5.9 - 6.4	IV
	KEECHERI	PULIYANNOR TO KECHERY	6.4	IV
	MANIMALA	KALLOOPARA TO THONDRA	6.3 - 6.4	IV
	PAMBA	MANNAR TO THAKAZHY	3.3 - 7.8	IV
	BHAVANI	ALONG ELACHIVAZHY	5.4	V
	CHITRAPUZHA	IRUMPANAM TO KARINGACHIRA	4.6	V

	KADALUNDY	ALONG HAJIRAPPALLY/ HAJIYARPALLI	3.6	V
	KALLAI	THEKEPURAM TO ARAKKINAR	4.5	V
	KARUVANNUR	ALONG KARUVANNUR	3.5	V
	KAVVAI	ALONG KAVVAI	3.9	V
	KUPPAM	THALIPARAMBA TO VELICHANGOOL	3.1 - 3.8	V
	KUTTIYADY	ALONG KUTTIYADY	5.0	V
	MOGRAL	ALONG MOGRAL	3.1	V
	PERIYAR	ALWAYE-ELOOR TO KALAMASSERY	3.2 - 5.1	V
	PERUVAMBA	ALONG PERUVAMBA	3.9	V
	PUZHACKAL	OLARIKKARA TO PUZHACKAL	3.8	V
	RAMAPURAM	ALONG RAMAPURAM	3.3	V
	THIRUR	NADUVILANGADI TO THALAKKADATHUR	3.6	V
	UPPALA	POYYA TO MULINJA	3.2	V
MADHYA PRADESH	SONE	ALONG AMLAI	12.4	III
	GOHAD	GOHAD DAM TO GORMI	6.3	IV
	KOLAR	SURAJNAGAR TO SHIRDIPURAM	7.5	IV
	TAPI	NEPANAGAR TO BURHANPUR	4.6 - 8	IV
	BICHIA	SILPARI TO GADHAWA	3.5	V
	CHAMLA	ALONG BADNAGAR, UJJAIN	4.0	V
	CHOUPAN	ALONG VIJAIPUR	3.4	V
	KALISOT	MANDIDEEP TO SAMARDHA VILLAGE	4.1	V
	KANHAN	KANHAN IN CHINDWARA DISTRICT BOUNDRY	3.2	V
	KATNI	ALONG KATNI	3.5	V
	KUNDA	KHARGONE TO KHEDI KHURD	4.0	V
	MALEI	JAORA TO BARAUDA	3.5	V
	MANDAKINI (MP)	ALONG CHITRAKUT	5.8	V
	NEWAJ	ALONG SHUJALPUR	4.0	V
	PARVATI	BATAWADA TO PILUKHEDI	3.2	V
	SIMRAR	ALONG KATNI	3.9	V
TONS	CHAKGHAT TO CHAPPAR	3.5	V	
WAINGANGA	CHINDWARA TO BALAGHAT	3.2	V	
MAHARASHTRA	GHOD	ANNAPUR TO SHISHUR	10.2	III
	KANHAN	BHANDARA TO NAGPUR	9.8-16.4	III
	KOLAR (MAH)	ALONG KORADI	18.0	III
	KRISHNA	SHINDI TO KURUNDWAD	3.4-14.0	III
	MOR	JALGAON TO AMODA	16.0	III
	PATALGANGA	KHADEPADA TO KOPOLI	5.0-18	III
	PEDHI	NARAYANPUR TO BHATKULI	20.0	III
	PENGANGA	MEHKAR TO UMARKHED	8.6-20	III
	PURNA	DHUPESHWAR TO ASEGAON	10.2-18.4	III
	TAPI	RAVER TO SHAHADA	8.0-12.0	III
	URMODI	DHANGARWADI TO NAGTHANE	12.4	III
	VENNA	MAHABALESHWAR TO MAHULI	7.2-12.5	III
	WAGHUR	SUNASGAON TO SAKEGAON	18.0	III
WENA	KAWADGHAT TO HINDONGHAT	10.2-13.8	III	

	BINDUSAR	SWARAJ NAGAR TO SNEHNAGAR	8.0	IV
	BORI	ALONG AMALNER	9.2	IV
	CHANDRABHAGA	PANDHARPUR TO SHEGAON DHUMALA	7.5-9.5	IV
	DARNA	IGATPURI TO SANSARI	5.0-9.0	IV
	GIRNA	MALEGAON TO JALGAON	6.6-9.0	IV
	HIWARA	PACHORA TO NIMBORA	8.6	IV
	KOYNA	KARAD TO PAPDARDE	8.6	IV
	PEHLAR	PELHAR DAM TO GOLANI NAKA	7.0	IV
	SINA	SOLAPUR TO BANKLAGI	8.5	IV
	TITUR	ALONG CHALISGAON, JALGAON	7.8	IV
	AMBA	BENSE TO ROHA	4.8	V
	BHATSA	SHAHAPUR TO BHADANE	4.8-6.0	V
	GOMAI	LONKHEDA TO SHAHDA	6.0	V
	KAN	KAVATHE TO SAKARI	5.0	V
	MANJEERA	LATUR TO NANDED BRIDGE	5.0	V
	PANCHGANGA	SHIROL TO KOLHAPUR	3.2-5.8	V
	PANZARA	VARKHEDE TO DHULE	6.0	V
	RANGAVALI	TINTEMBA TO NAVAPUR	5.0	V
	SAVITRI	DADLI TO MUTHAVALI	3.2-5.0	V
	SURYA	DHAMNI DAM TO PALGHAR	4.4-5.0	V
	TANSA	ALONG THANE	6.0	V
	ULHAS	KALYAN TO BADLAPUR	4.0-5.0	V
	VAITARNA	GANDHRE TO SARASHI	4.0	V
	VASHISTI	KHERDI TO DALVATNE	3.2-3.4	V
MANIPUR	IMPHAL	KANGLA MOAT TO SAMUROU	3.4-6.4	V
	IRIL	KANGLA SIPHAI TO UKHRUL	3.2	V
	KHUGA	KHUGA LAKE TO CHURACHANDPUR	3.1-3.6	V
	KHUJAIROK	MOREH TO MAOJANG	4.3	V
	LOKCHAO	BISHNUPUR TO LOKTAK LAKE	4.5	V
	MANIPUR	SEKMAIJAN TO THOUBAL	3.6-4.3	V
	THOUBAL	SHONG KONG TO PHADOM	3.5	V
	WANGJING	WANGJING TO HEIROK	4.1-4.3	V
MEGHALAYA	KYRHUKHLA	SUTNGA TO KHLIERIAT	10.0	IV
	NONBAH	NANGSTOIN TO WAHRIAT	6.0-7.5	IV
	UMTREW	BYRNIHAT TO MORANG DALA	6.2-8.0	IV
	LUKHA	MYNDIHATI TO SHYMPLONG	6.0	V
	MYNTDU	JOWAI TO PAMHADEM	5.2	V
MIZORAM	TIAU	ALONG CHAMPHAI	11.3	III
	TLAWNG	ALONG ZOBAWK, SAIRANG TO BAIRABI	3.1-6.7	IV
	TUIPUI	ALONG CHAMPHAI	8.2	IV
	TUIVAWL	ALONG KEIFANG	6.8	IV
	CHITE	ALONG ARMED VENG	3.7	V
	MAT	ALONG SERCHHIP	5.5	V
	SAIKAH	ALONG LAWNGTLAI	4.4	V
	TUIKUAL	ALONG SERCHHIP	6.0	V

	TUIRIAL	ALONG TUIRIAL, AIZWAL	3.4-4.6	V
NAGALAND	DZUNA	ALONG KOHIMA	6.0-13.0	III
	CHATHE	MEDZIPHEMA TO, DIMAPUR	7.0	IV
	DZU	KOHIMA TO DZUKO VALLEY	7.0	IV
	DZUCHA	ALONG KOHIMA	4.0	V
	SANO	ALONG KOHIMA	4.0	V
ODISHA	GURADIH NALLAH	ALONG ROURKELA	11.3	III
	KATHAJODI	CUTTACK TO URALI	5.8-11.2	III
	NANDIRAJHOR	D/S TALCHER	2.7 - 13	III
	DAYA	BHUBANESWAR TO BARAGARH	4.0-7.3	IV
	KUAKHAI	URALI TO BHUBANESWAR	6.7-7.7	IV
	BANGURU NALLAH	ALONG TALCHER RENGALI	3.2	V
	BHEDEN	ALONG BHEDEN	3.6	V
	BRAHAMANI	ROURKELA TO BIRITOL	5.8-6.0	V
	BUDHABALNAGA	MAHULIA TO BARIPADA	3.5	V
	KUSUMI	ALONG ANGUL TALCHER	3.2	V
	MAHANADI	SAMBALPUR TO PARADEEP	3.6	V
	MANGALA	ALONG PURI	5.7	V
	NAGAVALLI	JAYKAYPUR TO RAYAGADA	3.5	V
	NUNA	ALONG BIJIPUR, PURI	3.1	V
	RATNACHIRA	ALONG BHUBHNEHSWAR, PURI	3.3	V
	RUSHIKULYA	PRATAPPUR TO GANJAM	3.4	V
	SABULIA	ALONG JAGANNATHPATNA, RAMBHA	5.0	V
SERUA	KHANDAETA TO SANKHATRASA	4.8	V	
PUDUCHERRY	ARASALAR	ALONG KARAİKAL	7.0	IV
	CHUNNAMBAR	ALONG ARIYANKUPPAM	6.0	V
PUNJAB	KALI BEIN	SULTANPUR LODHI TO CONF TO BEAS	9.0	IV
	BEAS	ALONG MUKERIAN	3.8	V
RAJASTHAN	BANAS	ALONG BISALPUR DAM, SWAROOPGANJ, NEWTA DAM	13.2	III
	CHAMBAL	SAWAIMADHOPUR TO KOTA	3.2-4.8	V
SIKKIM	MANEY KHOLA	ADAMPOOL TO BURTUKK	3.2-4.5	V
	RANGIT	DAM SITE (NHPC) TO TREVANI	3.2-3.8	V
	RANICHU	NAMLI TO SINGTAM	3.8-4.0	V
	TEESTA	MELLI TO CHUNGTHANG	4.0-4.3	V
TAMIL NADU	BHAVANI	SIRUMUGAI TO KALINGARAYAN	3.3-6.6	IV
	TAMBIRAPANI	PAPPANKULAM TO ARUMUGANERI	3.1-4.0	V
TELANGANA	KARAKAVAGU	ALONG PALWANCHA	18.0	III
	MANER	WARANGAL TO SOMNAPALLI	6-20.0	III
	GODAVARI	BASAR TO KHAMMAM	4.0-9.0	IV
	KINNERSANI	ALONG PALWANCHA	10.0	IV
	KRISHNA	THANGADIGI TO WADAPALLY	5.0-6.0	V
TRIPURA	BURIGAON	ALONG BISHALGARH	3.9	V
	GUMTI	TELKAJILA TO AMARPUR	3.9	V
	HAORA	AGARTALA TO BISHRAMGANJ	3.2-4.0	V
	JURI	ALONG	4.9	V

		DHARMANAGAR		
	KHOWAI	ALONG TELIAMURA	3.3	V
	MANU	ALONG KAILASHAHAR	3.5-3.6	V
UTTAR PRADESH	GOMTI	SITAPUR TO VARANASI	3.1-18.0	III
	GANGA	KANNAUJ TO VARANASI	3.5-8.8	IV
	RAMGANGA	MURADABAD TO KANNAUJ	6.6	IV
	BETWA	HAMIRPUR TO WAGPURA	3.5-4.2	V
	GHAGHARA	BARHALGANJ TO DEORIA	4.0-4.5	V
	RAPTI	DOMINGARH TO RAJGHAT	4.7-5.9	V
	SAI	UNNAO TO JAUNPUR	4.0-4.5	V
	SARYU	AYODHYA TO ELAFATGANJ	4.3	V
UTTARAKHAND	KALYANI	D/S PANT NAGAR	16.0	III
	GANGA	HARIDWAR TO SULTANPUR	6.6	IV
	KOSI	SULTANPUR TO PATTIKALAN	6.4	IV
	NANDOUR	ALONG SITARGANJ	5.6-8.0	IV
	PILKHAR	IN THE VICINITY OF RUDRAPUR	10.0	IV
WEST BENGAL	CHURNI	SANTIPUR TOWN TO MAJHADIA	10.3-11.3	III
	DWARKA	TARAPITH TO SADHAK BAMDEB GHAT	5.6-17.0	III
	GANGA	TRIBENI TO DIAMOND HARBOUR	5.0-12.2	III
	DAMODAR	DURGACHAKM TO DISHERGARH	4.4-8.2	IV
	JALANGI	LAAL DIGHI TO KRISHNA NAGAR	8.3	IV
	KANSI	MIDNAPORE TO RAMNAGAR	9.9	IV
	MATHABHANGA	MADHUPUR TO GOBINDAPUR	8.5	IV
	BARAKAR	KULTI TO ASANSOL	5.7	V
	DWARAKESHWAR	ALONG BANKURA	1-5.6	V
	KALJANI	BITALA TO ALIPURDWAR	6.0	V
	KAROLA	JALPAIGURI TO THAKURER KAMAT	3.9	V
	MAYURKASHI	SURI TO DURGAPUR	5.2	V
	RUPNARAYAN	KOLAGHAT TO BENAPUR	3.1-5.8	V
	SILABATI	GHATAL TO NISCHINDIPUR	3.8	V
TEESTA	SILIGURI TO PAHARPUR	3.3	V	

48. In view of above, it is absolutely necessary that Action Plans are prepared to restore the polluted river stretches to the prescribed standards. The Action Plans may cover the following:

A) Source control

Source control includes industrial pollution control and treatment and disposal of domestic sewage as detailed below:-

(a) Industrial pollution control

- (i) Inventorisation of industries
- (ii) Categories of industry and effluent quality

- (iii) Treatment of effluents, compliance with standards and mode of disposal of effluents
- (iv) Regulatory regime.

(b) Channelization, treatment, utilization and disposal of treated domestic sewage.

- (i) Identification of towns in the catchment of river and estimation of quantity of sewage generated and existing sewage treatment capacities to arrive at the gap between the sewage generation and treatment capacities;
- (ii) Storm water drains now carrying sewage and sullage joining river and interception and diversion of sewage to STPs,
- (iii) Treatment and disposal of septage and controlling open defecation,
- (iv) Identification of towns for installing sewerage system and sewage treatment plants.

(B) River catchment/Basin Management-Controlled ground water extraction and periodic quality assessment

- (i) Periodic assessment of groundwater resources and regulation of ground water extraction by industries particularly in over exploited and critical zones/blocks.
- (ii) Ground water re-charging /rain water harvesting
- (iii) Periodic ground water quality assessment and remedial actions in case of contaminated groundwater tube wells/bore wells or hand pumps.
- (iv) Assessment of the need for regulating use of ground water for irrigation purposes.

(C) Flood Plain Zone.

- (i) Regulating activities in flood plain zone.
- (ii) Management of Municipal, Plastic, Hazardous, Bio-medical and Electrical and Electronic wastes.
- (iii) Greenery development- Plantation plan.

(D) Ecological/Environmental Flow (E-Flow)

- (a) Issues relating to E-Flow
- (b) Irrigation practices

(E) Such other issues which may be found relevant for restoring water quality to the prescribed standards.

49. Model Action Plan for Hindon River, already prepared by the CPCB, may also be taken into account.

50. In view of above, we consider it necessary to issue the following directions:

- i) All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e BOD < 3 mg/L and FC < 500 MPN/100 ml) within six months from the date of finalisation of the action plans.
- ii) The action plans may be prepared by four-member Committee comprising, Director, Environment., Director, Urban Development., Director, Industries., Member Secretary, State Pollution Control Board of concerned State. This Committee will also be the Monitoring Committee for execution of the action plan. The Committee may be called "River Rejuvenation Committee" (RRC). The RRC will function under the overall supervision and coordination of Principal Secretary, Environment of the concerned State/Union Territory.
- iii) The action plan will include components like identification of polluting sources including functioning/ status of STPs/ETPs/CETP and solid waste management and processing facilities, quantification and characterisation of solid waste, trade and sewage generated in the catchment area of polluted river stretch. The action plan will address issues relating to; ground water extraction, adopting good irrigation practices, protection and management of Flood Plain Zones (FPZ), rain water harvesting, ground water charging, maintaining minimum environmental flow of river and plantation on both sides of the river. Setting up of biodiversity parks on flood plains by removing encroachment shall also be considered as an important component for river rejuvenation. The action plan should focus on proper interception and diversion of sewage carrying drains to the Sewage Treatment Plant (STP) and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water. The action plan should have speedy, definite or specific timelines for execution of steps. Provision may be made to pool the resources, utilizing funds from State budgets, local bodies, State Pollution Control Board/ Committee and out of Central Schemes.

- iv) The Action Plans may be subjected to a random scrutiny by a task team of the CPCB.
- v) The Chief Secretaries of the State and Administrators/ Advisors to Administrators of the Union Territories will be personally accountable for failure to formulate action plan, as directed.
- vi) All States and Union Territories are required to send a copy of Action Plan to CPCB especially w.r.t Priority I & Priority II stretches for approval.
- vii) The States and the Union Territories concern are directed to set up Special Environment Surveillance Task Force, comprising nominees of District Magistrate, Superintendent of Police, Regional Officer of State Pollution Control Board and one person to be nominated by District Judge in his capacity as Chairman of Legal Services Authority on the pattern of direction of this Tribunal dated 07.08.2018, in *Original Application No. 138/2016 (TNHRC), "Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu Case)*.
- viii) The Task Force will also ensure that no illegal mining takes place in river beds of such polluted stretches.
- ix) The RRC will have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement and failure may also be published on such website. The Committee may consider suitably rewarding those contributing significantly to the success of the project.
- x) The RRCs will have the authority to recover the cost of rejuvenation in Polluter Pays Principle from those who may be responsible for the pollution, to the extent found necessary. In this regard, principle laid down by this Tribunal in order dated 13.07.2017 in *O.A No. 200 of 2014, M.C Mehta Vs. U.O.I* will apply. Voluntary donations, CSR contribution, voluntary services and private participation may be considered in consultation with the RRC.

51. We understand that the State Pollution Control Boards or other authorities are having funds deposited under the order of the Tribunal besides funds available

under Consent Mechanism. The said funds may be utilized for the purpose of expenditure for the Committees, including preparation and execution of action plans in accordance with the provisions contained in the Water Act, 1974.

52. A copy of this be sent by e-mail to all the concerned i.e. the Ministry of Water Resources, Ministry of Environment, Forest & Climate Change, Ministry of Housing and Urban Affairs, the Niti Ayog, National Mission for Clean Ganga, Central Pollution Control Board, Chief Secretaries of all the States and Union Territories for compliance.

53. The RRCs will send progress reports by e-mail at filing.ngt@gmail.com on or before 15.12.2018.

54. Needless to say, that order of National Green Tribunal is binding as a decree of Court and non-compliance is actionable by way of punitive action including prosecution, in terms of the National Green Tribunal Act, 2010.

55. Put up for consideration of the Report on 19th December, 2018.



....., CP
(Adarsh Kumar Goel)

....., JM
(S.P. Wangdi)

....., EM
(Dr. Nagin Nanda)

New Delhi
September 20, 2018

**GOVERNMENT OF MEGHALAYA
FORESTS & ENVIRONMENT DEPARTMENT**

NOTIFICATION

ANNEXURE R/3

Dated Shillong, the 24th January, 2019.

No.ENV.5/2018/44: In pursuance of NGT/ Principal Bench Order Dt. 20th Sept., 2018, in Original Application No. 673/2018, News item published in 'The Hindu' Authored by Shri. Jacob Koshi titled " more river stretches are now critically polluted", the Government of Meghalaya is pleased to constitute a River Rejuvenation Committee for preparing an action plan within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e BOD < 3 mg/L and FC < 500 MPN/100 ml) within six months from the date of finalisation of the action plans, consisting of the following members:

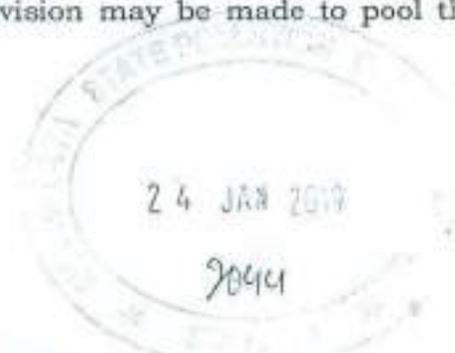
1. **River Rejuvenation Committee** (A four-member Committee for preparing the Action Plan)
 - i. Principal Chief Conservator of Forests and HoFF -----Chairperson
 - ii. Director, Urban Development.-----Member Convener
 - iii. Director, Industries,-----Member
 - iv. Member Secretary, Meghalaya State Pollution Control Board.----Member

This Committee will also be the Monitoring Committee for execution of the action plan. The Committee may be called "River Rejuvenation Committee" (RRC). The RRC will function under the overall supervision and coordination of Principal Secretary, Forest & Environment, Government of Meghalaya.

Term of Reference:

- (i) The action plan will include components like identification of polluting sources.
- (ii) Functioning/ status of STPs/ETPs/CETP and solid waste management and processing facilities.
- (iii) Quantification and characterisation of solid waste, trade and sewage generated in the catchment area of polluted river stretch.
- (iv) The action plan will address issues relating to; ground water extraction, adopting good irrigation practices, protection and management of Flood Plain Zones (FPZ), rain water harvesting, ground water charging, maintaining minimum environmental flow of river and plantation on both sides of the river.
- (v) Setting up of biodiversity parks on flood plains by removing encroachment shall also be considered as an important component for river rejuvenation.
- (vi) The action plan should focus on proper interception and diversion of sewage carrying drains to the Sewage Treatment Plant (STP) and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water.
- (vii) The action plan should have speedy, definite or specific timelines for execution of steps. Provision may be made to pool the resources, utilizing

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- funds from State budgets, local bodies, State Pollution Control Board/Committee and out of Central Schemes.
- (viii) The RRC will have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement and failure may also be published on such website. The Committee may consider suitably rewarding those contributing significantly to the success of the project.
- (ix) The RRCs will have the authority to recover the cost of rejuvenation in Polluter Pays Principle from those who may be responsible for the pollution, to the extent found necessary. In this regard, principle laid down by this Tribunal in order dated 13.07.2017 in *O.A No. 200 of 2014, M.C Mehta Vs. U.O.I* will apply. Voluntary donations, CSR contribution, voluntary services and private participation may be considered in consultation with the RRC.

The Action Plans may be subjected to a random scrutiny by a task team of the CPCB. A copy of Action Plan is required to be sent to CPCB especially w.r.t Priority I & Priority II (**ANNEXURE I**) stretches for approval

Sd/-
(P.W. Ingty, IAS)
Addl. Chief Secretary to the Govt. Of Meghalaya,
Forests & Environment Department
Shillong

ANNEXURE R/4

**REVISED ACTION PLAN FOR REJUVENATION OF RIVER MYNTDU
WEST JAINZIA HILLS DISTRICT, MEGHALAYA
IDENTIFIED AS RIVER POLLUTED STRETCH
UNDER PRIORITY - V**

PREPARED BY

**RIVER REJUVENATION COMMITTEE
GOVERNMENT OF MEGHALAYA**

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1.0 INTRODUCTION

The river originates at a place called Mih Myntdu, adjacent to Jowai town. This river encircles Jowai on three sides excluding the northern part of town. The river flows across Jowai town which is the second largest town in the state of Meghalaya, and then through Leshka (where a Hydro Project Dam is being constructed) to reach a village Borghat, within Jaintia Hills, before finally entering Bangladesh, where it is locally called 'Shari'. The total length of the polluted stretch is 9.9 kms. It receives the waste water discharges from the Jowai town and run off from the agricultural fields either directly or through drains. The total population in the catchment area of Myntdu river is 28,430 as per 2011 census. There is no industrial estate, however there are isolated small scale industries located in the catchment of the river. Map showing the catchment area of Myntdu River is shown in figure below

(a) Localities in the catchment of Myntdu River: Myntdu River is one of the major river encircling Jowai towns on three sides. Localities in the catchment of Myntdu river are Mooralong, lumpariat, Mookyndup, Tyndongwapung, Ladthaboh, Caroline Colony, New hill, Moosalynkut, Salaroh, Mynthong, Chutwakhu, Khimusniang, lawmusiang, Mission Compound, Tpep-pale, *Chah Tngait, Khim u sniang, Moo-chu riaw, Um-Changpung, law Musiang Chilliangraij, Umchang-iar, Lower Chukwakhu, Lumkyrwiang, part of Mission Compound part of longpiah, and some part of Loomiongkjam* Panaliar, Dulong, longpiah, Loomiongkjam, law Musiang”, Tpep Pale, Moosylangkat, and Lathalaboh Soo Mer”and “Niaw Mer

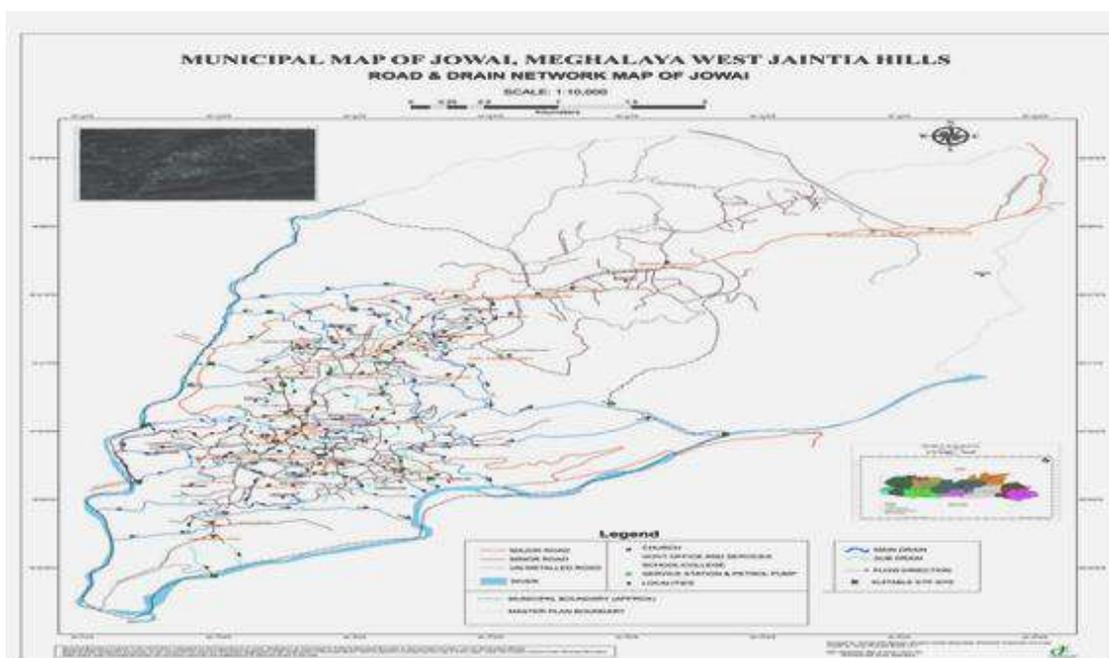


FIGURE 1: MAP INDICATING CATCHMENT AREA OF MYNTDU RIVER

(b) Major Industrial Areas in the Catchment of Myntdu River: There is no major industrial estate but only some small scale industries are located in the catchment area of the River.

(c) Major Drains contributing to Pollution in Myntdu River: There are 5 major drains/tributaries which pass through Jowai town that discharge the untreated sewage and municipal wastes into the Myntdu River. Table 1 below indicated the identified drains and their co-ordinates and flow

TABLE 1 -TRIBUTARIES/DRAINS OF MYNTDU RIVER

Sl.No	Major outfall/drains	GPS Co-ordinates	Discharge of Flow
1.	<i>Riatsiatsim</i>	25°26.592'N, 92°191.29'	0.053 Cumec
2.	<i>Rampyrthal</i>	25°26.030'N, 92°12.232E'	
3.	<i>Liar-Urkyrdeñ</i>	25°25.852'N, 92°12.192E'	
4.	<i>Myn'twa</i>	25°26.463'N, 92°13.223'	0.334 Cumec
5.	<i>Soomer and Niawmer</i>	25°26.986'N, 92°15.814'E	0.200

The Meghalaya State Pollution Control Board is monitoring the water quality of the Myntdu River at Jowai. Based on the water quality monitoring data submitted by the Board, the CPCB has identified the Myntdu River at Jowai as polluted river stretch under Priority Class-V as the BOD value was observed to be above 3.0 mg/l.

2.0 OBJECTIVES/ACHIEVABLE TARGETS FOR RESTORATION OF POLLUTED

In pursuance of the Hon'ble National Green Tribunal (Principal Bench), New Delhi, orders dt. 20.09.2018 and 19.12.2018 in original application No. 673/2018 in the matter on News item published in "The Hindu" Titled more river stretches are now critically polluted - Central Pollution Control Board, an action plan has been evolved with the objective of restoration of Myntdu River at Jowai to meet the bathing standards of Biological Oxygen Demand (BOD)

3.0 Water Quality of the River, drains and ground water sources (located in the catchment of the river of the Myntdu River) .

3.1 Water quality data of Myntdu River

The river water quality data for the year 2019 (Jan to December) is provided at Table 1 below (The regular monitoring is carried out by Pollution control Board)

Water quality of Myntdu River

The river water quality data for the year 2019 (Jan to December) is provided at Table 2 below.

TABLE 2: WATER QUALITY DATA OF MYNTDU RIVER AT JOWAI (JAN –DEC 2019)

PARAMETERS MONTHS	pH	DO mg/L	BOD mg/L	FC MPN/100ml	TC MPN/100ml

JAN	6.9	6.4	4.5	2300	4700
FEB	6.7	6.1	4.8	2400	4900
MARCH	6.7	6.3	4.0	2300	4700
APRIL	6.8	6.5	3.8	2100	4400
MAY	6.7	6.6	3.8	1700	3900
JUNE	6.9	6.9	3.5	1200	3400
JULY	7.1	7.0	3.3	430	1700
AUGUST	6.8	7.2	3.0	310	1300
SEPTEMBER	7.0	7.4	3.2	280	920
OCTOBER	6.8	7.0	3.3	240	840
NOVEMBER	6.8	7.2	3.2	220	790
DECEMBER	6.9	7.4	3.2	140	440

3.2 The water quality of the drains is shown in Table 3 below

TABLE 3-WATER QUALITY DATA OF THE DRAINS DISCHARGING INTO THE MYNTDU RIVER

	pH	Dissolved oxygen (mg/l)	BOD (mg/l)	Total Coliform (MPN/100ml)	Feecal Coliform (MPN/100ml)	Zn (mg/l)	Cr (mg/l)	Ni (mg/l)	Cu (mg/l)	Mn (mg/l)
<i>Riatsiatsim</i>	7.4	4.5	6.6	5000	2400	0.03	BDL	BDL	BDL	0.14
<i>Rampyrthal</i>	7.4	3.2	10.5	8900	5200	0.08	BDL	BDL	BDL	0.12
<i>Liar-Urkyrdeĩñ</i>	7.3	2.8	15.4	15000	10000	0.05	BDL	BDL	BDL	0.14
<i>Myn'twa</i>	7.6	4.5	3.6	500	110	0.10	BDL	BDL	BDL	0.01
<i>Soomer & Niawmer</i>	6.6	4.8	3.4	480	70	0.07	BDL	BDL	BDL	0.08

3.3 GROUND WATER QUALITY

The Meghalaya State Pollution Control Board is monitoring the water quality of ground water located in Jowai at the following locations and the water quality is provided at Table 3 below

TABLE 4: GROUND WATER QUALITY DATA IN THE CATCHMENT OF MYNTDU RIVER

Sampling Locations →	<i>Drinking Water Norms as per IS 10500:2012</i>	Dug Well, Riatsasim, Jowai	DTW, Thomas Jones Synod College, lawmusiang	Dug well Mooralong, Ladthaboh	Borewell Khimusniang	Spring Chilliãng Raij
Parameters ↓						
pH	6.5-8.5	6.7	6.4	7.2	6.6	6.2
Conductivity (mg/l)	-	315.0	275.0	315.0	195.0	138.0
Turbidity (NTU)	1.0	0.65	1.8	1.0	7.2	1.0
Chloride (mg/l)	250.0	21.0	44.0	14.0	7.0	12.0
Alkalinity (mg/l)	200.0	82.0	16.0	122.0	58.0	42.0
Total Hardness	200.0	148.0	104.0	142.0	74.0	40.0

(mg/l)						
Nitrate-N (mg/l)	45.0	5.7	14.1	1.3	2.0	8.8
Iron (mg/l)	0.3	0.12	0.1	0.12		0.12
Total Coliform (MPN/100ml)	Shall not be detectable	10	8	12	28	ND
Faecal Coliform (MPN/100ml)	Shall not be detectable	ND	ND	ND	ND	ND
Zn (mg/l)	5.0 mg/l	BDL	BDL	BDL	BDL	BDL
Cr (mg/l)	0.05	BDL	BDL	BDL	BDL	BDL
Ni (mg/l)	0.02	BDL	BDL	BDL	BDL	BDL
Cu (mg/l)	0.05	BDL	BDL	BDL	BDL	BDL
As (mg/l)	0.01	BDL	BDL	BDL	BDL	BDL
Lead (mg/l)	0.01	BDL	BDL	BDL	BDL	BDL
Nickel (mg/l)	0.02	BDL	BDL	BDL	BDL	BDL
Cadmium(mg/l)	0.003	BDL	BDL	BDL	BDL	BDL
Manganese(mg/l)	0.1	BDL	BDL	BDL	BDL	BDL

4.0 IDENTIFICATION OF THE SOURCE OF POLLUTION IN RIVER MYNTDU

The sources of pollution of the river Myntdu include both point and non-point sources. Point sources of pollution are from the dry latrines located along the river Jowai and its tributaries, effluents from hotels, restaurants, automobile workshops, slaughter houses, vegetable, meat and fish markets, hospitals, diagnostic clinics, situated in the catchment areas. Non-point sources of pollution include indirect discharge of untreated sewage, municipal waste water, dumping of solid wastes, agricultural runoffs.

5.0 COMPONENTS OF ACTION PLAN

Following components have identified for preparation of action plan for rejuvenation of river in compliance to the Hon'ble NGT Orders as detailed below:

The proposed action plan covers following components:

SOURCE CONTROL

Source control includes industrial pollution and disposal of domestic sewage as detailed below:

5.1 Channelization, treatment, utilization and disposal of treated domestic sewage

- a. Identification of towns and villages in the catchment of rivers Myntdu and estimation of quantity of sewage generation.
- b. Storm water drains now carrying sewage and sullage joining rivers Myntdu and interception and diversion of sewage to STPs.
- c. Treatment and disposal of septage and controlling open defecation.
- d. Identification of areas for installing decentralized sewage treatment plants.

5.2 Industrial Pollution Control

- a. Inventorization of industries
- b. Category of industry and effluent quality
- c. Treatment of effluents, compliance with standards and mode of disposal of effluents

5.3 Solid Waste Management

- a. Collection, segregation, transportation, disposal and treatment of municipal solid wastes generated from town in accordance of provisions of the Solid Waste Management Rules, 2016.
- b. Restriction of illegal disposal of solid waste along the river bank of Umkhrach River and flood plain zones.
- c. Burning of solid waste should be strictly prohibited.
- d. Construction and demolition wastes should be disposed in designated areas and no case it should be disposed into river beds or flood plain zone.

5.4 Flood Plain Zone

- a. Regulating activities in flood plain zone.
- b. Management of Municipal, Plastic, Hazardous, Bio-medical and Electronic wastes.
- c. Afforestation in the catchment and aesthetic plantation programs.
- d. Improve irrigation practices.

5.5 Ecological/Environmental Flow (E-Flow)

- a. Issues relating to E-Flow
- b. Irrigation practices

6.0 DETAILED GAP ANALYSIS

6.1 SEWAGE MANAGEMENT: MYNTDU CATCHMENTS

The sewage flow is considered as 80% of the net water supplied to the consumer. Considering 135 lpcd water supply, the rate of sewage generation works out as 108 lpcd and the same has been adopted. The population in the catchment of Myntdu river as per 2011 census is about 28430 and projected population is about 37812. The sewage generation of the floating population is also considered. Main source of water for Jowai is from Jowai Water Supply Scheme (PHED) which is a surface water source of Myntdu. The detailed gap analysis is given in the Table 4 below for the Myntdu River:

TABLE 5: GAP ANALYSIS WITH RESPECT TO SEWAGE

River	Towns	Population (2011)	Population (2032)	Projected Total Water Consumption (135 lpcd) (MLD)	Projected Estimated Average Sewage Generation(MLD)*	Existing STPs		Gap (MLD)
						Nos	Capacity	
Myntdu	Jowai	28430	37812	5.10	4.10	-	-	4.10

Base on the projected population, the estimated gap in sewage management is 4.10 MLD.

Presently, Septic tanks have been made by individual households for disposal of sewage and the supernatant is directly or indirectly disposed of in nearby drains which join the drains which joins the Myntdu River. There is no underground planned pipe sewerage system in Jowai and thus sewage management is being done with natural slope in open drain system leading to valleys. Due to the hilly terrain of Jowai , a common Sewage Treatment Plant is practically feasible. Hence decentralized type of Sewage Treatment Plants are proposed at the outfall of major drains

6.2 INDUSTRIAL EFFLUENT MANAGEMENT

In the catchment of the Myntdu River there is no industrial estate but the industries are isolated in pockets which are in operation. The total number of industries which fall in the catchment of Myntdu River are 20(twenty) in number. The number of industries categorically located in and around the catchment area of the Myntdu river stretch are as provided in Table 6

TABLE 6: NUMBER OF INDUSTRIES OPERATING IN THE CATCHMENT

Sl. No.	River	Identified River Stretch	Type of Industries/category	Number of Industries
1.	Myntdu	Jowai to Pamhadem	Red Category	2
			Water polluting /small scale	18

The total water consumption of the industries, the total effluent generated and number of captive ETPs along with the Gap Analysis within the catchment of Umkrah River are given in the **Table 7**

TABLE 7 : GAP ANALYSIS OF EFFLUENT GENERATED BY INDUSTRIES

Sl. No.	River	Type of Industries/ category	No. of Industries	No. of Industries having Captive ETPs	No. of Industries not having Captive ETPs	Total Water Consumption by the Industries (MLD)	Industrial Effluent Generated by the Industries (MLD)	Industrial Treated Effluent	GAP	Mode of Disposal
1.	Myntdu	Red Category	2	2		0.49	0.40	0.40	Nil	Treated Effluent is Disposed off to Drains
		Water polluting /small scale	18	18	-					

6.3 SOLID WASTE MANAGEMENT

Sl. No.	Town or City	Population (2011)	Expected population (in 2032)	Future Total solid waste generation (at 0.35 kg per head per day) in TPD	Existing treatment facility		GAP
					Total no. of Treatment facilities	Total capacity	

1	Jowai (Catchment of Myntdu river)	28430	37812	13.23	-	-	13.23
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6.4 INDUSTRIAL HAZARDOUS WASTE

Automobile Service Centers are already covered under consent mechanism under Water Act (Prevention and Control of Pollution) Act 1974. The Committee advised the Meghalaya State pollution Control Board to bring all these under the HW & OW (M&H) Rules, 2016 and regulate them through authorization process.

6.5 BIOMEDICAL WASTE MANAGEMENT

There is one common bio-medical waste treatment facilities in the state of Meghalaya which at present is nonfunctional. The Common Bio-medical Waste Treatment Facility (CBMWTF) is under repair and renovation. The HCF have their own treatment facilities like Deep burial pits and sharp pits constructed in accordance to Biomedical Waste Management Rules 2016. The biomedical wastes are disposed by deep burial and the liquid portion by direct discharge into drains after chemical disinfection. Some of the HCF also have autoclaves, shredders and incinerators for the treatment of the Biomedical wastes.

6.6 CONSTRUCTION & DEMOLITION WASTE

No major large scale construction or demolition is carried out within the catchment area of the Myntdu rivers. Small scale housing construction and demolition is carried out where in the waste generated is used for land filling and leveling.

7.0. MYNTDU RIVERS REJUVENATION PLAN:

7.1 *Action plan for management of sewage:*

- a. Each household within the catchment area of the Myntdu River needs to have a septic tanks and a soak pit.
- b. The flow in each drain should exclude monsoon flow. Further, any drain if receiving fresh water from any escape channel etc, should be examined for its diversion rather than mixing with sewage.

Decentralized Sewage Treatment Plants (STPs) using anaerobic waste water treatment process will be installed at 7 sewerage zones.

7.2 *Action plan for management of industrial effluents:*

- a. All the industries (water polluting) will be directed to have captive ETPs and ensure to compliance to effluent discharge norms.
- b. Industries will be directed to adopt best practices to minimize water consumption and for

recycling of treat waste water.

- c. Provision of waste water treatment system.
- d. Hotels/Restaurants particularly located on road-side should not dispose untreated sewage and solid waste into nearby public drain or rivers. Such establishments should be properly regulated and levied with fines in case of any violation.

7.3 **Action plan for management of Solid Waste Management:**

- a. Implementation of Door-to-Door collection.
- b. Source segregation as biodegradable and non-biodegradable wastes.
- c. Identification of suitable site for setting up common waste processing and secure landfill facility.
- d. Transportation, disposal and treatment facilities of municipal solid wastes generated from town in accordance of provisions of the Solid Waste Management Rules, 2016.
- e. Restriction illegal disposal of solid waste along the river bank and flood plain zones.
- f. Prohibition on burning of solid wastes.
- g. Development of integrated solid waste management facility (provision of segregation, treatment, compost, pellets making as well as landfill with leachate treatment provision in accordance with solid waste management rules, 2016 as further amendments made thereof.
- h. Bio-mining and Capping of existing municipal dumpsite in accordance with the SWM rules, 2016

7.4 **Flood Plain Zone (FPZ):**

Department of Water Resources should identify /demarcate Flood Plain Zone and regulate the activities. Such regulations would also cover:

- a. Plantation in Flood Plain Zone (FPZ) – By Forest and Environment Department, Meghalaya
- b. Checking and removal of encroachments periodically- District Administration
- c. Prohibition of disposal of municipal and bio-medical waste particularly in drains-By District administration/Jowai Municipal Board;
- d. Department of Water Resources, Meghalaya may notify FPZ - within one year.

7.5 **Greenery development- Plantation plan/Biodiversity Parks:**

Bio-diversity parks wherever feasible will be developed by the Forest & Environment Deptt.

Greenery or plantation on both sides of the river will be carried out by the Forest Department.

7.6 **Sand Mining in river stretches:**

Sand mining on the river bed has been banned.

7.7 **Environmental Flow (E-Flow):**

The river Myntdu carry natural waters during the monsoon and even during the lean season as the two rivers are perennial rivers. Provisions of roof top rain water harvesting in Govt. building, commercial buildings, hotels and Houses will be emphasized. By-laws are made in the Urban Affairs Department for provisions of roof top rain water harvesting. Hydrological Stations will be set up along the stretch of the river Myntdu by Water Resources Department.

8 MONITORING OF ACTION PLAN

In compliance with the order passed on OA No. 673/2018 dated 20.09.2018 by the Hon'ble National Green Tribunal (NGT) Principal Bench, New Delhi, "River Rejuvenation Committee" was constituted by the Governor of Meghalaya vide order NO. ENV.5/2018/44 Dated 24.01.2019, .

The proposed Action Plans will be monitored by the River Rejuvenation Committee (RRC) which has been constituted by Government of Meghalaya. CPCB experts also shall be invited for the RRC review meetings for taking feedback and suggestions.

Action Plan for River Rejuvenation of polluted river stretches shall be prepared and monitored by the Committee.

River Rejuvenation Committee:-

- | | | | |
|----|---|----|-----------------|
| 1. | PCCF & HOFF, Forest & Environment Department, Meghalaya | -- | Chairman |
| 2. | Director, Urban Affairs Department, Meghalaya | -- | Member Convener |
| 3. | Director, Commerce and Industries Department, Meghalaya | -- | Member |
| 4. | Member Secretary, Meghalaya State Pollution Control Board | -- | Member |

9. ACTION PLAN:

Action plans with time lines and executing authorities with the budget estimates are given in the following Table below:

Sl. No	Action Plan for rejuvenation of River Myntdu	Execution Agency/ Department	Time Target	Amount (in rupees)	Remarks
1. SEWAGE MANAGEMENT					
	Installation and commissioning of decentralized STPs Chanelization including diversion of sewage generated from household/ townships /interception of all the drains presently carrying sewage and for ensuring proper treatment through the upcoming Decentralized Sewage Treatment Plants at the major outfalls of the drains. Faecal Sludge Treatment Plant for treatment of Septage from individual households (1.5 MLD) along with site development works	Urban Affair Department, Jowai Municipal Board, Urban Affairs Department & Shillong Municipal Board	April 2021	41 crores (Rs.35 crores for ETP + Rs.6 crore for Septage management) 20 crore Include in the installation & commissioning of STPs	Preliminary Project proposal Reports for External aided project was taken up by the Directorate of Urban affairs
	Utilization of treated waste water Irrigating the nearby plantation areas within the vicinity of Faecal Sludge Treatment Plant Use of treated	Urban Affair Department, Shillong Municipal Board		-	After commissioning the project utilization of treated waste water will be started.

	waste water for construction of infrastructure projects or building activity. Flushing/cleaning of sewage drains. Fire brigades Flushing purposes in the upcoming buildings especially Govt building etc. Operation and maintenance of STP				
2. INDUSTRIAL POLLUTION CONTROL					
	Action against the industries not installed ETPs or ETPs exist but not operating or ETP outlet or treated effluent is not complying to the effluent discharge standards or norms.	MSPCB	Continuous Process		Directions, show cause notices and Closure notices are issued.
3. SOLID WASTE MANAGEMENT:					
	Solid Waste Management Project. 1. A Solid Waste Management Project is being initiated by the Urban Affairs Department for the development of the scientific waste management facilities for Shillong City will include Recycling Plant, bio-fertilizer production, particle board from waste	Urban Affairs Department Jowai Municipal Board		30.0 crores	DPR for sanitary landfill, compost plant, windrow platform etc was prepared by Anderson Biotech(P) Ltd (Consultant through Meghalaya Urban Authority and thereafter submitted to the Government. approval awaited.

	<p>matters and bricks will be manufactured. Only 5 to 10 % of the waste will land filled.</p> <p>2. Development of integrated solid waste management facility (provision of segregation, treatment, compost, pellets making as well as sanitary landfill with leachate treatment provision in accordance with solid waste management rules, 2016 as further amendments made thereof.</p>				
4. BIO-MEDICAL WASTE MANAGEMENT:					
	Development of one Common Biomedical waste treatment facility	Urban Affairs Department, Shillong Municipal Board	30 th March, 2021	-	Cost is included in Umkhrah Action Plan
	Installation of Captive ETPs at all the Government Hospitals	Health Department (Engineering Wing)	30 th March 2021	-	Works has started. Show Cause Notice has been issued by MSPCB to the Health Department
5. GROUNDWATER QUALITY					
	Groundwater quality monitoring at salient points in the catchment of river Myntdu	Meghalaya State Pollution Control Board,	Continuous activity	-	
6. FLOOD PLAIN ZONE:					
	Prohibition on illegal disposal of waste and removal of encroachment	District Administration & Urban Affairs Department	Continuous activity	-	

	from river banks.				
7. ENVIRONMENTAL FLOW (E-FLOW) AND GROUNDWATER RECHARGE MEASURES:					
	Provisions of roof top rain water harvesting in Govt. building, commercial buildings, hotels and Houses	District Administration/ Urban Affairs Department	Continuous activity	-	By-laws are made in the Urban Affairs Department.
	Setting up of Hydrological Stations. (non-recurring cost)	Water Resources Department	30 th March 2021	0.054 Crores	Funding through State Government
8. GREEN DEVELOPMENT:					
	Plantation on both sides of the river and in the private land and individual land owner	Forest & Environment Department	30 th April 2021	0.0743930 crore	
9. CLEANING & AWARENESS ACTIVITIES					
	Public awareness programme through add on media	Forest & Environment Department, MSPCB, District Administration	Continuous activity		
GRAND TOTAL AMOUNT				91.12 Crore	

ANNEXURE R/5

State-wise Identified Polluted Rivers and the Status of Action Plans approved by CPCB in compliance to Hon'ble NGT Orders dated 20.09.2018, 19.12.2018, 08.04.2019, 6.12.2019 & 29.6.2020 in OA No. 673 of 2018 (as on 31.10.2020)

Name of the State / UT	Total No. of Identified Polluted River Stretches (PRS)	Priority I & II PRS approved		Priority III PRS		Priority IV PRS		Priority V PRS*	Total Action Plans (P-I to P-IV) Approved by CPCB Task Team
		Priority I	Priority II	Total Number	Priority III approved	Total Number	Priority IV approved		
Andhra Pradesh	5	0	0			2	2	3	2
Assam	44	3	1	4	4	3	3	33	11
Bihar	6	0	0	1	1			5	1
Chhattisgarh	5	0	0			4	4	1	4
DD & DNH	1	1	0					0	1
Delhi	1	1	0					0	1
Goa	11	0	0	1	1	2	2	8	3
Gujarat	20	5	1	2	2	6	6	6	14
Haryana	2	2	0					0	2
Himachal Pradesh	7	1	1	1	1			4	3
J & K	9	0	1	2	2	2	2	4	5
Jharkhand	7	0	0			3	3	4	3
Karnataka	17	0	0	4	4	7	7	6	11
Kerala	21	1	0			5	5	15	6
Madhya Pradesh	22	3	1	1	1	3	3	14	8
Maharashtra	53	9	6	14	14	10	10	14	39
Manipur	9	0	1					8	1
Meghalaya	7	2	0			3	3	2	5
Mizoram	9	0	0	1	1	3	3	5	4
Nagaland	6	1	0	1	1	2	2	2	4
Odisha	19	1	0	3	3	2	2	13	6
Puducherry	2	0	0			1	1	1	1
Punjab	4	2	0			1	1	1	3
Rajasthan	2	0	0	1	1			1	1
Sikkim	4	0	0					4	0
Tamil Nadu	6	4	0			1	1	1	5
Telangana	8	1	2	2	2	2	2	1	7
Tripura	6	0	0					6	0
Uttar Pradesh	12	4	0	1	1	2	2	5	7
Uttarakhand	9	3	1	1	1	4	4	0	9
West Bengal	17	1	1	3	3	4	4	8	9
Grand Total	351	45	16	43	43	72	72	175	176

* Action plans pertaining to Priority V does not require approval from CPCB and Action Plans Pertaining to Priority V to be approved by the River Rejuvenation Committees constituted by the respective State Governments/UT Administrations .



ANNEXURE R/6

Legal/OA673/2018/NMCG/2019/

Date: 19th June 2020

To,
The Registrar,
Hon'ble National Green Tribunal,
Faridkot House, Copernicus Marg,
New Delhi - 110 001

Subject: 1st Quarterly Report of Central Monitoring Committee constituted vide NGT order dated 29.11.2019 (uploaded on website on 06.12.2019) in the NGT Matter OA No. 673 of 2018

Sir/ Ma'am,

In compliance to the Hon'ble NGT Matter OA No. 673 of 2018 (News item published in "The Hindu" authored by Shri Jacob Koshy Titled "More river stretches are now critically polluted: CPCB") regarding 351 polluted river stretches, first quarterly report of the Central level Committee constituted under the Chairmanship of Secretary, DoWR, RD&GR, Ministry of Jal Shakti is enclosed herewith for kind information.

Enclosure: As above

Yours faithfully,

(D.P. Mathuria) 19.6.2020

Executive Director-Technical

**FIRST QUARTERLY REPORT OF THE
CENTRAL MONITORING COMMITTEE
CONSTITUTED VIDE
NGT ORDER DATED 29.11.2019
(UPLOADED ON THE NGT WEBSITE ON 06.12.2019)
IN THE MATTER OA NO. 673 OF 2018**

**NATIONAL MISSION FOR CLEAN GANGA
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT
AND GANGA REJUVENATION,
MINISTRY OF JAL SHAKTI,
GOVERNMENT OF INDIA, NEW DELHI
JUNE 2020**

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Tour report for assessment of polluted river stretches in Meghalaya

A. Introduction

1. The National Green Tribunal, Principal Bench at New Delhi, vide order dated 6th December, 2019 in OA No.673/2018 in the matter of News item published in 'The Hindu' authored by Shri Jacob Koshy titled 'More river stretches are now critically polluted: CPCB' has given certain directions as under:-

(i) 100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28th August, 2019 in OA No.593/2017 by 31st March, 2020 at least 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 22nd August, 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 31st March, 2021 in terms of the order dated 8th April, 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 22nd August, 2019 in the case of river Ganga i.e. Rs.10 lakhs per month per STP.

(iii) 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 at least 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 action plans prepared by the States which may start forthwith, if not already started.
- (x) Rivers which have been identified as clean may be maintained.

2. Pursuant to the directions of NGT and to facilitate monitoring thereof by the Central Monitoring Committee, National Mission for Clean Ganga (NMCG), vide OM dated 22nd January, 2020, has constituted teams consisting officers from NMCG, NRCD and CPCB to visit and review the status of pollution (domestic and industrial), available sewage infrastructure and existing/futuristic gap to make a conditional assessment and requiring interventions, if any. For the State of Meghalaya, composition of the team was as below:-

- (i) Shri Saumyasib Mukhopadhyay, Senior Environmental Specialist, NMCG
- (ii) Dr. P. N. Rymbai, Scientist 'B', NRCD
- (iii) Dr. Shantanu Dutta, Additional Director, Shillong, (Representative from CPCB)

The present report provides a summary of the filed visit and discussion undertaken during the visit.

B. Background

3. Out of the identified 351 polluted river stretches reported, 7 such stretches are reported in Meghalaya. However, only 2 such stretches namely, River Umkhrah and River Umshyrpi are falling under Priority-I. The detail of the polluted river stretches in Meghalaya is shown in Table-1. The above team visited Meghalaya during 04-05th March, 2020 to ascertain the ground reality and to interact with the stakeholders responsible for sewage treatment facilities to be/being created for the said polluted river stretches. The team visited various points on Rivers Umkhrah and Umshyrpi.

Table1: Polluted River Stretches in Meghalaya:

SI.No.	Name of polluted stretches with pollution categorization	No. of such stretches	Name of river/stretch
1	No of Polluted stretched in Category-I	2	1.Umkhrah River 2.Umshyrpi River
2	No of Polluted stretched in Category-IV	3	1. Kyrhuhkhla 2. Nongbah 3. Umtrew
3	No of Polluted stretched in Category-V	2	1. Lukha 2. Myntdu
	Total	7	

The team took tour in Shillong and due to ongoing curfew in Shillong travelling to other areas was prohibited. However, all the drains discharging to the polluted stretches of River Umshyrypy and Umkhrah (falling under Priority -1) was done with officials of PHED, Urban Affairs, Pollution Control Board and others so as to have a detail glimpse of the proposed treatment of waste water, solid waste and industrial waste water.

The photographs taken during the visit are placed at **Annexure – I**. A meeting with the stakeholders was also held in the Meghalaya State Pollution Control Board (MSPCB), Shillong under the Chairmanship of Chairman, MSPCB, and Shillong on 4th of March 2020.

As per the directions of NGT and also works assigned to the teams, discussions with the respective local bodies were focused on assessment of sewerage infrastructure (existing/futuristic) vis-à-vis the action plans submitted by Meghalaya State Pollution Control Board(MSPCB) to the Central Pollution Control Board (CPCB). During the discussion it was learnt that Shillong City is under the jurisdiction of three Urban Local Bodies viz. **Shillong Municipal Board, Shillong Cantonment Board and Shillong Urban Agglomeration under Khasi Hills Autonomous District (KHADC)**. It is learnt that the department of Urban Affairs of Shillong is responsible only for the sewage management within the Shillong Municipal Board area. For the rest of the areas, plans are taken up either by Shillong Cantonment Board or by KHADC.

It was informed that action plans for polluted river stretches under Priority-I (2 nos) were approved by CPCB in May/June, 2019. In respect of polluted river stretches under Priority-IV (3 nos), Priority V (2 nos), actions plans although have been submitted by MPCB but yet to be approved by CPCB.

Stretch wise details of Priority I are given at **Annexure-II**, which includes information on towns/villages located thereon, sewage generation, treatment available and the gap, proposed treatment, industrial activities contributing to pollution in the said stretch, and the present implementation status vis-à-vis the directions of NGT. A copy of the minutes of meeting is enclosed in file **Annexure-III**.

During the meeting all stakeholders were requested to provide the latest status on the implementation of Action Plan approved by the CPCB, however, it appears that still lot of things needs to be done to address the sewage treatment in the Shillong.

As per the Monthly Progress Report (MPR) submitted by Govt. of Meghalaya the list of polluted stretches has been proposed to be modified as per Table 2.

Table2: River List of Polluted Stretches

Priority River Stretch	Polluted Stretches		Name of Polluted rivers	Corresponding Towns
	As per CPCB Report	Revised list as per the recent monitoring (MPCB JAN-Nov 2019)		
Priority-I	2	2	1.Umkhrah River 2.Umshyrpi River	Shillong
Priority-II	-	-		
Priority-III	-	-		
Priority IV	3	1	Nongbah river	Scattered settlements
Priority V	2	4	1. Kyrhuhkhla 2. Umtrew 3. Lukha 4. Myntdu	Coal mine area and villages. Byrnihat (bioremediation) Coal mine and villages Jowai (7 STP)
Total	7	7		

3. Observations and recommendations:

i.From the pollution stretches concerned in Meghalaya, Shillong the major town of concern situated along the two Priority Rivers namely Umkhrah and Umshyrpi. The other important towns are Jowai (along river Myntdu Priority V), and Byrnihat (along river Umtrew in Priority V). The other polluted stretch i.e. flows through coal mines and scattered village population.

- (a) The total present catchment area population of these rivers is about 400000 (census 2011) with an estimated sewage generation of 40 MLD. No treatment capacity is available at this moment. The major town wise break up is given in table3 below:

Table3: Sewage Generation vis-à-vis gap assessment for the priority towns.

S.No	Major Towns	Priority	Contributing Population (2011)	Sewage Generation (MLD)	Existing Capacity (MLD)	GAP (MLD)	Proposed (STP and MLD)
1	Shillong	I (Umkhrah)	354749	38.31	0	38.31	3.7 MLD (3 STP)
2	Jowai	V (Myntdu)	28430	3.07	0	3.07	3 MLD (7 DSTPs) , proposal being sent to NRCD
Rest of the areas are scattered population and passes through coal mines							

- ii. The waste management programme in Shillong largely dependent upon the decision at the local community levels and KHADC and interdepartmental communication.
- iii. The DPR preparation work is going on since last 5 years. Earlier, M/s Mott MacDonald was hired for prepared a sewerage and STP scheme in Shillong which was prepared as detailed integrated sewerage network and STP scheme. But, due to land issues and possible non feasibility of laying of sewerage line in Shillong the scheme was cancelled. It was proposed to develop a 45 MLD scheme and 60 MLD till 2040.
- iv. Later on for 2 specific sewage zones (Zone 1a2 and Zone 1a3) M/s WAPCOS has been hired as a Design Checking cum Project Management Consultant. Due to non-availability of land for SPS and STP, nalla tapping at strategic locations and FSSM has been proposed. They have came up with installation of 4 MLD of STP (through 3 STPs) and 1 FSST with 300 KLD. Zone Maps of Shillong is given in Figure1.

Table4: Sewage Generation in Shillong and gap assessment within it

S.No	Name of ULB	Sewage Generation	GAP Treatment (MLD)	in	Proposed STP
1	Shillong Municipal Board	19.34	19.34		4.3 (3 DSTPs of 4 MLD) and 1 FSSM of 300 KLD
2	Shillong Cantonment Board	1.61	1.61		Being proposed
3	Shillong Urban Agglomeration under KHADC	26.95	29.95		-

- v. So basically for the areas within the Shillong Municipal board areas where 3 Decentralized STPs are being planned (2 along Umkhrah River and 1 along Umshyrpi river through I&D and STP scheme). In addition, a 300 KLD Faecal Sludge and Septage Management is being planned. However, major areas falls beyond the Shillong Municipal Board areas for which concrete plan to be developed.
- vi. **Drain flow:** There are about 20 drains flowing to Umkhrah River having a dry weather flow of around 45 MLD. Whereas in Umshyrpy river around 6-10 MLD flow for nearly 10 outfalls is discharging. Hence the STP proposed appears to be not be sufficient. During the visit, it was observed that there are 20 outfalls in Umkhrah River and only 4 of them are proposed to be tapped for treatment. The State Government was advised to see that all outfalls are tapped for abatement of pollution in Umkhrah River. Whereas, in the case of Umshyrpi River, 12 outfalls are observed and none of them are tapped for treatment, instead, a 750 KLD STP is proposed to be set up at the downstream of the main river itself at Harrison Bridge. The consultant concerned was advised to see that there is no error in the flow measurement at Umshyrpi River before finalizing on the capacity of STP proposed.

- vii. **STP along Umshirpy:** A 700 KLD STP is proposed just along Umshirpy River whereas the flow in river Umshirpy is not less than 10 MLD. The reasons for proposing such lower capacity of STP has been mainly the land constraint as been told by the Urban Affairs and their consultant M/s WAPCOS. Even for the waste generation in Shillong Municipal Board and the capacity proposed is appears very much under designed.
- viii. The 300 KLD FSSM scheme has been proposed as a short term measures in association with the STP schemes which will give till a detailed sewage management is not in place. This FSSM scheme would cover all the Shillong areas (i.e. Shillong Municipal Board and Shillong Urban Agglomeration). However, tendering of the schemes and its implementation is required to be completed at the earliest. 3 cesspool are available and 26 more cesspool vehicles will be procured. The proposal consists of:

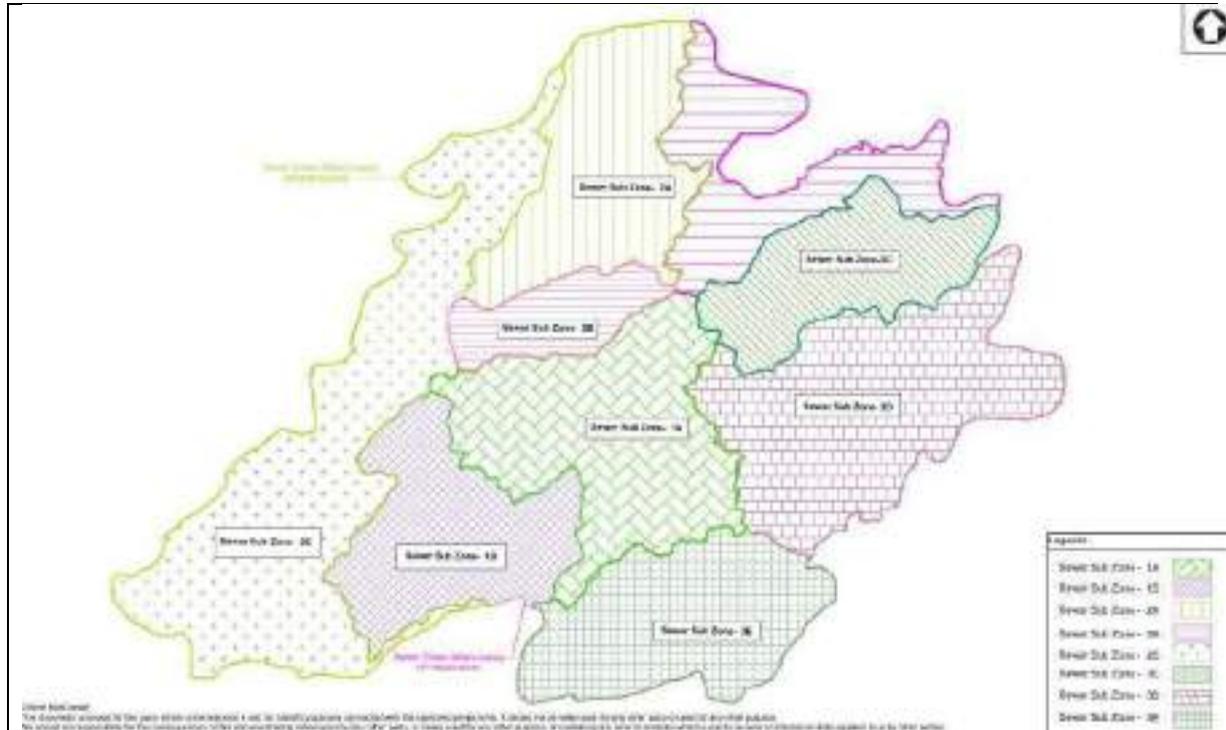
- Number of users – **4,56,441 – Shillong Urban Agglomeration**
- Septage extraction ratio – 50%
- Septage generation rate – 30 g/person/day
- Number of Households – 91,288
- Frequency of desludging - once every 3 years
- Nos. of houses to be desludged per annum – 30,429
- Average sludge volume per house – 3 m³
- Number of trips per day - 3
- Volume of sludge collected per day – 300m³/day
- Number of cesspool vehicles of Collection of Septage from household – 26 (proposed) and 3 existing. Total 29.

The septage characteristics is given below::

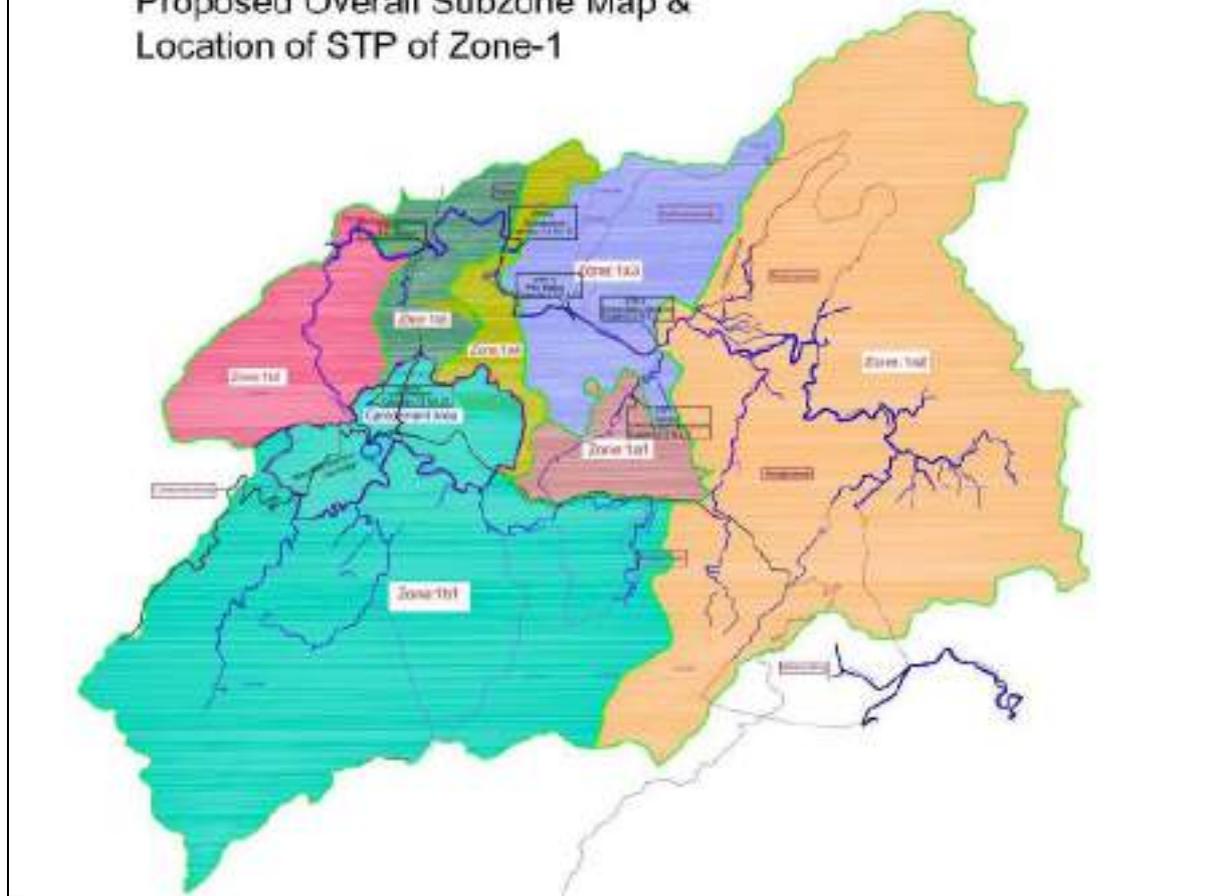
No.	Description	Unit	Value
1	Capacity	m ³ /day	300
2	Average flow-rate	m ³ /hr	12.5

No.	Parameters	Unit	Value
1	pH	-	4 – 10
2	Chemical Oxygen Demand (COD)	mg/l	2,000
3	Biochemical Oxygen Demand (BOD)	mg/l	1,000
4	Total Suspended Solids (TSS)	mg/l	1,200

5	Total Nitrogen (TP)	mg/l	180
6	Total Phosphorus (TP)	mg/l	50



Proposed Overall Subzone Map & Location of STP of Zone-1



With regard to the Myntdu River which is of priority-V at Jowai, West Jaintia Hills District, the Jowai Municipal Board has prepared DPR which however needs to be revised and sent to Urban Affairs Department for approval. As per the DPR, 10 outfalls have been identified and 7 STPs have been proposed to be installed at the total cost of around Rs. 30 crore which includes operation and maintenance for 5 years. The proposal will be sent to NRCD for financial assistance.

- ix. **Bioremediation:** For Bioremediation, the department of Urban Affairs has tied up with M/s Trinity Impex International for preparation of DPR and it will be completed by 2nd week of March 2020. It is being done at this moment for the 2 major drains (due to fund constraint) and later it will be scaled up for other rivers as well. For other polluted river stretches which are located in rural areas with scattered population only bioremediation was proposed and the DPR is expected to be completed by the month of May, 2020.
- x. **Solid Waste Management:** It has been informed that the Shillong Municipal Board, Shillong Cantonment Board and Traditional Institutions collect solid wastes daily on a door-to-door basis so as to minimize littering. Segregation of municipal solid waste is adopted only in areas under the jurisdiction of Shillong Municipal Board and Cantonment board for the purpose of mini composting of bio-degradable waste carried out by self-help groups within the premises of existing disposal site. A 170 TDP Compost Plant is under construction at **Marten, Shillong** which is proposed to be commissioned by 31st March, 2020. A sanitary landfill has been developed for the purpose of disposal of inert waste. During the site visits it was observed that the State Government has constructed a good height of jali fencing along the bank of some stretch of rivers Umkhrah and Umshyrpi so as to prevent the dumping of wastes into the rivers. The details of present capacity vis-a vis gap assessment for the solid waste management is given in table 5.

Table 5: Solid Waste generation and Treatment Facility

River	ULB	Solid Waste Generation (TPD)	Solid Waste Treatment (TPD)	Gap in Treatment (TPD)
Umkhrah	Shillong Municipal Board, Shillong Cantonment Board & Traditional Institutions	164.81	8.72 TPD (170 TPD compost plant will be commissioned by 31 st March 2020)	156.09
Umshyrpi	Shillong Municipal Board, Shillong Cantonment Board & Traditional Institutions	50.13		50.13
	TOTAL	214.94	8.72	206.22

- xi. Solid Waste Management by KHADC: A project has been taken up by the KHADC as a part of the project the council has engaged Master rolls duly recommended by the Dorbar Shhnong on contractual basis at Rs 5000/- per month each to clean up the river. The cleaning up of the river was undertaken by the Water Resource Department started on 7th August 2017 along the stretch between Umkaliar to Mawlai where the council has engaged 4 assistant supervisors and 8 master rolls. During the cleaning 14 truckloads of waste are collected from the river and are sent to the solid waste disposal facility at Marten. The council has incurred a Cost of **Rs 10,90,500** for the cleaning of river. Details enclosed in **Annexure-IV**.
- xii. The management and handling of bio-medical waste by the Health Care facilities located in Shillong are in accordance with the criteria laid down under the Bio-Medical Waste Management Rules, 2016. At present the Common Bio-Medical Waste Treatment Facility (CBWTF) is not in operation and hence deep burial as a temporary measurement is being carried out as recommended by CPCB for final disposal until the CBTWF is in operation. The Shillong Municipal Board informed that a proposal has been sent to MoEF&CC for up-gradation of existing CBWTF but the proposal was rejected as the Ministry informed that there is no sanction for up-gradation but only for a new CBWTF. In this regard, a proposal for setting up of a new CBWTF is under preparation which will be forwarded to MoEF&CC at the earliest. Shillong Municipal Board informed that as an interim arrangement, it has tie up with a firm in Assam for treatment of the waste from the State for which authorization of transport of the wastes has been received from MSPCB, however, the firm in Assam has yet to receive authorization from the Pollution Control Board, Assam.
- xiii. MSPCB informed that industries including hotels, restaurants, automobile servicing units and hospitals located in the catchment of the two rivers (Umkhrah and Umshirpi) are regulated under the consent management of the Board. These industries are having onsite ETPs for treatment of trade effluent except for one hospital wherein the ETP is still under construction. These industries are regularly monitored by the Board.
- xiv. The District Forest Officer (DFO), Social Forestry mentioned that a proposal for tree plantation was prepared by the Forest Department along the bank of Umkhrah and Umshyrpi rivers. An estimated cost of Rs. 28.35 lakh was proposed for plantation along the Umkhrah River. However, there has been an issue with land availability for plantation along the Umshyrpi river as a portion of land identified for the project falls under the Defense which stated that the particular portion of land has already been given to NHIDC and PHED for widening of road and lying of pipelines respectively. However, these plantation activities are kind of random plantation (based on land availability) does not much related to catchment treatment.
- xv. The State Government was also advised to speed up the implementation of In-situ remediation of drains and to complete well within 31st March, 2020 so that it is in compliance with the NGT order.

**(Shri Saumyasib
Mukhopadhyay)
NMCG**

**(Dr. P.N. Rymbai)
NRCD**

**(Dr. Shantanu Dutta)
CPCB**



Fig: Snapshots of main channel and some outfalls at Umkhrah and Umshyrpi rivers in Shillong.



Fig: Construction of Jali fence at some stretches along the river banks for preventing dumping of wastes into Rivers Umkhrah and Umshyrpi

List of Polluted River Stretches

- Total number of Stretch:- 7
- Based on water quality monitoring results during the period from January-December 2019, MSPCB informed that priority status of the said polluted river stretches has changed from that reported by CPCB (in 2016 sampling). In some of the cases, water quality was reportedly improved as per the stretch wise details given as under:-

Priority	Polluted stretches	
	As per CPCB Report (Sep-2018)	Revised list as per recent Monitoring (SPCB-Jan-Dec 2019)
Priority-I	02	02
Priority-II	--	--
Priority-III	--	--
Priority-IV	03	01
Priority-V	02	04
Total	07	07

Status of Sewage Generation and treatment In Shillong, Meghalaya

ULBs	No of ULBs	STP Capacity Required (MLD)	STP Capacity Existing (MLD)	STP Capacity Ongoing (MLD)	STP Capacity (Existing + Ongoing) (MLD)	GAP IN STP Capacity (MLD)
Shillong municipal Board	1	19.34	-	-	-	19.34
Shillong cantonment Board	1	1.61	-	-	-	1.61
KHADC(Traditional Institutions)	1	26.95	-	-	-	26.95

Polluted River Stretch (Priority I) Gap Analysis in Sewage Generation & Treatment in Shillong, Meghalaya

ULB	Numbers	Sewage Generation MLD	Sewage Treatment MLD	Gap in Treatment MLD	Capacity of Proposed STP MLD
Shillong Municipal Boards,	4 (Proposed STPs including Septage Management)	19.34	-	19.34	4.05 (STPs including Septage Management)
Shillong cantonment board	Nil	1.61	-	1.61	To be proposed (Annexure I)
Shillong urban agglomeration under KHADC	Nil	26.95	-	26.95	No proposal

List of Polluted River Stretch under Priority –I in Shillong, Meghalaya

Sr. No.	River Name	River Stretch	Length of Stretch as per RAP (KM)	As per CPCB report		As per SPCB report		Number of Town	Sewage Generation (MLD)	Sewage Treatment Plant Capacity (MLD)	GAP in Treatment (MLD)	Proposed Capacity (MLD)
				BOD Range (mg/lit)	Priority	BOD Range (mg/L)	Priority					
1	Umkhrah	Demthring to MawlaiMawpdang	10	30-90.2	1	10.5-56.0	1	1	33.52	-	33.52	3.05
2	Umshyrpi	Dhankheti to Umshyrpi Bridge	5	38.5-95.0	1	13.4-44.0	1	1	14.37	-	14.37	1.00
	TOTAL								47.89		47.89	4.05

GAP Assessment in Solid Waste Treatment for Shillong, Meghalaya

River	ULB	Solid Waste Generation (TPD)	Solid Waste Treatment (TPD)	Gap in Treatment (TPD)
Umkehrh	Shillong Municipal Board, Shillong Cantonment Board & Traditional Institutions	164.81	8.72 TPD (170 TPD compost plant will be commissioned by 31 st March 2020)	156.09
Umshyrpi	Shillong Municipal Board, Shillong Cantonment Board & Traditional Institutions	50.13		50.13
	TOTAL	214.94	8.72	206.22

Annexure-III (Minutes of Meeting at Meghalaya)

Minutes of the Meeting on the Assessment of the Implementation of Action Plans for Rejuvenations of Polluted River Stretches in the state of Meghalaya held Between the Officials of NMCG & NRCD, Ministry of Jal Shakti, New Delhi with all Stakeholders / Implementing Agencies held on 5th March 2020 in the Conference Hall of the Meghalaya State Pollution Control Board (MSPCB), Shillong

A Meeting of all the stakeholders on Assessment of Polluted River Stretches of 6 States with regard to the Hon'ble NGT matter OA No. 673/2018 was held on the 5th March 2020 in the Conference Room of the Meghalaya State Pollution Control Board, Shillong. The officials present in the Meeting are as indicated below (list enclosed).

1. Shri C.P. Marak, IFS (Retd), Chairman, Meghalaya State Pollution Control Board, Shillong
2. Dr. Shantanu Dutta, Addl. Director, CPCB, Regional Directorate North East, Shillong
3. Shri Saumyarib Mukhopadhyay, Sr. Environment Specialist, NMCG, Ministry of Jal Shakti
4. Dr. P.N. Rymbai, Sc 'B', NRCD, Ministry of Jal Shakti
5. Shri B. Lato, Jt. Director, Urban Affairs, Meghalaya, Shillong
6. Smti A.D. Biah, Addl. Chief Engineer, Water Resource Deptt., Meghalaya, Shillong
7. Shri M.L. Lawai, EE, Water Resource Deptt., Meghalaya, Shillong
8. Smti M.J.A. Sangma, DFO, Social Forestry, East Khasi Hills
9. Shri C. Marngar, SE, PHED, Meghalaya, Shillong
10. Shri F.B. Chyne, EE, Shillong Municipal Board
11. Shri J.B. Laloo, JE, Shillong Municipal Board
12. Shri M. Kharkongor, District Urban Planner, Shillong
13. Shri R. Sohkhlet, District Urban Planner, Jowai, West Jaintia Hills District
14. Shri S. Amse, EO, Jowai Municipal Board
15. Shri R. Pde, S.I., Jowai Municipal Board
16. Shri H. Syiem, Deputy Secretary, KHADC, Shillong
17. Shri A. Basalawmoit, Under Secretary, KHADC, Shillong
18. A.K. Borah, TLE, WAPCOS Ltd.
19. Shri H. Wagh, MLE, WAPCOS Ltd.
20. Shri J.H. Nengnong, Member Secretary, Meghalaya State Pollution Control Board
21. Dr (Miss) B. Nongbri, Sr. Scientist, Meghalaya State Pollution Control Board
22. Smti J. Sawian, Scientist 'C' Meghalaya State Pollution Control Board
23. Smti D. Syiemlieh, Environmental Engineer, Meghalaya State Pollution Control Board
24. Shri S. Syiem, AEE, Meghalaya State Pollution Control Board
25. Shri J.F. Lamurong, AEE, Meghalaya State Pollution Control Board
26. Shri Y.F.H. Laloo, AEE, Meghalaya State Pollution Control Board
27. Shri M.S. Tiewsoh, AEE, Meghalaya State Pollution Control Board

The meeting was chaired by Shri C.P. Marak, IFS (Retd), Chairman, Meghalaya State Pollution Control Board.

At the outset, the Chairman welcomed all the officials present in the meeting and highlighted that the meeting was called to discuss on the water sector of the State which has attracted the attention of the Government of India and NGT. He also stressed on the urgency and gravity of the situation for which the issues need to be tackled by different Govt. Departments. The following are the point of deliberation:

1. Presentation of Action Plans for polluted river stretches under priority I, IV and V.

It was informed that the priority I includes the Umkrah River and Umshyrpi in Shillong city while the priority IV includes Noobah River in Nongstoin, Umtrew River in Byrnihat, Ri-Bhoi District and Kyrhuhkhia River in Khiehriat, East Jaintia Hills District. Priority V includes the Myntdu River in Jowai, West Jaintia Hills and Lukha River in East Jaintia Hills District.

For Priority-I rivers, the Board's official informed that as per the NGT Order, the river water should be brought up to bathing quality but however, the Plan is to bring the water quality of priority-I up to irrigation quality.

After the presentation the following points were discussed:

- **Sewage Management**

The Sr. Environment Specialist, NMCG, Ministry of Jal Shakti advised that a DPR is to be approved and the tendering process is to be completed at the earliest and the construction of the Sewage Treatment Plants for the generated sewage within the jurisdiction of Shillong Municipal Board should be started by July 2020.

The bio-remediation treatment should commence by 30th March 2020 as per NGT Order.

The Dy. Director, Urban Affairs informed that for bio-remediation, the Department has tied up with Trinity Impex international for preparation of DPR and it will be completed by 2nd week of March 2020. It was further informed that due to fund constraints the bio-remediation treatment process will be carried out initially for two major drains.

With regard to the Myntdu River, the District Urban Planner, Jowai informed that the Jowai Municipal Board has prepared DPR which however needs to be revised and sent to the Urban Affairs Department for approval. As per the DPR, 10 outfalls have been identified and 7 ETPs have been proposed to be installed at the total cost of around Rs. 30 crores which includes operation and maintenance for 5 years. The proposal will be sent to NRCD for financial assistance.

For other polluted river stretches which are located in rural areas with scattered population only bio-remediation was proposed and the DPR is expected to be completed by the month of May.

It was further informed that construction of septic tank latrines with soak pits has been sanctioned under Swachh Bharat mission in the villages within the catchment of the polluted river stretches of priority IV and V.

For faecal sludge management, the Shillong Municipal Board informed that 3 cesspool vehicles are in operation.

It was further informed that additional 26 nos. of vehicles will be procured for disposal of faecal sludge with a proper routine plan for movement of the vehicles.

The NMCG officials advise that the Water Resources Deptt. should carry out the flow measurement during the lean period.

- **Solid Waste Management**

The Shillong Municipal Board, Shillong Cantonment Board and Traditional Institutions collect solid wastes on a daily basis. Door-to-door collection has been carried so as to minimize littering. Segregation of municipal solid waste is adopted only in areas under the jurisdiction of Shillong Municipal Board and Cantonment Board for the purpose of mini composting of bio-degradable waste carried out by self help groups within the premises of existing disposal site.

A 170 TPD Compost Plant is under Construction at Marten, Shillong which is proposed to be commissioned by 31st March 2020.

A scientific sanitary landfill has been developed for the purpose of disposal of inert waste.

- **Bio-medical Waste Management**

The management and handling of bio-medical waste by the Health Care Facilities located in Shillong are in accordance with the criteria laid down under the Bio-Medical Waste Management Rules, 2016. At present the Common Bio-medical Waste Treatment Facility (CBWTF) is not in operation and hence deep burial as a temporary measure is being carried out as recommended by CPCB for final disposal until the CBWTF is in operation.

Shillong Municipal Board informed that as an interim arrangement, the Shillong Municipal Board has tie up with a firm in Assam for treatment of the waste from the State for which authorization for transport of the wastes has been received from the MSPCB however, the firm in Assam has yet to receive Authorization from the Pollution Control Board, Assam.

The Meeting decided that the SMB can write to the Regional Director, CPCB, Shillong in the matter and the Addl. Director, CPCB, Regional Directorate North East, Shillong assured that the CPCB will take up the matter with the Pollution Control Board, Assam.

Further, Shillong Municipal Board informed that a proposal has been sent to MoEF & CC for up-gradation of the exiting CBWTF but the proposal was rejected as the Ministry informed that there is no sanction for up-gradation but only for a new CBWTF. A proposal for setting up of a new CBWTF is under preparation which will be forwarded to MoEF & CC at the earliest.

- Trade effluent

The Meghalaya State Pollution Control Board informed that the industries located in the catchment of the two rivers are regulated under consent management of the Board. It was also informed that these industries includes hotels, restaurants, automobile servicing units and hospitals and these industries are having onsite ETPs for treatment of trade effluent except for 1 hospital wherein the ETP is still under construction. These industries are regularly monitored by the Board.

2. Presentation by the WAPCOS Ltd., Consultant of Urban Affairs Deptt.

A presentation by WAPCOS Ltd. was made on the proposed STPs within the jurisdiction of Shillong Municipal Board.

The Sr. Environment Specialist, NMCG, Ministry of Jal Shakti suggested that a Shit Flow Diagram for offsite and onsite treatment should be prepared. The official further advised that WAPCOS Ltd. should share the population data of Shillong Municipal Board, Shillong Cantonment Board, Shillong Agglomeration etc to estimate sewage generation as per the format to be submitted to NMCG.

In reply to a query made by the Sr. Environment Specialist, NMCG, Ministry of Jal Shakti, the Chairman informed that for areas outside the Municipality, the duty of waste management falls under the jurisdiction of the District Councils under Sixth Schedule. And the Cantonment areas in Shillong falls under the jurisdiction of the Shillong Cantonment board.

The representative of KHADC informed that the Council has prepared by-laws in this regard which are still pending approval due to the absence of the Executive Council.

The representatives of Shillong Cantonment Board were not present during the meeting and hence information regarding the status of sewage management under its jurisdiction could not be obtained.

The Meeting urged upon the KHADC that it should organize public awareness and hold meetings with the community with guidance of the Meghalaya State Pollution Control Board and should take the Rangbah Shnong (Traditional Institutions) into confidence in the matter of sewage management.

It was informed that the PHE Deptt. has carried out Feasibility Study on the Nonbah River. The Meeting decided that the Report on the Study is to be submitted by the PHE Deptt.

The Sr. Environment Specialist, NMCG, Ministry of Jal Shakti advised that the operation and maintenance should be projected for 10 years.

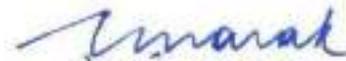
The Meeting decided that the Jowai Municipal Board should expedite revision of the DPR and send for funding.

Dr. P.N. Rymbai, Sc. 'B', NRCD, Ministry of Jal Shakti informed that the National River Conservation Department, Ministry of Jal Shakti may be approached for funding for sewage management, plantation, awareness programme, eco friendly crematorium and study projects on rivers of Meghalaya.

The DFO, Social Forestry gave a presentation on the proposal of tree plantation to be taken up by the Forest Department along the bank of the Umkhrak and Umshyrpi rivers. She informed that plantation along the Umkhrak River will cost around Rs. 28.35 lakhs. However, plantation along the Umshyrpi River is not possible since land is not available though the matter has been taken up with the CEO, Cantonment and the Ministry of Defence since most of the land falls under the Defence. She informed that the Ministry of Defence has informed that land cannot be spared since some portion has already been given to NHDC for widening of road and PHED for laying of pipelines.

The Meeting decided that the DFO, Social Forestry to send the detailed proposal to the Ministry of Jal Shakti for funding.

The Meeting ended with a vote of thanks to and from the Chair.



C.P. MARAK, IFS (Retd)
CHAIRMAN

Meghalaya State Pollution Control Board
Shillong

ANNEXURE R/7

Quarterly Progress Report for the period 1-07-2020 to 30-09-2020 in compliance to the NGT Order Dt. 28.02.2020 in the matter of O.A. No. 606/2018 in the matter of compliance of Municipal Solid Waste Management.

Sl. No.	Particulars
1.	Quarterly Progress Report for controlling air Pollution in Non-Attainment city/town. Annexure-I
2.	Quarterly Progress Report for restoration of polluted river stretches in the State of Meghalaya. Annexure-II
3.	Quarterly Progress Report for Solid Waste Management (including bio-mining of legacy waste dumpsite). Annexure-III
4.	Quarterly Progress Report for Bio-Medical Waste Management. Annexure-IV
5.	Quarterly Progress Report for Hazardous Waste Management. Annexure-V
6.	Quarterly Progress Report on sewage Treatment and Utilization of sewage. Annexure-VI
7.	Quarterly Progress Report on Compliance to E-Waste Rules. Annexure-VII

Secretary to the Govt. of Meghalaya
Forest and Environment Department

Secretary
to the Govt. of Meghalaya
Forest & Environment Department

**QUARTERLY PROGRESS REPORT FOR THE PERIOD 01-07-2020 TO 30-09-2020 FOR CONTROL OF AIR POLLUTION
OF AIR POLLUTION IN NON-ATTAINMENT CITY / TOWN**

BASIC INFORMATION					
NAME OF NON-ATTAINMENT CITY		BYRNIHAT, RI-BHOI DISTRICT			
STATE / UNION TERRITORY		MEGHALAYA			
NAME OF NODAL OFFICER OF PCB / PCC		DR. B. NONGBRI			
E-MAIL ID		megspcb@rediffmail.com			
CONTACT NUMBER		9436110580			
DATE TILL WHICH PROGRESS IS SUBMITTED		01-04-2020 TO 30-06-2020			
ACTION POINT CODE	SECTOR	TOTAL NO. OF ACTIONS	NO. OF ACTIONS COMPLETED	NO. OF ACTIONS UNDER PROGRESS	REMARKS
CB	Capacity Building Monitoring Network & Source Apportionment Study	1. Stress on promotion of horticulture programme and use of organic manures / compost (i) Distribution of organic manure to selected beneficiaries within Byrnihat area. (ii) Training on organic farming. (iii) Training on horticultural crop production	Completed - -	- Under progress Under progress	Training on production of organic compost through Barkley method (18 days composting) has been taken up in villages adjacent to Byrnihat viz. Abri Jorbil, Bara-killing, Chota-killing, Killing, Hatimara, Noksigittim @ 2 units/village, the programme will also cover the other adjacent villages in the near future as well
		2. (i) Research studies including health impact studies, exposure, impacts and other relevant studies	-	Under progress	
		3. (i) Establish an Air Quality Management Division at SPCB/PCC Head Quarters to	Completed	-	Air Quality Management Division has been set up in Meghalaya State Pollution

		oversee air quality management activities in the State and interact with CPCB			Control Board
		4.(i) Set up and publicize helpline in each city/town as well as SPCB/PCC HQ for complaints against reported non-compliance	Completed	-	Awareness and Complaint Cell established in the Head office of MSPCB
		5.(i) Emission inventory to carry out source apportionment study and carrying capacity assessment in EPIP, Byrnihat Town	-	Under progress	1. CPCB has forwarded the Study proposal submitted by MSPCB to MoEF&CC for necessary sanction. 2. MSPCB has forwarded the information to CPCB on the identified towns/cities in the State of Meghalaya where Source Apportionment /Emission Inventory has not been initiated for consideration of Joint Studies by CPCB & MSPCB in Shillong city, Byrnihat town & Tura town.
		6.(i)The interim emission targets with regard to control of emissions from sources viz. vehicle, road dust, biomass and garbage burning, jhum cultivation, industries	-	Under progress	Implementation of measures to reduce emissions from vehicles, road biomass and garbage burning, jhum cultivation, industries is in progress by the concerned implementing agencies
		7.(i)To constitute a District Level Monitoring Committee – to review the progress and ensure smooth implementation of the plan	Completed	-	The MSPCB has constituted the District Level Monitoring Committee headed by the Deputy Commissioner, Ri-Bhoi District
		Total number of actions – 9	Total no. of actions completed – 4	No. of actions under progress – 5	
PO	Public Outreach	1. Launch public awareness campaign for air pollution control, vehicle maintenance, minimizing use of personal vehicles, lane	-	Under progress	The District Transport Officer, Ri-Bhoi directed the enforcement officer to conduct random checking cum awareness

		discipline, etc.			to all types of vehicles.
		2. Creation of awareness to farmers to stop burning of crops residue and biomass	Completed	-	The Director of Agriculture has taken the following actions: - i) Leaflets about awareness on the ill effects of burning if crop residues have been issued to the District Agriculture Officer & District Horticulture Officer, Ri-Bhoi District ii) Field officials are deputed to conduct training on composting and creating awareness on organic farming without burning the crop residues (on-going process). Inputs for the farmers may be given for organic farming iii) The field officials have been directed to comply and include these control measures in all training programmes conducted by the office
		Observation of World Environment Day, 5 th June, 2019 in non-attainment city-Byrnihat, Ri-Bhoi District, Meghalaya Total number of action – 3	Completed		
			Total no. of actions completed – 2	No. of actions under progress – 1	
RD/ C&D	Road Dust and Construction & Demolition	1. Control measures for fugitive emissions from material handling, conveying and screening operations through water sprinkling, curtains, barriers and dust	-	Under progress	Water sprinkling has been provided to control fugitive emissions from the storage, transportation of raw materials and transportation points to control dust

	suppression units			pollution by Industrial units at EPIP
	2. Ensure carriage of construction materials in closed/covered units	-	Under progress	Enforced by the District Administration
	3. Blacktopping of metalled road including pavement of road shoulders	Completed	-	Completed by MIDC in industrial area
	4. Prepare plan for widening of road and improvement of infrastructure for decongestion of roads	-	Under progress	The Executive Engineer, PWD (Roads), Nongpoh Division has submitted the following proposals: - i) Maintenance of road from Byrnihat point ii) Construction of road from Narbong to Santipur (L-7.00 Km) iii) Construction of road at Upper Amjok (L-1.50 km) iv) Construction of road at Upper Narbong
	5. Prepare plan for construction of expressways/bypasses to avoid congestion due to non-destined vehicles	-	Under progress	In progress by PWD
	6. Maintain potholes for free flow of traffic	Completed	-	Completed by MIDC in industrial area
	7. Prepare plan for creation of green buffers along the traffic corridors	-	Under progress	A total of 1510 nos. of seedlings were supplied by Forest Deptt. to various Industries to plant in vacant areas of EPIP, Byrnihat. Social Forestry Division planted the seedlings along the roadside of the approach road to EPIP, Byrnihat.
	8. Introduce water fountains at major traffic intersection, wherever feasible	Completed	-	Completed by MIDC in industrial area
	9. Greening of open areas, gardens,	-	Under	The DFO, Social Forestry Division, Ri-Bhoi

		community places, schools and housing societies Total no. of actions – 9	No. of actions completed – 3	progress No. of actions under progress – 6	District has submitted a proposal for execution of the following works: - i) For raising of 0.5 Ha plantation at Byrnihat Industrial Area during 2019-20 ii) Creation of 1 Km Green Buffer Plantation at Byrnihat Industrial Area The proposal has been submitted to CPCB on recommendation of the Committee for necessary funding
VE	Vehicles	1. Prevent parking of vehicles in the non-designated areas	-	Under progress	The Superintendent of Police, Ri-Bhoi District, Nongpoh has designated and enforced No Parking Zones un Byrnihat areas
		2. Synchronize traffic movements/introduce intelligent traffic systems for lane driving	Completed	-	The Superintendent of Police, Ri-Bhoi District, Nongpoh has informed that due to insufficient intelligent equipments in the District, no scientific or intelligent systems were introduced for lane driving
		3. Launch extensive drive against polluting vehicles for ensuring strict compliance-Strict vigilance and no tolerance for visible emissions - stop plying of visibly polluting vehicles by impounding or heavy fine		Under progress	The District Transport Officer along with the Enforcement staff is launching drive against polluting vehicles to ensure strict compliance & vigilance and no tolerance of visible emissions by compounding fine as per M.V. Act, 1988.
		4. Introduction of public transport system in Byrnihat-Nongpoh route section	Completed	-	Public transport system is in place
		5. Introduction of electric vehicles in Byrnihat-Nongpoh route section	-	Under progress	The Transport is exploring the feasibility of introducing electric driven public transport vehicles in the Byrnihat-

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					Nongpoh route
		6.Introducing of Mobile Vehicular Emission Testing Unit in Nongpoh-Byrnihat section	-	Under progress	District Transport Officer has suggested to the Office of the Commissioner of Transport to introduce Mobile vehicular emission testing unit in Nongpoh-Byrnihat section.
		7. Maintaining and enforcing of permissible loading limits of vehicles	-	Under progress	The Enforcement Inspector is directed by the District Transport Officer to maintain and enforce strict permissible loading limits of all vehicles plying through the weighbridge
		8. Setting up of Pollution Under Control (PUC) Certification Centres	-	Under progress	The Transport Deptt. has received approval from the Govt. for setting up PUC Centre at Byrnihat, Ri Bhoi District.
		9. Strict vigilance and enforcement of PUC norms and link PUC with annual vehicle insurance to ensure 100% compliance	-	Under progress	District Transport Officer has requested the Commissioner of Transport for setting up PUC Centre in Nongpoh and to link with fitness certificates.
		10. Prepare Action Plan to check fuel adulteration and random monitoring of fuel quality data	-	Under progress	The Food Civil Supplies & Consumer Affairs Deptt. of Ri-Bhoi District has drafted an Action Plan which is deemed to be necessary for the control of fuel adulteration & monitoring of fuel quality. The following can be noted as priority: - <ul style="list-style-type: none"> • The FCS&CA Deptt. to coordinate with Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd., Hindustan

					<p>Petroleum Corporation Ltd. & other Corporations to facilitate the Action Plan</p> <ul style="list-style-type: none">• The various Oil Corporations to check the quality of the fuel in the depot/refinery before transportation to their respective destinations• The Oil Corporations thereafter to share the inspection report & other related information with the FCS&CA Deptt.• The Oil Corporations to depute their Officers for field inspection for their respective service stations & check the quality of the fuel again & for any adulteration therein. Thereafter share the report with the FCS&CA Deptt.• The Officers of FCS&CA Deptt. to conduct inspections of the fuel quality of the different service stations present in Ri-Bhoi District on receipt of the report from the Oil Corporations• On inspection of service stations, if any anomalies are detected with regard to adulteration, the service stations are liable for explanation and respective Oil Corporations to take necessary action• Samples of the fuel inspected to be maintained with FCS&CA Deptt. & may be subject to Laboratory tests for further clarity of the report
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					<ul style="list-style-type: none"> The Oil Corporations to further assist the FCS&CA Deptt. with technical knowhow & monitoring devices for proper & efficient inspections <p>The inspections, monitoring and reports to be completed & scrutinized within 180 days from date of initiation.</p>
		<p>11. Introduction of CNG or PNG driven vehicles to reduce vehicular exhaust emission</p> <p>Total no. of actions – 11</p>	-	Under progress	Transport Department has suggested the State Government to introduce CNG or PNG driven vehicles to reduce vehicular emission
			No. of actions completed -2	No. of actions under progress-9	
IP	Industries	1. Industrial units to install water spraying system in internal roads and washing of tyres of vehicles	Completed	-	Water sprinkling has been provided to control fugitive emissions from the storage, transportation of raw materials and transportation points to control dust pollution by industrial units at EPIP
		2. Identification of brick kilns and their regular monitoring including use of designated fuel and closure of unauthorized units	Completed	-	Identification process of Brick Kilns completed. There is no brick kiln in Byrnihat, Meghalaya.
		3. Conversion of natural draft brick kilns to induced draft kilns (Zigzag technology)	Completed	-	Not arise since there is no brick kiln in Byrnihat under Meghalaya jurisdiction
		4. Strict enforcement of all pollution control measures in all industries including those located in unauthorized areas and Action	-	Under progress	Verification of the compliance of specified norms by industries through inspection and monitoring is carried out by MSPCB

		against non-complying industrial units			from time to time
		5. Urgent ban of furnace oil, pet coke which are dirty industrial fuels with high Sulphur and heavy metals	Completed	-	
		Total no. of actions – 5	No. of actions completed – 4	No. of actions under progress – 1	
BB/DF	Waste and Biomass-Dumping and Burning	1. Launch extensive drive against open burning of bio-mass, crop residues, garbage, leaves, etc.	Completed	-	The Director of Agriculture has taken the following actions: - i) Leaflets about awareness on the ill effects of burning if crop residues have been issued to the District Agriculture Officer & District Horticulture Officer, Ri-Bhoi District ii) Field officials are deputed to conduct training on composting and creating awareness on organic farming without burning the crop residues (on-going process). Inputs for the farmers may be given for organic farming iii) The field officials have been directed to comply and include the control measures in all training programmes conducted by the office
		2. Proper collection of horticulture waste (biomass) and its disposal following composting-cum-gardening approach	Completed	-	
		3. Ensure ban on burning of agriculture waste and crop residues and its implementation	Completed	-	
		Total no. of actions – 3	No. of actions completed – 3	No. of actions under progress - Nil	
AQ	Air Quality Data	1. Air quality monitoring station expansion	-	Under progress	Proposal submitted for setting up of additional stations in Byrnihat residential area to CPCB for necessary funding
		2. Air Quality Index to be calculated & disseminated to the people through website	-	Under progress	Air Quality Index (AQI) of the station is displayed in public domain through

		&print/electronic media in local vernacular (on maximum weekly basis for manually operated monitoring stations and real time basis for continuous monitoring stations)			Board's website & Shillong Times Newspaper on weekly basis (manually operated monitoring stations)
		3. Monitoring of DG sets to ensure that only those DG sets that meet the standards are allowed to operate and action against violations	-	Under progress	Monitoring is in progress. Besides, the Board also proposes to seek financial assistance for procurement of monitoring instruments from MoEFF&CC/CPCB
		4. MSPCB may undertake NLM in conjunction with the Police Department and take remedial action. Police Deptt. of the States may obtain the noise monitoring devices within a period of three months and specification of such devices may be finalized in consultation with the State PCBs. Police Deptt. of the States may also train their staff regarding the use of such devices and develop a robust protocol for taking appropriate action against the defaulters. Police Deptt to check the use of sound limiters in all sound system/public addresses system for effective control of noise pollution. Total no. of actions - 4	- - -	Under progress	Monitoring by MSPCB is in progress. Besides, the Board also proposes to seek financial assistance for procurement of monitoring instruments from MoEFF&CC/CPCB Response awaited Response awaited Response awaited
			Total no. of actions completed -	Total no. of actions under	

			Nil	progress - 1 Response awaited - 3	
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Nodal Officer
Meghalaya State Pollution Control Board

QUARTERLY PROGRESS REPORT FOR THE PERIOD 01.07.2020 TO 30.09.2020 FOR RESTORATION OF POLLUTED STRETCHES IN THE STATE OF MEGHALAYA

I.	Total No. of Pollution River Stretches	7 (Umkhrah & Umshyrpi river –Priority I:Umtrew, Nonbah & Kyrhukhla river –Priority IV: Myntdu & Lukha –Priority V)						
		Umkhrah	Umshyrpi	Umtrew	Nonbah	Kyrhukhla	Myntdu	Lukha
II.	In-situ Bio-remediation	PMC of Smart City has prepare the feasibility report for Nallah in-situ treatment for the drain falling within the ADB. The report was approved and accepted by the RRC.DPR preparation is being taken up.			Survey for preparation of DPR started and likely to be completed by November 2020.			
III.	Sewage Treatment Plant							
	Total Sewage Generation (MLD)	33.52	15.47	0.36	3.10	0.8	3.07	0.5
	Total Existing Treatment Capacity (MLD)	0.05						
	Capacity Utilization							

Note: Garbage traps have been installed in 6 nos. of drains connecting to the rivers and one oil grease trap of 5kld installed in one drain of Umkhrah River.

Town	Existing STP	Capacity Being Utilized	Whether Complying or not	STP Proposed if any	Status (DPR/tendering/under construction/ETC etc.)
Shillong (catchment of Umkhrah & Umshyrpi river)	0.05 MLD	-	-	Faecal Sludge & Septage Management (FSSM) -0.35 MLD 5 On-site Treatment System.- 13.42 MLD Total -13.935 MLD	a) Tender for FSSM to be floated by the 2 nd week of November & and for On-site Treatment System land are being identified. b) The 0.115 MLD Septage Treatment Plant which is under construction is 70% completed.

Town	Existing ETP Capacity(MLD)	Whether Complying or not	CETP Proposed if any	Status (DPR/tendering/under construction/ETC etc.)
Shillong	1.8	Complying	-	-
Byrnihat	1.0	Complying	-	-
Nongstoin	0.41	Complying	-	-
Ladrymbai & Khliehriat	0.1	Complying	-	-
Jowai	0.45	Complying	-	-
Khliehriat, Myndihati & Lumshnong	0.615	Complying	-	-

V.	Solid Waste Management	Umkhrah	Umshyrpi	Umtrew	Nonbah	Kyrhukhla	Myntdu	Lukha
	Total Municipal Solid Waste generation (TPD)	164.81		1.16	10.05	2.6	9.95	1.6
	Existing facilities (TPD)	8.72 (2.00 TPD Organic Compost + 6.72 Recyclables) a) Door to door collection is introduced in all wards and level of coverage is 100%.Segregation at source is in place and the level of compliance by the residential households is 85% ad by the		15.0	Collection, segregation and transportation of wastes has been done by the SLRM team under SBM (Urban) .In some households the biodegradable	Waste management soak pit household waste water management & organic waste compost for 175 households	Door to door collection and transportation coverage is being done by the Jowai Municipal Board. Segregation at source is in place.	Waste management soak pit household waste water management & organic waste compost pit for 366 households

	<p>commercial establishments about 45%.Chain link fencing has been installed at strategic garbage points. Penalty is imposed on habitual offenders.</p> <p>b) Additionally, Garbage traps have been installed in 6 nos of drains connecting to the rivers and one oil grease trap of 5 Kld installed in one drain of Umkhrah River. For treatment of the bio-degradable waste, a 170 TPD Compost Plant is under Construction at Marten, Shillong and the plant is awaiting the delivery of the final piece of equipment so commissioning can begin. The implementing agency, SIPMIU is expediting the same. For Scientific disposal of waste a 6500 sqm sanitary landfill at Marten, Shillong was commissioned in October 2017. An additional 8500 sqm sanitary landfill is also completed,</p> <p>3 nos of decentralised compost plant are completed .Training of operators is being initiated and it is expected that the</p>		<p>wastes are treated by composting method in compost pit</p>	<p>under SBM (G)</p>		<p>under SBM (G)</p>
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		remaining 3 Centres will be functional by the end of 2020.					
	Proposed	Waste to energy of 100 TPD capacity	Proposed for soak pit household waste water management & organic waste compost for 112 households under SBM (G)	Land has been identified and a compost plan has been sanctioned under SBM (Urban)		Within the existing dumping site portion of land has been identified for indigenous compost plant and waste recovery. The work is to be started soon.	
	Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	Enclosed as annexure II					

VI.	Bio-medical/Hazardous/Plastic Waste Management(in TPD)	Umkhrah	Umshyrpi	Umtrew	Nonbah	Kyrhukhla	Myntdu	Lukha
	Total Bio-medical Waste generation	1.0597		0.0021	0.029	0.00608	0.41	Nil

Total Bio-medical Waste Treatment	1.0597	0.0021	0.029	0.00608	0.41	Nil
Bio-Medical Treatment facilities	<p>a) The Urban Affairs Department had floated a Notice for expression of Interest for setting up of Common Bio-Medical waste treatment and Disposal Facilities at Shillong on the 24th April, 2020 wherein 4 (four) participating firms submitted proposals and a letter of acceptance was awarded to S. M. Enterprise to carry out the work required on 19th May, 2020. The work to be carried out includes the installation of the following:</p> <ul style="list-style-type: none"> ➤ Incinerator of 100kg/hour capacity ➤ Continuous stack monitoring device ➤ Autoclave of 100kg/hour capacity ➤ Shredder of 100kg/hour capacity ➤ Effluent Treatment Plant ➤ Other ancillaries to support the facility <p>b) The Urban Affairs has procured three Bio-medical Wastes vehicles solely for transport of Bio-medical Wastes.</p>					
Hazardous Waste generation	Nil	Nil	1.17	Nil	Nil	0.1405
Hazardous Waste Treatment	-	-	1.135	-	-	0.1405
Plastic Waste generation	0.230	-	-	-	-	-
Plastic Waste processing	<p>(a) The plastic Waste was collected as municipal waste into dry waste and wet waste. The plastic waste was segregated from the dry waste at the dumpsite and collected for compaction and bailing and send to Cement plants for co-processing to be used as Fuel.</p> <p>(b) Used for road making in some parts of Nongstoin</p>					
Total No. of Hospital and bio-medical waste generation/treatment	6	2	None	2	None	2
Total of units generating Hazardous waste/treatment facility			6			11

		Umkhrah	Umshyrpi	Umtrew	Nonbah	Myntdu	Kyrhukhla	Lukha
VII.	Ground water regulation	For Domestic purpose –District Level Committee Ground Water Resource (Deputy commissioner of respective District as Chairman and official of Water resources as Member Secretary) looks after it and grant NOC. For Commercial purpose - State Level Committee Ground Water Resource(Commissioner & Secretary, Water Resources as Chairman and Regional Director, CGWB, NER, as Member Convener) looks after it and grant NOC						
VIII.	Maintaining minimum e-flow of river	Perennial						
IX.	Protection and management of Flood Plain Zones (FPZ)	TOR approved and RFP for engaging of consultancy for flood plains Zonation in identified river stretches prepared and sent to the NPMU NHP,MOJS for approval (Due to technical reasons FPZ is being proposed only at Umkhrah, Nonbah, Umtrew and Myntdu as other rivers flow through deep gorges) Proposal for setting up of HO stations sent to Govt. for availing sanction.						
X.	Rain water harvesting	i. Rain water harvesting implemented for Schools and government buildings ii. Incorporated as one of the condition while giving permission for any house construction						
XI.	Plantation along river	Proposal have been submitted to CEO CAMPA for according sanction to an amount of Rs.27,17,440/- in 2021-2022 for treatment of 48.58 ha (preliminary works for creation of plantations and creation of 94.5 polypot nursery beds for future plantations.					No proposal was made since there is a Reserve Forest and green cover on both sides of the river	
XII.	Development of biodiversity park on flood plains by removing encroachment	Matter of encroachment is pending in the Supreme Court .Biodiversity parks in existence.	No proposal for setting up of Bio-Diversity Park due to non-availability of Government land.					
XIII.	Reuse of Waste water	Treated wastewater are reuse for gardening/cleaning purpose						

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Sl. No.	Recommendations	Information required to submitted
A. Pertaining to State Government /UT Administration		
1.	<p>i Whether the State/UT Govt/Admin has taken action to monitor the implementation of recommendations of the Monitoring Committee in the interim and Final report (related to State/UT and SPCBS/PCCs)? If yes, kindly provide details (viz., committees constituted, meetings conducted, Office memorandum issued etc.) If no, please provide the action plan with timeline.</p>	<p>A state level committee is constituted Copy enclosed at Annexure-I</p>
2.	<p>i Whether the State/UT Govt/Admn has taken action to sensitize about duties to be performed by concerned department/agency? (a) If yes, please provide details (b) If no, kindly provide action plan with timeline.</p> <p>ii Which Department/agency has been authorized by State Government/UT Administration to ensure earmarking or allocation of industrial space or shed for recycling, pre-processing and other utilization of hazardous or other waste in the existing and upcoming industrial park, estate and industrial clusters, (a) Whether the agency authorized as at (ii) above, has earmarked or allocated industrial space/shed for recycling, pre- processing and other utilisation of hazardous or other waste. (b) If yes, please provide no. of areas earmarked/allocated and activities for which area has been earmarked. (c) If no, kindly provide action plan with timeline.</p> <p>Which Department/agency has been authorized by State Government/UT Administration for recognition and registration of workers involved in recycling, pre-processing, and other utilization activities? Please also provide details of the recognition and registration of workers (a) Whether the agency authorized as at (iii)</p>	

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	<p>above, has assisted in formation of groups of such workers to facilitate setting up such facilities? If yes, please provide no. of such groups formed and no. of workers in each groups. If no, please provide action plan with timeline.</p> <p>(b) Whether the agency authorized as at (iii) above, has undertaken industrial skill development activities for the workers involved in recycling, pre-processing and other utilization. If yes, please provide details of such skill development activities undertaken. If no, please provide action plan with timeline.</p> <p>(c) Whether the agency authorized as at (iii) above, has undertaken annual monitoring for safety and health of workers involved in recycling, pre-processing and other utilization. If yes, please provide details of the annual monitoring carried. If no, please provide action plan with timeline.</p> <p>iii. Whether State Government/UT Administration has prepared integrated plan for effective implementation of these provisions and submitted annual report to the MoEF&CC.</p> <p>iv. Provide action taken report on steps taken to ensure strengthening of institutional capacities for effective implementation of Rule 5 of HOWM Rules, 2016.</p>	
3.	States/UTs who have responded are required to ensure strengthening of institutional capacities for effective implementation of the Rule 5 followed by monitoring through Chief Secretaries of State Government /UT administration. (State Government/UT Administration: 05 months)	

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Appendix-A

Format for providing information w.r.t. directions of the Tribunal dated 07/07/2020 in the matter of 804/2017 (April, 2020-September, 2020) by SPCBs/PCCs

S. No	Recommendations	Information required to submitted
A.	Pertaining to Interim Report of Monitoring Committee	
1.	SPCBs/PCCs shall ensure timely submission of annual returns by all occupiers and in case of non-compliances (i.e. for non-submission/after lapse of timeline) action may be taken in accordance with the provisions laid down under the HOWM Rules, 2016.	<ul style="list-style-type: none"> i. Total No. of operating hazardous and other wastes handling units: 19 ii. How many hazardous or other waste generating units [of (i) above] have submitted annual returns by 30th June (2019-2020): 4 (Four) Units iii. How many units [of (i) above] have submitted annual returns after 30th June (2019-2020): NIL iv. How many units [of (i) above] have not submitted annual return (2019-2020): 15 v. In how many units [of (iii) & (iv) above] action has been taken by SPCB? 15
2.	SPCBs/PCCs shall prepare annual inventory report on hazardous and other waste generation and its management, as per CPCB's guidelines and ensure submission of same within stipulated timeframe as laid down under HOWM Rules, 2016.	<ul style="list-style-type: none"> i. Of the numbers of hazardous or other waste generating units, who have submitted annual returns, nos. of units are randomly verified, as per CPCB's guidelines, (Nos.): 1(one) Unit ii. Provide the list of such units. M/s Lafarge Umiam Mining (P) Ltd.
3.	SPCBs/PCCs to ensure verification and reconciliation of closing of manifest document for all the cases in Hazardous waste handling/ generating units.	<ul style="list-style-type: none"> i. In how many units, verification of closing of manifest documents and reconciliation of the same were done by SPCB (during the said period). iii. 1(one) Unit ii. Of which, how many pertains to interstate movement and within the state? Interstate Movement 3(three)Units

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4.	SPCBs/PCCs to ensure regular updation of website with respect to all enforcement actions along with details of industries and action taken thereof.	<p>i. Whether website of SPCB has been updated w.r.t. all enforcement actions along with (a) details of industries, (b) date of inspection including collection of effluent or other samples, (c) whether unit is compliant or not, (d) if non-compliant then action taken including the date of notice if any sent to defaulter and action taken pertaining to HOWM Rules: (Yes/No)</p> <p>NO</p> <p>ii. Provide specific link of all enforcement action uploaded in Board's website.</p> <p>N/A in view of reply above</p> <p>iii. Provide the copy of enforcement framework document developed by board for effective enforcement of Rules.</p> <p>N/A in view of reply above</p> <p>iv. Provide details of defaulting units as per Table 1 given below.</p> <p>NIL</p>
5.	Board shall take necessary action for compliance to the HOWM Rules, 2016 and recommendations of the Monitoring Committee	Enclosed at Appendix-B
6.	Board shall be directed to submit the 2nd, 3rd and 4th quarter compliance report.	

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7.	Development of sectoral process based reasonable HW generation range/ environmental benchmarking/guidelines for HW recycling/ utilization and approach for waste management hierarchy and submit the progress report on the same within 06 months to CPCB.	Document is yet to be prepared. Guidance on preparation is being sought from the Central Pollution Control Board, New Delhi
8.	Board shall be directed to submit the status on setting up of TSDF or sharing arrangement with authorized common TSDFs of neighboring states.	<p>Site identification for establishment of common TSDF has been carried out by the Board alongwith the Industries Department. However the inventorization carried out by the Board it was found that the quantum of hazardous waste generated in the State is too less for establishment of Common Hazardous Waste Treatment, Storage & Disposal Facility (CHWTSDF). Industries generating landfillable hazardous wastes were directed to dispose their wastes in an authorized disposal facility. Similarly CPCB, New Delhi has submitted a report of the Committee on Categorization of States as Small States Based on Threshold Limit of Generation of Hazardous Waste for which the report is placed at Annexure-IV.</p> <p>Moreover it was decided in the meeting of Chairmen & Member Secretaries of North Eastern State Pollution Control Boards held on 26th May 2017, it was suggested to look into the possibility of sharing a Common Hazardous Waste Treatment, Storage & Disposal Facility (CHWTSDF) to be setup in Assam for treatment and disposal of the Hazardous Waste generated in Meghalaya.</p>
B. Pertaining to Final Report of Monitoring Committee		
1.	<i>Action point 15: Clearance of Waste Oil/Sludge from Ships:</i>	

SPCC

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<p><i>Concerned SPCBs/PCCs or Port Authorities of State/UT to grant/obtain necessary authorization to cover hazardous wastes generated from both normal port operations/activities and all ship generated wastes (MARPOL annexes) (e.g in case of used/waste Oil authorization for Cat. No. 5 and Cat. No. 3 of HOWM Rules, 2016). The same be also covered in the annual report submitted as per HOWM Rules, 2016. (SPCBs/PCCs and Port Authorities: 05 months)</i></p>	<p>There are no ports (land or river) in the state of Meghalaya.</p>
<p>2. Action point 15: Clearance of Waste Oil/Sludge from Ships: <i>SPCBs/PCCs shall ensure that all the ports (including minor ports), ICDs/CFSS have mandatory authorization as per HOWM Rules, 2016. The said authorization shall be granted by the SPCB/PCC after due scientific evaluation. (SPCBs/PCCs: 05 months)</i></p>	
<p>3. Action point 18: Collaboration between regulating authorities: <i>SPCBs/PCCs along with Customs and Port authorities to ensure regular interaction among themselves for better compliance of import and export related issues and management of ship wastes. (MoEF&CC, CPCB, SPCBs/PCC, Customs and Ports Authorities: On a regular basis)</i></p>	<p>There are no ports (land or river) in the state of Meghalaya.</p>
<p>4. Action point 19: Availability of Waste Reception Facilities at ports: <i>SPCBs/PCCs may coordinate with DG(S) and Port Authorities for implementation of the aforesaid notification for environmentally sound management and disposal of ship wastes. (SPCBs/PCCs: 05 months)</i></p>	

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5.	<p>Action point 20: Authorization for the waste reception facilities and ports: <i>SPCBs/PCCs shall ensure authorization is granted to Ports and Waste reception facility available at all ports and all the provisions of HOWM Rules, 2016 (i.e. authorization, manifest system, inventerisation etc.) are being followed by Ports and Waste Reception Facilities. (SPCBs/PCCs : 05 months)</i></p>	<p>There are no ports (land or river) in the state of Meghalaya.</p>
6.	<p>Action point 26: Display of information outside the factory gate: <i>SPCBs/PCCs shall ensure that verification of installation/updation of display boards at all the Hazardous waste generating units on a continuous basis. (SPCBs/PCCs : 05 months)</i></p>	<p>i. Number of hazardous waste generating units in the state: 19 ii. Number of units installed display board: 16 Units iii. Of (ii) above, how many has been verified by the Board: 16 Units iv. Number of hazardous waste generating units not installed/updated display board: 3(Three) UNITS v. Action taken by the board, in case of non-compliances observed: Directions is in process of being issued</p>
7.	<p>Action point 27: Institutional Reforms: SPCBs/PCCs shall ensure that adequate manpower is available with the PCB/PCC, training shall be regularly provided with emphasis on scientific evaluation and management of hazardous waste.</p>	<p>i. Is adequate manpower available with SPCB/PCC: NO ii. Steps taken to ensure adequate manpower are made available in SPCB/PCC and timeline for the same. Proposal has been sent to the Government and Central Pollution Control Board and reply is awaited iii. No. of training programs organized by SPCB/PCC during FY-2019-20. 1(One) program "MONITORING OF</p>

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		<p>INDUSTRIAL EMISSION & AMBIENT AIR QUALITY” Total no of participants – 54 persons</p> <p>iv. No. of training programs attended by SPCB/PCC officials (which are organized by other agencies). 8(eight)</p> <p>*Please provide topic of the training programmes organised by Board and no. of officials attended the same.</p>
8.	<p>Action point 27: Institutional Reforms:</p> <p><i>SPCBs/PCCs should have adequate laboratory infrastructure for analysis of HW parameters.</i></p>	<p>i. No. and list of Hazardous waste parameters for which facility for analysis is available with SPCB/PCC. Enclosed at Appendix-C</p> <p>ii. Steps taken to provide adequate laboratory infrastructure for the remaining parameters in the SPCB/PCC and timeline for the same. NIL</p> <p>iii. In case of non- availability of the infrastructure current practice of the SPCB/PCC for analysis of HW parameters. NIL</p>
9.	<p>Action point 27: Institutional Reforms: <i>R&D work shall be regularly carried out by the SPCBs/PCCs either individually, in collaboration with other SPCBs/PCCs and expert technical Institutes/agencies. Continuous dissemination of information and awareness programs shall be carried out by the SPCBs/PCCs. (SPCBs/PCCs : 05 months)</i></p>	<p>(i) Capacity building for officers of Meghalaya State Pollution Control Board is dependent on training conducted by CPCB and other renowned institutes in the Country.</p> <p>(ii) It maybe informed that the Board has undertaken a research study on “Cleaner Production in Cement Industry for Environmental</p>

Format for providing information w.r.t directions of the Tribunal dated 07.07.2020 in the matter of O.A. 804/2014 (for the period from 1-07-2020 to 30-09-2020) by Chief Secretary

		<p>Sustainability™.</p> <p>It may be informed that the Meghalaya State Pollution Control Board will be not be in a position financially to regularly undertake research specifically in the areas of green chemistry, cleaner technology, waste minimization, circular economy.</p>
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MEMBER SECRETARY
Meghalaya State Pollution Control Board
Shillong

**Format for reporting implementation and monitoring of various
recommendations of the Monitoring Committee**

For Quarter: July-September 2020

Name of SPCB/PCC: Meghalaya State Pollution Control Board

Compliance Status as on: 30.09.2020

Basic Information

1. (a) Whether scientific principles based identification & quantification of hazardous and other wastes are carried out at the authorization stage by the Board itself: (Yes/No) If no,

YES

2. (a) (i) Whether authorization is granted/renewed by evaluation by SPCB officials or through evaluation of expert committee? (Yes/No)

YES. Evaluation by SPCB Officials

- (b) Whether authorization documents clearly stipulates respective mode of management (such as common or captive incineration/secured landfilling or pre-processing or recycling or utilization or export or captive storage, as applicable) for each category of HW being generated. (Yes/No) if no;

YES

3. (a) Whether elaborate protocols for pre-processing and recycling/utilisation facilities for enhanced level and frequency of enforcement and environmental monitoring have been laid down by the SPCB (Yes/No).

NO. There are no pre-processing and recycling facilities in the State of Meghalaya

4. Whether uniform format (as suggested by Monitoring Committee) for inspections of hazardous and other wastes handling facilities has been adopted by SPCB: (Yes/No)

YES

A. Hazardous and Other Wastes Generating Units and their authorization

5. Total No. of operating hazardous and other wastes handling units: **19**

6. Total No. of Units (having valid authorization): **11**

7. (a) New Units applied for fresh authorization (during the quarter): **NIL**

(b) (i) New Units of (a) above granted authorization: **NIL in view of reply at Sl. 7(a)**

- (ii) Of (b)(i) above, uniform inspection format as at (4) above has been enclosed in how many authorisations:

(c) (i) No. of fresh authorization granted (during the quarter) to new units (who applied in previous quarter) and other than (b) above: **NIL**

- (ii) Of (c)(i) above, how many units were inspected & HW data and facilities have been scientifically verified (during the quarter) before grant of authorization: **NIL**

- (iii) Of (c)(ii) above, uniform inspection format as at (4) above has been enclosed in how many authorizations: **NIL**
 - (d) Of (a) above, how many units were refused authorization: **NIL**
 - (e) Of (a) above, how many authorizations cancelled or suspended: **NIL**
 - (f) Other units (other than (a) above) who applied in previous quarter and authorization was refused: **NIL**
- 8. (a) Units applied for renewal of authorization (during the quarter): 5**
- (b) (i) Of units of (a) above, how many units have been granted renewal: **1**
 - (ii) Of (b)(i) above, uniform inspection format as at (4) above has been enclosed in how many authorizations: **1**
 - (c)(i) No. of authorization renewed (during the quarter) to units (who applied prior in previous quarter) and other than (b) above: **NIL**
 - (ii) Of (c)(i) above, how many units were inspected & HW data and facilities have been scientifically verified (during the quarter) before renewal of authorization: **1**
 - (iii) Of (c)(ii) above, uniform inspection format as at (4) above has been enclosed in how many authorizations: **1**
 - (d) Of (a) above, how many units were refused renewal of authorization: **NIL**
 - (e) Other units (other than (a) above) who applied in previous quarter and renewal of authorization was refused: **NIL**
- 9.(a) Nos. of units inspected by SPCB (during the quarter) only w.r.t. fresh/renewal of authorization: 1**
- (b) Nos. of hazardous and other wastes handling units (including recycling/utilizing/pre-processing/common TSDF facilities) inspected by SPCB (during the quarter) for other purposes other than (a) above, where observations on compliance of HOWM Rules too were made (only nos. of units to be given and not nos. of inspections): **5**

B. Scientific identification & quantification of HW

- 10.(a) Of the fresh authorization granted [i.e among 7(b)(i) and 7(c)(i) above], in how many cases additional categories of hazardous wastes (other than that declared by the applicant) were: **NO FRESH AUTHORIZATION GRANTED****
- 11.(a) Of the authorization renewed [i.e. among 8(b)(i), and; 8(c)(i)], in how many cases additional categories of hazardous wastes (other than that stipulated in the previous authorization) were: **NIL****
- (b) Of the authorization renewed [i.e. among 8(b)(i), and; 8(c)(i)], in how many cases category of other hazardous wastes (other than that stipulated in the previous authorization) were: **NIL**
- 12. Of the units inspected for other than grant/renewal of authorization purpose [i.e. among 9(b) above],**
- (a) in how many units, discrepancies in categories of hazardous/other wastes or quantities thereof or both to that stipulated in authorizations were observed: **NIL**
- (b) Of (a) above, in how many cases authorizations were amended accordingly: **NIL**

13. Based on (10), (11) and (12) above, authorizations of how many similar process based units were amended ((during the quarter) accordingly: **NIL**
14. (a) Of (10), (11), (12) and (13), in how many units "other waste" categories or quantities thereof or both have been added (during the quarter): **NIL**
(b) Of (14a) above, how many other waste category has been added: **NIL**
- C. Enhanced frequency of enforcement and environmental monitoring in hazardous or other waste recycling/ utilizing/ pre-processing/ waste collector facilities:**
15. Of (5) above:
- (a) How many units are only "hazardous wastes" recycling or utilization units: **NIL**
 - (b) How many units are only "other wastes" recycling or utilizing units: **NIL**
 - (c) How many units are recycling or utilization units of both i.e. hazardous waste and "other waste": **NIL**
 - (d) How many units are hazardous or other waste pre-processing units: **NIL**
 - (e) How many units are waste collectors: **NIL**
16. No. of inspections carried (during the quarter) in units as at (15) above, as part of inspections for renewal of authorization: **NIL**
17. No. of inspections (other than 16 above) carried (during the quarter) in units as at (15) above: **NIL**
18. No. of units (of 15 above) where monitoring (sampling & analysis) has been carried out by SPCB/PCC itself: **NIL**
19. No. of units (of 15 above) where monitoring (sampling & analysis) has been carried out by private labs engaged by SPCB/PCC: **NIL**
20. No. of units (of 15 above) whose annual return has been verified and validated by SPCB: **NIL**
- D. Manifest document**
21. Of (5) above, verification of closing of manifest documents and reconciliation of the same were done by SPCB (during the quarter) in how many units: **1**
- E. Inventory**
22. Of (5) above
- (a) How many hazardous or other waste generating units have submitted annual returns by 30th June of preceding year: **9(Nine)**
 - (b) How many units have submitted annual returns after 30th June of Preceding year: **3 (Three)**
 - (c) How many units have not submitted annual return for preceding year: **7**
 - (d) Of (b) & (c) above, in how many units action has been taken by SPCB? **7**
23. Of (a) above, how many units have been verified and validated by SPCB w.r.t. annual inventory submitted by them viz. products produced/categories of waste generation/ quantities generated/ daily record and manifest being maintained, etc.: **1(ONE)**

24. (a) For how many industrial sectors, hazardous waste or other waste generation range has been developed by SPCB: NOT DEVELOPED
- (b) List the sector of (a) above for which hazardous waste or other waste generation range has been developed: N/a in view of reply at (a) above
- (c) If not, what is the time target by which such sector process based HW generation range would be initiated (Month & Year). 31.12.2020

F. Enforcement actions (after 31/3/2019)

25. How many units were found violating one or other provisions of the HOWM Rules: 2
26. In how many units, documentation of non-compliance while processing renewal of authorisation or inspection has been done (after 31/3/2019) by SPCB to invoke powers of refusal or revocation: 2
26. Whether enforcement framework for effective enforcement of Rules based on principal of proportionality and precautionary principal has been developed by SPCB: (Yes/No) NO
27. Of 25 above, In how many defaulting units, Rule 23(1) has been enforced by SPCB as per CPCB guidelines: NIL
28. Of 25 above, In how many defaulting units, Rule 23(2) has been enforced by SPCB as per CPCB guidelines: NIL
29. (a) Of (25) above, how many units have been identified by SPCB as habitual and serious defaulters: NIL
- (b) Of (a) above, how many unit's authorisation have been refused or revoked: NIL
- (c) Of (a) above, how many unit has been prosecuted under the EPA: NIL
- (d) Of (a) above, FIR has been lodged against how many defaulting units: NIL
30. Of (25) above,
- (a) how many unit's authorisation (other than 29 above) have been refused or revoked: NIL
- (b) Of (a) above, how many unit (other than 29 above) has been prosecuted under the EPA: NIL
- (c) Of (a) above, FIR has been lodged against how many defaulting units (other than 29 above): NIL
31. (a) Whether website of SPCB has been updated w.r.t. all enforcement actions along with details of industries and action taken pertaining to HOWM Rules: (Yes/No): NO
- (b) Provide link address of the above site: N/a in view of reply at 31(a)

G. Common TSDF

32. (a) Whether State/UT has common or captive TSDF? If yes;

- NO

If no;

(b) Name of the common TSDF, where any sharing arrangement has been made for disposal of landfillable HW. **NO arrangement made**

(c) Name of the common TSDF, where any sharing arrangement has been made for disposal of incinerable HW. **No incinerable wastes in the State of Meghalaya**

(d) Whether SPCB/PCC has initiated any action for setting up of common TSDF?(yes/no)if yes, **YES**

(e) Whether site has been identified? **YES**

(f) EIA completed? **NO**

(g) EC granted? **NO**

(h) Provide the progress report in brief -

Site identification for establishment of common TSDF has been carried out by the Board alongwith the Industries Department. However the inventorization carried out by the Board it was found that the quantum of hazardous waste generated in the State is too less for establishment of Common Hazardous Waste Treatment, Storage & Disposal Facility (CHWTSDF). Industries generating landfillable hazardous wastes were directed to dispose their wastes in an authorized disposal facility.

33. (a) whether SPCB has directed common TSDF operator in their state not to return the HW consignment and do the needful as recommended by the Monitoring Committee: (Yes/No) **NO**

(b) Number of incidences returning of the HW consignment by the common TSDF (after 31/03/2019) noted by SPCB: **NIL**

34. Whether SPCB has planned environmental audit including site selection criteria, design & layout for both captive and common SLF: (Yes/No) **NO**

35. (a) Of (32)(a)(i) above, how many have opened escrow account as per O.M. dated 16/04/2009 of MoEF&CC: **N/a**

(b) List name of the common TSDF who have opened escrow account: (Insert Table for multiple entries): **N/a**

(c) Of (a) above, how many have deposited mandatory amount in the escrow account: **N/a**

(d) Of (a) above, in how many units SPCB/PCC has verified deposited amount as per above O.M. dated 16/04/2009 of MoEF&CC -(No.s) **N/a**

(d) Of (a) above, in how many units SPCB/PCC have verified Mandatory amount being deposited in the escrow account annually is displayed on the website of common TSDF operator: (No.s) **N/a**

(e) What actions have been taken by SPCB in case of non-opening/non-deposition of mandatory escrow account/ displaying on website: (not more than 100 words) **N/a**

36. (a) Whether laboratory facility for the analysis of all HW parameters as required under the HOWM Rules has been available in all of the common TSDFs as (32) above. If no, **N/a**

I. Impact of other regulation

37. (a) Brief note on action taken to bring domestic hazardous waste into the ambit of HW inventory (2018-19): **No action plan**

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(b) How many domestic hazardous waste deposition centers exists in the State/UT: **NIL**

(c) How many of (b) above have been authorised under HOWM Rules, 2016: **NIL**

(d) Quantity of domestic HW received in deposition center for (till 31/03/2019)

- Disposal into TSDF
- Recycling/Utilisation



No information available

(e) Quantity of domestic HW received in deposition center for (after 31/03/2019)

- Disposal into TSDF
- Recycling/Utilisation



No information available

(e) Quantity of domestic HW disposed in TSDF (till 31/03/2019)

(f) Quantity of domestic HW disposed in TSDF (after 31/03/2019)

No information available

(g) Brief note on action taken to bring fluorescent & other mercury containing lamp into the ambit of HW inventory (2018-19): **No action plan**

(h) Quantity of fluorescent & other mercury containing lamp disposed in TSDF (before 31/03/2019) **N/a**

(i) Quantity of fluorescent & other mercury containing lamp disposed in TSDF (after 31/03/2019) **N/a**

(j) Whether Common TSDF operator has declared the above received as at (e) and (ii) (domestic HW and fluorescent & other mercury containing lamp) in their annual inventory report (2017-18) separately (Yes/No) **NO**

J. Capacity Building

38. (a) Whether SPCB has at least one laboratory where all HW parameters as required under the HOWM Rules can be analyzed: (Yes/No) **YES**

(b) * Time (in terms of month month/year) by which (a) above would be commissioned in SPCB/PCC: **31.03.2023**

(c) Whether Capacity building in terms of qualified and experienced manpower has been provided (yes/no) **YES**

(d)*Time (in terms of month month/year) by which (c) above would be provided: (provide calendar) **N/a**

K. Action Plan for recycling/utilization (with upload option)

39 (a)Whether SPCB/PCC has evolved any approach in recycling and utilization of hazardous waste in terms of waste management hierarchy. **NO**

40 Whether any benchmarks/guidelines have been developed by SPCB/PCC for the possibilities of HW recycle/utilization on case to case basis? **NO**

if yes, provide the details.(upload option)

* If no, (ii) Target date for developing the same (Calendar/Upload option)

41 Whether SPCB/PCC has developed any environmental benchmarking among the similar industries generating HW which can be useful to ensure consistency and uniformity for rationalizing the HW generation and reuse/utilization.(yes/no)

NO

FORMAT FOR PROVIDING LABORATORY FACILITIES AVAILABLE WITH SPCB/PCC

A. General Information

Sl. No.	Particular	Details		
1.	Name of SPCB	Meghalaya State Pollution Control Board		
2.	Name and Designation of the Official (Head of the Laboratory)	Dr. B. Nongbri, Sr. Scientist		
3.	Contact Number	94361-10580		
4.	Year of Establishment of Laboratory facility	1988		
5.	Number of instruments/equipment available at HO (please enclosed list of instrument/equipment)	Information provided at Annexure – I		
6.	Whether Laboratory is Accredited? (Y/N)	YES		
7.	Provide the Accreditation details of and name of parameters Accredited	NABL Accreditation – Information provided Annexure – II		
8.	Whether laboratory participated in any analytical quantity control (AQC)? (Y/N)	YES		
9.	Provide year-wise details of AQC analysis	Information provided at Annexure – III		
	Year		No. of parameters	Z – score
10.	Whether Laboratory participated in any Proficiency Test (PT)? (Y/N)	YES		
11.	Provide year-wise details of PT analysis:	Information provided at Annexure – IV		
	Year		No. of parameters	Z – score
12.	Whether any audit (internal/extended) has been conducted? (Y/N)	YES		
13.	Details of such audit	Information provided at Annexure – V		

B. Analysis Facility: Information provided at Annexure – II

Sl. No.	Parameters	Laboratory Facility at HO (Yes/No)	Test Method followed	Any other arrangement for analysis
1.				
2.				
3.				
4.				
5.				


 MEMBER SECRETARY
 Meghalaya State Pollution Control Board
 Shillong

ANNEXURE -1

LIST OF INSTRUMENTS/EQUIPMENT AVAILABLE WITH THE
CENTRAL LABORATORY MSPCB

SL NO	NAME OF EQUIPMENT	NUMBERS
1.	Multigas analyser	4 NOS
2.	Micro balance	1 NO
3.	Digital Anemometer (Hand held)	10 NOS
4.	Humidity meter (Hand held)	10 NOS
5.	CO Analyzer (portable)	1 NO
6.	Microscopes	1 NO
7.	Hot plate (Rectangular)	3 NOS
8.	Handheld dissolved oxygen meter	5NOS
9.	Portable digital thermometer with probe	5NOS
10.	RAIN GAUZE	12 NOS
11.	CONDUCTIVITY METER	1 NO
12.	HANDHELD CONDUCTIVITY/TDS METER	5 NOS
13.	WATERPROOF HANDHELD PH METER	5 NOS
14.	WEIGHT BOX F2CLASS 200gm	1 NO
15.	Respirable dust sampler APM 460	3 NOS
16.	PM 2.5 sampler new improves APM 550MFC fine	15 NOS
17.	NOISE METER SLM 109	2 NOS
18.	Digital thermometer And hygrometer	1 NOS

19.	Flue Gas Analyser	1 NO
20.	Water purification system (RO) based Millipore synergy	1 NO
21.	UV- Visible spectrophotometer	4 NOS
22.	Atomic absorption spectrophotometer with graphic furnace and hydride generator system	1 NO
23.	Gas chromatograph, With ECD FID Detector	1 NO
24.	Balance Mattler	4 NOS
25.	Sound level meter Dispro with calibrators and adaptors	4 NOS
26.	Smoke meter netel	4 NOS
27.	Orsat gas analysis unit (JGWS)	1 NOS
28.	Hand held conductivity meter	1 NO
29.	Global positioning system,	2 NOS
30.	Binocular stereo microscope	1 NO
31.	Colony counter- electronics	1 NO
32.	Microscope lamp kochler substage	1 NO
33.	Rotary shaker with stainless steel platform CAP 36 nos of 250ml flash	1 NO
34.	Ultra sonic water bath (ultrasonic cleaners)	1 NO
35.	Alpha/B radio activity counter radiation counting system Alpha probe AP/165	1 NO
36.	Handy sampler for gaseous monitoring	1 NO
37.	COD digester with aluminum heating block system	2 NOS
38.	Karl fisher moisture content meter	1 NO
39.	Hot air oven	6 NOS
40.	Vertical Autoclave	1 NO
41.	Muffie furnace	1 NO

42.	Nephelometer/turbidity meter	1 NO
43.	Incubator universal	3 NOS
44.	Micro pH system with special glass electrode	1 NO
45.	Rotary evaporator	1NO
46.	BOMB calorimeter Controlled jacket vessel	1 NO
47.	Colony counter (digital) HI-media	1 NO
48.	Turbidity meter (digital)	1 NO
49.	Handheld anemometer with wind vane and temperature	2 NOS
50.	(Handy sampler) for gaseous monitoring	1 NO
51.	Benzene sampler	1 NO
52.	Water purification	1 NO
53.	Toxicity characteristic Leaching procedure (TCLP) Zero head extractor (ZHE)	1 NO
54.	Ion chromatograph	1 NO
55.	Mercury analyzer	1 NO
56.	Water distillation unit (QUARTZ)	2 NOS
57.	Smoke density meter	4 NOS
58.	Stack monitoring kit	3 NOS
59.	BOD INCUBATOR CALTRON DELUXE	2 NOS
60.	Anemometer (digital)	10 NOS
61.	Temperature and Humidity (digital)	10 NOS



NABL

National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



CERTIFICATE OF ACCREDITATION

CENTRAL LABORATORY, MEGHALAYA STATE POLLUTION CONTROL BOARD

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

FORESTS AND ENVIRONMENT DEPARTMENT, GOVERNMENT OF MEGHALAYA, "ARDEN", LUMPYNGGAD, SHILLONG, MEGHALAYA, INDIA

in the field of

TESTING

Certificate Number: TC-5577

Issue Date: 12/07/2019

Valid Until:

11/07/2021

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL. (To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



NABL

National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name	CENTRAL LABORATORY, MEGHALAYA STATE POLLUTION CONTROL BOARD, FORESTS AND ENVIRONMENT DEPARTMENT, GOVERNMENT OF MEGHALAYA, "ARDEN", LUMPYNGNGAD, SHILLONG, MEGHALAYA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5577	Page No. :	1 / 19
Validity	12/07/2019 to 11/07/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
1	BIOLOGICAL- WATER	Water (Surface, Ground, Potable)	E.coli	APHA : 9221 G(2): 2017	1 MPN/100mL to 1600 MPN/100mL
2	BIOLOGICAL- WATER	Water (Surface, Ground, Potable)	Faecal Coliform	APHA 23rd Edition 9221 E: 2017	1 MPN/100mL to 1600 MPN/100mL
3	BIOLOGICAL- WATER	Water (Surface, Ground, Potable)	Total Coliform	APHA 23rd Edition: 2017	1 MPN/100mL to 1600 MPN/100mL
4	BIOLOGICAL- WATER	Water (Surface, Ground, Potable)	Total Plate Count	APHA 23rd Edition: 9215 D: 2017	1 CFU/mL to 10000 CFU/mL
5	CHEMICAL- ATMOSPHERIC POLLUTION	Ambient Air	Carbon monoxide as CO	MPCB/CL-SOP/25: 2017	0.2 µg/m ³ to 4000 µg/m ³
6	CHEMICAL- ATMOSPHERIC POLLUTION	Ambient Air	Lead as Pb	ISC 411,3rd Edition 1999: 1999	0.02 µg/m ³ to 100 µg/m ³
7	CHEMICAL- ATMOSPHERIC POLLUTION	Ambient Air	Nickel as Ni	IS 5182 (Part-22), 2004: 2004	2.5 ng/m ³ to 25 ng/m ³
8	CHEMICAL- ATMOSPHERIC POLLUTION	Ambient Air	Nitrogen Oxides as NO ₂	IS 5182 (Part-6) RA2012: 2012	10 µg/m ³ to 750 µg/m ³
9	CHEMICAL- ATMOSPHERIC POLLUTION	Ambient Air	Ozone as O ₃	ISC 411, 3rd Edition, 1999: 1999	10 µg/m ³ to 200 µg/m ³
10	CHEMICAL- ATMOSPHERIC POLLUTION	Ambient Air	Particulate matter as PM ₁₀	IS 5182 (Part-23) RA2012: 2012	20 µg/m ³ to 500 µg/m ³



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Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5577	Page No. :	2 / 19
Validity	12/07/2019 to 11/07/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
11	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Particulate matter as PM2.5	MPCB/CL-SOP/2017-2018/19 Dtd 30.05.2017: 2017	10 µg/m ³ to 100 µg/m ³
12	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Sulphur Oxides as SO ₂	IS 5182 (Part-2) RA2012: 2012	4 µg/m ³ to 1050 µg/m ³
13	CHEMICAL-ATMOSPHERIC POLLUTION	Meteorological	Ambient Temperature	MPCB/CL-SOP/2017-2018/20 Dtd 30.05.2017: 2017	2 °C to 50 °C
14	CHEMICAL-ATMOSPHERIC POLLUTION	Meteorological	Rain Fall	MPCB/CL-SOP/2017-2018/20 Dtd 30.05.2017: 2017	1 ml/day to 500 ml/day
15	CHEMICAL-ATMOSPHERIC POLLUTION	Meteorological	Relative Humidity	MPCB/CL-SOP/2017-2018/20 Dtd 30.05.2017: 2017	20 % to 90 %
16	CHEMICAL-ATMOSPHERIC POLLUTION	Meteorological	Wind Direction	MPCB/CL-SOP/2017-2018/20 Dtd 30.05.2017: 2017	0 to 360
17	CHEMICAL-ATMOSPHERIC POLLUTION	Meteorological	Wind Speed	MPCB/CL-SOP/2017-2018/20 Dtd 30.05.2017: 2017	0 km/hr to 50 km/hr
18	CHEMICAL-ATMOSPHERIC POLLUTION	Noise	Ambient Noise Level (Leq, Lmax, Lmin etc.)	IS-9969 2001: 1981	35 dB(A) to 130 dB(A)
19	CHEMICAL-ATMOSPHERIC POLLUTION	Noise	Source Noise Measurement	IS-4954 RA1997: 1968	35 dB(A) to 130 dB(A)



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Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5577	Page No. :	3 / 19
Validity	12/07/2019 to 11/07/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
20	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Carbon dioxide	MPCB/CL-SOP/24: 2017	0.2 % to 12 %
21	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Carbon monoxide	MPCB/CL-SOP/24: 2017	0.2 % to 1 %
22	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Oxides of Nitrogen	MPCB/CL-SOP/24: 2017	20 mg/Nm ³ to 500 mg/Nm ³
23	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Oxygen	MPCB/CL-SOP/24: 2017	0.2 % to 18.4 %
24	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Particulate matter	IS 11255 (Part-1): 1985: 2012	10 mg/Nm ³ to 800 mg/Nm ³
25	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Sulphur-dioxide	MPCB/CL-SOP/24: 2017	20 mg/Nm ³ to 1500 mg/Nm ³
26	CHEMICAL-POLLUTION & ENVIRONMENT	Solid Waste	Boron as B	EPA 1311/EPA 200.8: 1994	0.01 mg/L to 10 mg/L
27	CHEMICAL-POLLUTION & ENVIRONMENT	Solid Waste	Cadmium as Cd	EPA 1311/EPA 200.8: 1994	0.1 mg/L to 50 mg/L
28	CHEMICAL-POLLUTION & ENVIRONMENT	Solid Waste	Chromium as Cr	EPA 1311/EPA 200.8: 1994	0.1 mg/L to 100 mg/L



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Permanent Facility					
29	CHEMICAL-POLLUTION & ENVIRONMENT	Solid Waste	Copper as Cu	EPA 1311/EPA 200.8: 1994	0.01 mg/L to 10 mg/L
30	CHEMICAL-POLLUTION & ENVIRONMENT	Solid Waste	Iron as Fe	EPA 1311/EPA 200.8: 1994	0.01 mg/L to 5 mg/L
31	CHEMICAL-POLLUTION & ENVIRONMENT	Solid Waste	Lead as Pb	EPA 1311/EPA 200.8: 1994	0.1 mg/L to 50 mg/L
32	CHEMICAL-POLLUTION & ENVIRONMENT	Solid Waste	Manganese as Mn	EPA 1311/EPA 200.8: 1994	0.1 mg/g to 100 mg/g
33	CHEMICAL-POLLUTION & ENVIRONMENT	Solid Waste	Nickel as Ni	EPA 1311/EPA 200.8: 1994	0.01 mg/g to 100 mg/g
34	CHEMICAL-POLLUTION & ENVIRONMENT	Solid Waste	Zinc as Zn	EPA 1311/EPA 200.8: 1994	0.01 mg/g to 10 mg/g
35	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Acidity	Titrimetric (Colour Indicator) APHA 23rd Edition, 2017:2310 B: 2017	5 mg/l to 1000 mg/l
36	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Alkalinity	Titrimetric (Colour Indicator) APHA 23rd Edition, 2017:2320 B: 2017	5 mg/l to 1000 mg/l



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
37	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Ammonical Nitrogen	Distillation followed by Titrimetric Method APHA 23rd Edition, 2017:4500 NH3 B & NH3 C: 2017	1 mg/l to 100 mg/l
38	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Ammonical Nitrogen	Ion selective electrode method APHA 23rd Edition, 2017:4500 NH3 D: 2017	0.05 mg/l to 500 mg/l
39	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Bio chemical Oxygen Demand as BOD 3day at 27 degree C	IS 3025(Part 44):1993 Reaffirmed 1999) Edition, 2.1 (2000-10): 2017	5.0 mg/l to 60000 mg/l
40	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Boron as B	Spectrophotometric method APHA 23rd Edition, 2017:4500 B. C: 2017	1 mg/l to 5 mg/l
41	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Cadmium as Cd	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.01 mg/l to 10 mg/l
42	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Calcium as Ca	By AAS Method and Titrimetric method (EDTA) APHA 23rd Edition, 2017:3500 Ca B: 2017	1 mg/l to 500 mg/l
43	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Chemical Oxygen Demand as COD	IS 3025 (Part 58): 2006	4 mg/l to 80000 mg/l



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Permanent Facility					
44	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Chloride	Titrimetric Method APHA 23rd Edition, 2017:4500 C1-B: 2017	2 mg/l to 5000 mg/l
45	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Chlorine Residual	Titrimetric Method APHA 23rd Edition, 2017:4500 C1-B: 2017	1 mg/l to 100 mg/l
46	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Chromium (Cr) Hexavalent	Spectrophotometric method APHA 23rd Edition, 2017:3500 Cr B: 2017	0.01 mg/l to 10 mg/l
47	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Chromium (Cr) Total	AAS & Spectrophotometric method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 15 mg/l
48	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Colour	Visual Comparison method APHA 23rd Edition, 2017:2120 B: 2017	5 Hazen Units to 500 Hazen Units
49	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Conductivity	Conductivity meter APHA 23rd Edition, 2017:2510 B: 2017	5 µs/cm to 200 ms/cm
50	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Copper as Cu	By AAS Method APHA 23rd Edition, 2017:3111 Cu B: 2017	0.025 mg/l to 4 mg/l
51	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Dissolved Oxygen	Modified Winkler Method APHA 23rd Edition, 2017:4500 O C: 2017	1 mg/l to 10 mg/l



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Permanent Facility					
52	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water	Fixed & Volatile Solids	Gravimetric APHA 23rd Edition, 2017: 2540 E: 2017	5 mg/l to 5000 mg/l
53	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water	Fluoride	Ion selective electrode method APHA 23rd Edition, 2017:4500 F-C: 2017	0.05 mg/l to 50 mg/l
54	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water	Iron as Fe	Spectrophotometric method APHA 23rd Edition, 2017:3500 Fe B: 2017	0,1 mg/l to 40 mg/l
55	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water	Iron as Fe	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 20 mg/l
56	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water	Lead as Pb	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 10 mg/l
57	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water	Magnesium as Mg	By Calculation of Total Hardness & calcium APHA 23rd Edition, 2017:3500 Mg B By Calculation: 2017	- to -
58	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water	Manganese as Mn	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 10 mg/l
59	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water	Nickel as Ni	APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 1 mg/l



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Permanent Facility					
60	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Nitrate Nitrogen	Nitrate Electrode Method APHA 23rd Edition, 2017:NO3 -D: 2017	0.1 mg/l to 50 mg/l
61	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Nitrate Nitrogen	UV-Screen Method Reduction followed by Spectrophotometric Method APHA 23rd Edition, 2017:4500 NO3 -B : 2017	0.5 mg/l to 100 mg/l
62	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Nitrite Nitrogen	Spectrophotometric Method APHA 23rd Edition, 2017:4500 NO2B: 2017	0.01 mg/l to 1.00 mg/l
63	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Oil & Grease	Gravimetric Method (Solvent Extraction) APHA 23rd Edition, 2017:5220 B: 2017	5 mg/l to 500 mg/l
64	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	pH	pH Meter APHA 23rd Edition, 2017:4500 H+B: 2017	2 to 12
65	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Phenols	Distillation followed by Colorimetric APHA 23rd Edition, 2017:5530 C: 2017	0.005 mg/l to 0.25 mg/l



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
66	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Phosphate	Orthophosphate-pre-treatment followed by Spectrophotometric method APHA 23rd Edition, 2017:4500 P D: 2017	0.01 mg/l to 25.00 mg/l
67	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Potassium as K	By Flame photometer APHA 23rd Edition, 2017:3500 K B: 2017	1 mg/l to 50 mg/l
68	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Settleable Solids	APHA 23rd Edition, 2017:2540 F: 2017	5 mg/l to 1000 mg/l
69	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Sludge Volume Index (SVI)	Imhoff cone Membrane Filter Apparatus or Gooch crucible APHA 23rd Edition, 2017:2710 D By Calculation: 2017	- to -
70	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Sodium as Na	By Flame photometer APHA 23rd Edition, 2017:3500 Na B: 2017	1 mg/l to 1000 mg/l
71	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Sulphate	Spectrophotometric method APHA 23rd Edition, 2017:4500 SO42-E: 2017	5 mg/l to 4000 mg/l
72	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Sulphide	APHA 23rd Edition, 2017:4500 H+B: 2017	1 mg/l to 10 mg/l



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Permanent Facility					
73	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Total Dissolved Solids	Filtration, Evaporation & Gravimetric APHA 23rd Edition, 2017:2540 C: 2017	5 mg/l to 10000 mg/l
74	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Total Hardness (CaCO ₃)	Titrimetric (EDTA Method) APHA 23rd Edition, 2017:2340 C: 2017	2 mg/l to 1000 mg/l
75	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Total Kjeldahl Nitrogen	Digestion followed by Titrimetric method APHA 23rd Edition, 2017:4500 NH ₃ B, C, D & 4500 NorgB: 2017	1 mg/l to 500 mg/l
76	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Total Solids	Gravimetric APHA 23rd Edition, 2017:2540 B: 2017	5 mg/l to 10000 mg/l
77	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Total Suspended Solids	Vacuum Filtration (GF/C) APHA 23rd Edition, 2017:2540 C: 2017	2 mg/l to 5000 mg/l
78	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Turbidity	Nephelometric APHA 23rd Edition, 2017:2130 B: 2017	5 NTU to 1000 NTU
79	CHEMICAL-POLLUTION & ENVIRONMENT	Waste Water	Zinc as Zn	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.01 mg/l to 10 mg/l
80	CHEMICAL- WATER	Package Drinking Water	Alkalinity	Titrimetric (Colour & indicator) APHA 23rd Edition, 2017:4500 H+B: 2017	5 mg/l to 100 mg/l



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
81	CHEMICAL- WATER	Package Drinking Water	Cadmium as Cd	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.01 mg/l to 10 mg/l
82	CHEMICAL- WATER	Package Drinking Water	Calcium as Ca	Titrimetric method (EDTA) APHA 23rd Edition, 2017: 3500 Ca B: 2017	1 mg/l to 50 mg/l
83	CHEMICAL- WATER	Package Drinking Water	Chloride	Titrimetric method APHA 23rd Edition, 2017:4500 H+B: 2017	2 mg/l to 100 mg/l
84	CHEMICAL- WATER	Package Drinking Water	Chromium (Cr) Total	AAS & Spectrophotometric method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 5.0 mg/l
85	CHEMICAL- WATER	Package Drinking Water	Conductivity	Conductivity meter APHA 23rd Edition, 2017:2510 B: 2017	2 μ s/cm to 2000 μ s/cm
86	CHEMICAL- WATER	Package Drinking Water	Copper as Cu	By AAS Method APHA 22nd Edition, 2017:3111 Cu B: 2017	0.025 mg/l to 4 mg/l
87	CHEMICAL- WATER	Package Drinking Water	Fluoride	Ion selective electrode method APHA 23rd Edition, 2017:4500 F-C: 2017	0.05 mg/l to 50 mg/l



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
88	CHEMICAL- WATER	Package Drinking Water	Iron as Fe	By AAS Method/Spectrophotometric method APHA 23rd Edition, 2017:3500 Fe B APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 10 mg/l
89	CHEMICAL- WATER	Package Drinking Water	Lead as Pb	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 10 mg/l
90	CHEMICAL- WATER	Package Drinking Water	Manganese as Mn	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 10 mg/l
91	CHEMICAL- WATER	Package Drinking Water	Nickel as Ni	APHA 23rd Edition, 2017: 3111 B: 2017	0.05 mg/l to 1 mg/l
92	CHEMICAL- WATER	Package Drinking Water	Nitrate Nitrogen	Ion selective electrode method APHA 23rd Edition, 2017:4500 NO3-D: 2017	0.1 mg/l to 15 mg/l
93	CHEMICAL- WATER	Package Drinking Water	Nitrite Nitrogen	Spectrophotometric method APHA 23rd Edition, 2017:4500 NO2B: 2017	0.01 mg/l to 1 mg/l
94	CHEMICAL- WATER	Package Drinking Water	pH	pH Meter APHA 23rd Edition, 2017: 4500 H+B: 2017	4 to 10



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Permanent Facility					
95	CHEMICAL- WATER	Package Drinking Water	Phosphate	Orthophosphate-pre-treatment followed by Spectrophotometric method APHA 23rd Edition, 2017:4500 P D: 2017	0.01 mg/l to 5 mg/l
96	CHEMICAL- WATER	Package Drinking Water	Potassium as K	By Flame photometer APHA 23rd Edition, 2017:3500 K B: 2017	1 mg/l to 50 mg/l
97	CHEMICAL- WATER	Package Drinking Water	Silica	Spectrophotometric method APHA 23rd Edition, 2017:4500 SIO2 C: 2017	1 mg/l to 10 mg/l
98	CHEMICAL- WATER	Package Drinking Water	Sodium as Na	By Flame photometer APHA 23rd Edition, 2017:3500 Na B: 2017	1 mg/l to 50 mg/l
99	CHEMICAL- WATER	Package Drinking Water	Sulphate	Spectrophotometric method APHA 23rd Edition, 2017:4500 SO42-E: 2017	5 mg/l to 200 mg/l
100	CHEMICAL- WATER	Package Drinking Water	Total Hardness (CaCo3)	Titrimetric (EDTA) APHA 23rd Edition, 2017:2340 C: 2017	2 mg/l to 100 mg/l
101	CHEMICAL- WATER	Package Drinking Water	Zinc as Zn	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.01 mg/l to 10 mg/l
102	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Acidity	Titrimetric (Colour Indicator) APHA 23rd Edition, 2017:2310 B: 2017	5 mg/l to 100 mg/l



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Permanent Facility					
103	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Ammonical Nitrogen	Distillation followed by Titrimetric method APHA 23rd Edition, 2017:4500 NH3B, NH3C, : 2017	1 mg/l to 100 mg/l
104	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Ammonical Nitrogen	Ion selective electrode method APHA 23rd Edition, 2017:4500 NH3D: 2017	0.05 mg/l to 100 mg/l
105	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Bio chemical Oxygen Demand as BOD 3 day at 27 degree C	IS 3025 (Part 44): 1993 Reaffirmed 1999) Edition 2.1 (2000-10): 2000	1.0 mg/l to 600 mg/l
106	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Boron as B	Spectrophotometric method APHA 23rd Edition, 2017:4500 B C: 2017	1 mg/l to 5 mg/l
107	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Cadmium as Cd	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.01 mg/l to 10 mg/l
108	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Calcium as Ca	Titrimetric method (EDTA) APHA 23rd Edition, 2017:3500 Ca B: 2017	1 mg/l to 500 mg/l
109	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Chemical Oxygen Demand as COD	IS 3025 (Part 58): 2006	4 mg/l to 800 mg/l
110	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Chloride	Titrimetric Method APHA 23rd Edition, 2017:4500 C1 B: 2017	2 mg/l to 5000 mg/l



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Permanent Facility					
111	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Chlorine Residual	Titrimetric Method APHA 23rd Edition, 2017:4500C1 B: 2017	1 mg/l to 100 mg/l
112	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Chromium (Cr) Hexavalent	Spectrophotometric method APHA 23rd Edition, 2017:3500 Cr B: 2017	0.01 mg/l to 5.0 mg/l
113	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Chromium (Cr) Total	AAS & Spectrophotometric method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 10 mg/l
114	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Colour	Visual Comparison method APHA 23rd Edition, 2017:2120 B: 2017	5 Hazen Units to 500 Hazen Units
115	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Conductivity	Conductivity Meter APHA 23rd Edition, 2017:2510 B: 2017	5 µs/cm to 200 ms/cm
116	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Copper as Cu	By AAS Method APHA 23rd Edition, 2017:3111 Cu B: 2017	0.025 mg/l to 4 mg/l
117	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Dissolved Oxygen	Modified Winkler Method APHA 23rd Edition, 2017:4500 O C: 2017	1 mg/l to 10 mg/l
118	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Fixed & Volatile Solids	Gravimetric APHA 23rd Edition, 2017:2540 E: 2017	5 mg/l to 5000 mg/l



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
119	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Flouride	Ion selective electrode method APHA 23rd Edition, 2017:4500 F-D APHA 23rd Edition, 2017:4500 F-C: 2017	0.05 mg/l to 50 mg/l
120	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Iron as Fe	By AAS Method/Spectrophotometric method APHA 23rd Edition, 2017:3500 Fe B: 2017	0.1 mg/l to 40 mg/l
121	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Lead as Pb	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 10 mg/l
122	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Magnesium as Mg	By Calculation of Total Hardness & calcium APHA 23rd Edition, 2017:3500 Mg B By Calculation: 2017	- to -
123	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Manganese as Mn	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 10 mg/l
124	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Nickel as Ni	APHA 23rd Edition, 2017:3111 B: 2017	0.05 mg/l to 1.0 mg/l
125	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Nitrate Nitrogen	Ion selective electrode method APHA 23rd Edition, 2017:4500 NO3-D: 2017	0.5 mg/l to 50 mg/l



NABL

National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name	CENTRAL LABORATORY, MEGHALAYA STATE POLLUTION CONTROL BOARD, FORESTS AND ENVIRONMENT DEPARTMENT, GOVERNMENT OF MEGHALAYA, "ARDEN", LUMPYNGNGAD, SHILLONG, MEGHALAYA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5577	Page No. :	17 / 19
Validity	12/07/2019 to 11/07/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
126	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Nitrite Nitrogen	Spectrophotometric Method APHA 23rd Edition, 2017:4500 NO2 B: 2017	0.01 mg/l to 10.0 mg/l
127	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Oil & Grease	Gravimetric Method (Solvent Extraction) APHA 23rd Edition, 2017:5220 B: 2017	2 mg/l to 100 mg/l
128	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	pH	pH Meter APHA 23rd Edition, 2017:4500H+B: 2017	4 to 10
129	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Phenols	Distillation followed by Colorimetric APHA 23rd Edition, 2017:5530 C: 2017	0.005 mg/l to 0.25 mg/l
130	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Phosphate	Orthophosphate-pretreatment followed by Spectrophotometric method APHA 23rd Edition, 2017:4500 P D: 2017	0.01 mg/l to 25.0 mg/l
131	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Potassium as K	By Flame photometer APHA 23rd Edition, 2017:3500 K B: 2017	1 mg/l to 50 mg/l
132	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Settle able Solids	Imhoff cone APHA 23rd Edition, 2017:2540 F: 2017	5 mg/l to 1000 mg/l



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name	CENTRAL LABORATORY, MEGHALAYA STATE POLLUTION CONTROL BOARD, FORESTS AND ENVIRONMENT DEPARTMENT, GOVERNMENT OF MEGHALAYA, "ARDEN", LUMPYNGNGAD, SHILLONG, MEGHALAYA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5577	Page No. :	18 / 19
Validity	12/07/2019 to 11/07/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
133	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Sludge Volume Index (SVI)	Imhoff cone Membrane Filter Apparatus or Gooch crucible APHA 23rd Edition, 2017:2710 D By Calculation: 2017	0.5 to 2.0
134	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Sodium as Na	By Flame photometer APHA 23rd Edition, 2017:3500 Na B: 2017	1 mg/l to 500 mg/l
135	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Sulphate	Spectrophotometric method/gravimetric method APHA 23rd Edition, 2017:4500 SO4 2-E: 2017	5 mg/l to 4000 mg/l
136	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Sulphide	APHA 23rd Edition, 2017:4500 S2-B: 2017	1 mg/l to 10 mg/l
137	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Total Dissolved Solids	Filtration, Evaporation & Gravimetric APHA 23rd Edition, 2017:2540 C: 2017	5 mg/l to 10000 mg/l
138	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Total Hardness (CaCO ₃)	Titrimetric (EDTA Method) APHA 23rd Edition, 2017:2340 C: 2017	2 mg/l to 1000 mg/l
139	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Total Kjeldahl Nitrogen	Digestion followed by Titrimetric method APHA 23rd Edition, 2017:4500 NH ₃ B, C, D, & 4500 Norg B: 2017	1 mg/l to 500 mg/l



NABL

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SCOPE OF ACCREDITATION

Laboratory Name CENTRAL LABORATORY, MEGHALAYA STATE POLLUTION CONTROL BOARD,
FORESTS AND ENVIRONMENT DEPARTMENT, GOVERNMENT OF MEGHALAYA,
"ARDEN", LUMPYNGNGAD, SHILLONG, MEGHALAYA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5577 Page No. : 19 / 19

Validity 12/07/2019 to 11/07/2021 Last Amended on -

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
140	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Total Solids	Gravimetric APHA 23rd Edition, 2017:2540 B: 2017	5 mg/l to 10000 mg/l
141	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Total Suspended Solids	Vacuum Filtration (GF/C) APHA 23rd Edition, 2017:2540 C: 2017	2 mg/l to 5000 mg/l
142	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Turbidity	Nephelometric APHA 22nd Edition, 2017:2130 B: 2017	5 NTU to 100 NTU
143	CHEMICAL- WATER	Surface Water/Ground Water/Rain Water	Zinc as Zn	By AAS Method APHA 23rd Edition, 2017:3111 B: 2017	0.01 mg/l to 10 mg/l

NOTE- The Laboratory has demonstrated competence for the stated scope for WATER. This however does not fully cover the specification requirements of BIS for the Packaged Drinking Water as per IS 14543 and the Packaged Natural Mineral Water IS 13428.

Annexure III

Details of AQC participated by the Board's Laboratory

Sl.No	Product/ Material	Details of Testing	Date of Testing	Nodal Laboratory (Accreditation body/Country)	Performance in terms of Z score	Corrective action taken
01.	Water	Total dissolved solids	28.03.2017 to 13.04.2017	Central pollution Control Board, Parivesh Bhawan, East Arjun Nagar, new Delhi - 110032	A -0.39 B 0.95	Satisfactory
		Total kjeldahl Nitrogen			A -1.42 B 0.10	Satisfactory
		Ammonia Nitrogen			A -1.84 B -0.78	Satisfactory
		Sodium			A -0.78 B -0.26	Satisfactory
		Potassium			A 5.0 B -10.69	Unsatisfactory
		Phosphate			A -0.50 B -1.06	Satisfactory
		Chemical oxygen Demand			A -0.76 B 0.91	Satisfactory
		Biochemical oxygen Demand			A 0.96 B 0.51	Satisfactory
		pH			A 1.35 B 0.49	Satisfactory

Performance of Central Lab (in terms of Z-score) in Inter Laboratory comparison exercise organized by Central Laboratory Meghalaya State Pollution Control Board-

PRODUCT /MATERIAL- WATER SAMPLE (DRINKING)

PARAMETERS	DATE OF TESTING	Central Laboratory Meghalaya State Pollution Control Board-Shillong-14	M/S Sgs India Pvt.Ltd,Kolkatta ,West Bengal - 700104	M/S Mitra .S.K Pvt.Ltdguwahati ,Assam-781021	M/S R.V Briggs Kolkatta ,West Bengal-700001
Total Coliform(MPN/100ml)	13.03.2018	94	1.1	130	4
Z-score of TC		0.88			
FeacalColiform(MPN/100ml)		17	1.1	30	Absent
Z-score of FC		0.69			
E.Coli(MPN/100ml)		0	0	0	0
Z-score of EC		Satisfactory			
Total Plate Count(cfu/ml)		114	65	130	41
Z-score of TPC		0.68			

Performance of Central Lab (in terms of Z-score) in Inter Laboratory comparison exercise organized by Scientific Research Laboratory 90, Lake East (4th) Rod, Sanjoshpur, Jadavpur, Kolkata - 700075

Sample Description: Ambient Air

Dated: 15.06.2019

Sl. No.	Parameters	Unit	M/S R.V Briggs & CO. Private LTD Taher Mansion, 1 st Floor 9, Bentinck Street Kolkata – 700001	Meghalaya State Pollution Control Board, Forests , 'ARDEN' Lumpynggad, Shillong – 793014	Scientific Research Laboratory 90, Lake East (4 th) Rod, Sanjoshpur, Jadavpur, Kolkata - 700075	Scientific Research Laboratory 90, Lake East (4 th) Rod, Sanjoshpur, Jadavpur, Kolkata – 700075 (SITE LABORATORY, HALDIA)	Z – Score of Meghalaya State Pollution Control Board (
1.	PM10	µg/m ³	77	81	74	77	1.3
2.	SO2	µg/m ³	9	7	8	7	-0.8
3.	NO2	µg/m ³	40	41	37	42	0.5
4.	Pb	µg/m ³	0.07	0.05	0.06	ND	-1.0
5.	As	µg/m ³	4.0	3.6	3.8	ND	-1.0

6.	Benzo(a)pyrene	$\mu\text{g}/\text{m}^3$	1.8	1.9	1.5	ND	0.8
7.	Ni	$\mu\text{g}/\text{m}^3$	20	24	22	ND	1.0

****Method of Air Sampling and examination (APHA) edited by James P. Lodge**

ND: Not within scope

Performance of Central Lab (in terms of Z-score) in Inter Laboratory exercise organized by Meghalaya State Pollution Control Board ,Shillong
Sample Description -TCLP of solid waste (from dumpside) .

Parameters	M/S R.B Briggs, Kolkata	Mitra S.K., Kolkata	MSPCB, Shillong	Scientific Research Laboratory Kolkata	Z – Score of Central Lab of MSPCB, Shillong
Result (mg/kg) of TCLP of sample from dump side					
Lead as Pb	3.8	4	4.6	4.4	1.9
Cadmium as Cd	7.8	8.4	8.8	8.2	1.2
Chromium as Cr	1.24	1.2	1.4	1.2	1.5
Nickel as Ni	10.2	10.4	9.6	10	-1.3
Copper as Cu	1.8	1.6	2	1.6	1.3
Zinc as Zn	922	880	860	900	-1.1
Iron as Fe	73.6	70.2	72.6	70	0.6
Manganese as Mn	27.5	27.2	28.2	27.8	1.2
Boron as B	3	3.4	3.6	3.4	1.0



Certificate of
Participation

This is to certify that

**CENTRAL LABORATORY, MEGHALAYA STATE
 POLLUTION CONTROL BOARD**

*Has Participated in Proficiency Testing Program on
BIOLOGICAL TESTING IN WATER (PTW/BIOL/01/18-19)*

Parameter: E. coli

With Lab Code: 180118

THE PARTICIPANT PERFORMANCE IS GIVEN IN THE PT REPORT (BIOL01SS/18-19) AGAINST THE LAB CODE PROVIDED BY GPTP.

The Above PT Round is Conducted in Accordance with the Requirement of ISO/IEC 17043:2010



(Umesh Gupta)
 Technical Director

Date: 10.12.2018

CIN. U74140DL2010PTC201479
 COP/GPTP/CHEM/00

GLOBAL PT PROVIDER PVT LTD, NEW DELHI

PROFICIENCY TESTING PROGRAM ON BIOLOGICAL TESTING IN WATER
SCHEME CODE – PTW/BIOL/01/18-19

LABORATORY SUMMARY SHEET

Date of Issue: 10.12.2018

Summary Sheet No.: GPTP/PTW/BIOL/01/18-19/18

Laboratory : CENTRAL LABORATORY, MEGHALAYA STATE POLLUTION CONTROL BOARD Address: MEGHALAYA STATE POLLUTION CONTROL ARDEN, LUMPYNGGAD SHILLONG MEGHALAYA - 793014 (INDIA) Kind Attention: DR. (MISS) B. NONGBRI	Lab Code: 180118
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Sl. No.	PT Parameter	Assigned Value		
		A	B	C
1.	<i>E. coli</i>	Absent	Present	Absent

Sl. No.	PT Parameter	Observed Results			Performance Evaluation
		A	B	C	
1.	<i>E. coli</i>	Absent	Present	Absent	Satisfactory

Comments:

The performance is given as satisfactory if all the results are reported correctly.

Participants with performance evaluation as "Satisfactory" is considered to be Acceptable.

Participant's results other than assigned value should thoroughly investigate their results.



Authorized Signatory

SUMMARY OF THE ASSESSMENT

Laboratory assessed : Central Laboratory, Meghalaya State Pollution Control Board

Quality Manager: Dr.-B. Nongbri

Date(s) of Visit: 18 May 2019 to 19 May 2019

Type of Visit: Re Assessment

Field : Testing

Discipline(s): Biological,Chemical

Facility (s): Permanent Facility

Lead Assessor: Satish Kumar Gaiind

Lead Assessor / Tech Assessor

Satish Kumar Gaiind

Tech Assessor

Ramar R

Date of earlier visit: 21st and 22nd April 2018

Non-Conformities during earlier visit have been discharged: Yes

ASSESSMENT SUMMARY: The laboratory being involved in the testing of parameters pertaining to environment, pollution and water in both chemical and biological discipline for the submitted scope, has established the management system as per the requirements of ISO/IEC 17025 : 2017 version. The laboratory in general is found to be in compliance to the requirement related to clause 4.0 to 8.0 but requires improvement related to the activities associated with management review, quality objectives, equipment particularly reference material and media availability and Quality assurance activity (P.T. participation), method verification and measurement uncertainty. Non conformances have been raised accordingly. Laboratory is using NABL symbol on the reports. metrological traceability is being maintained.

Assessment Team Comment on compliance of laboratory to :

- NABL 133: Compliance
- NABL 142: Compliance
- NABL 163: Compliance
- NABL 143*:

The requirements of NABL 133 have been explained by the Lead Assessor and understood by the laboratory.

*(NABL 143 is applicable for calibration laboratories only)

	MAJOR	MINOR
Non-Conformities raised during the assessment	5	2

RECOMMENDATIONS OF ASSESSMENT TEAM:

The renewal of the accreditation as per the recommended scope and authorised signatory in chemical and biological discipline pertaining to the requirements of ISO/IEC 17025 :2017 is subject to the satisfactory closure of all the non conformances raised in the assessment.



Assessment

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in Conformities(NC) Details

Sl. No.	Clause	Description	Classification	Non-Conformity Raised	Corrective Action Proposed by the Laboratory	Action	Corrective Action Taken By CAB	Corrective Action Evidence	Assessor Remark	NC Status
1	6.5.2.b	Metrological traceability	Major	The lab does not have certified reference materials for performing following testing activities. 1. Arsenic, Cobalt, Mercury, Silica in waste water; 2. Arsenic, Cobalt, Mercury, Molybdenum, Selenium, and Vanadium in solid waste; 3. Arsenic, Mercury, Silica in package drinking water; 4. Arsenic, Cobalt, Mercury, Silica in surface/ground/rain water;	As we do not perform regularly, we wish to withdraw the mentioned parameters from our applied scope and we request NABL to do the needful.	Corrective Action				

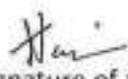
(1791)

Sl. No.	Description	Classification	Non-Conformity Raised	Corrective Action Proposed by the Laboratory	Action	Corrective Action Taken By CAB	Corrective Action Evidence	Assessor Remark	NC Status
7.2.a	Ensuring the validity of results	Major	1. The lab has not participated in any PT/ILC for the additional parameters ie heavy metals in solid waste (tsp). 2. The lab has not participated in any PT/ILC for Atmospheric pollution parameters.	We will identify a suitable PT providers for the mentioned parameters and we will participate in the identified program. In the case of non-availability of suitable PT provider, we will conduct ILC. Documentary evidences will be submitted to NABL.	Corrective Action				
3	7.2.1.5 Selection, verification and validation of methods	Major	1. The lab has not verified the methods and also has so far not performed these tests such as odour and salinity in waste water and surface/ground/rain water. 2. The lab has not verified the methods EPA 1311/EPA 200.83 for determining the metals in solid waste (tsp).	1. As we do not perform the test such as odour and salinity, we wish to withdraw these parameters from the applied scope and we request NABL to do the needful. 2. We will perform verification for metals in solid waste and documentary evidences will be submitted to NABL.	Corrective Action				

17/02/20

EA

no	Description	Classification	Non-Conformity Raised	Corrective Action Proposed by the Laboratory	Action	Corrective Action Taken By	Corrective Action Evidence	Assessor Remark	NC Status
1.3	Evaluation of measurement uncertainty	Major	The lab has not estimated measurement uncertainty for testing of heavy metals in solid waste (tdp)	We will calculate Measurement Uncertainty for testing of heavy metals in solid waste and documentary evidences will be submitted to NABL.	Corrective Action	CAB			

Laboratory: Meghalaya State Pollution Control Board, Shillong	
Quality Manager: Dr B Nongbri, Sr Scientist	Date(s) of Internal Audit: August 7-8, 2019
Area Covered: Management requirement and Technical requirement	
Field : Testing	Discipline(s):Chemical & Biological
Facility (s):Permanent	
Auditor: Dr. D.P Mukherjee, Mrs J. Sawian , Shri. S. Swer and Shri. M.N. Warbah	
Auditees : Technical Manager, Quality Manager, Lab-In charge, and Lab personnel	
AUDIT SUMMARY:	
<p>Central laboratory has converted Laboratory quality management system from ISO/IEC 17025:2005 to ISO/IEC 17025 : 2017 addressing all the elements in new version criteria and started implement. Emphasis was given on impartiality and confidentiality. Confidentiality is maintained by obtaining self declaration from all the staff. Lab tries to identify the specific risk in producing reliable results and explore opportunities to minimize the risks. Relevant procedures, documents and records are maintained. Lab is equipped with necessary resources comprising of equipment, lab personnel, test methods, required chemicals and glassware and accommodation. Reagent water is checked only in terms of pH and conductivity but not following the standard procedure. All the lab personnel are acquainted with test methods. Lab personnel are familiar with the requirement of ISO-17025:2017 but they further need to go through the Quality manual and requirement specified in ISO/IEC 17025:2017 for better understanding of quality management system and newly added requirement. No induction training was organized for newly recruited staff. Lab has prepared the training calendar to make the lab personnel familiar with the quality system. Lab has the latest version of APHA standard methods. Lab maintains all the relevant NABL document and other external documents for estimating MU and risk assessment. All the CRMs are available. CRMs are purchased regularly on expiry..Performance of methos are verified. Laboratory participated in Inter-laboratory exercise and performance evaluated in this exercise was found satisfactory based Z-score. Lab has prepared the schedule for participating ILC program but lab need to enquire authorized PT provider for participating in PT program. Lab performs duplicate testing, and recovery study to ensure reliability of data. Quality control chart was prepared for all the parameters and performance of the testing was being checked on regular basis.. Retesting of remnant sample that can be preserved, is done for quality check. Internal audit plan is available. Non-conforming works are identified and preventive and coorrective actions are in place. Management review meetings are conducted covering all agenda specified in ISO/IEC 17025:2017 as per the schedule. Senior scientist and scientist "C", and scientist "B" attended training on Quality management system and internal audit. Before internal auditing, QM engages expert auditor to lead the internal auditor team for proper auditing to indentify the weak areas that merits attention. Lab space is adequate and housekeeping is satisfactory and environmental condition is monitored. Log books for equipment, chemicals/glassware are maintained. Job descriptions of key personnel are maintained. Lowest values of testing range were estimated based on calibration. Critical consumables are evaluated for most of the the relevant chemicals. Though Lab carried out Intermediate check for the equipment but now that has been discontinued. Microbiological room is properly maintained and sub culture is carried out. Lab checks the reliability of analytical result by regular using CRM in accordance with procedure established by the lab. Test report is as per the ISO-17025:2017. Calibration of equipment is done by the laboratory recognized by NABL. Sources of uncertainty have been identified and estimation of uncertainty has been made..</p>	
Non-Conformities raised during the assessment: 3	
 Acknowledgment by Authorised Representative of Laboratory & Date 08.08.2019	 Signature of Auditor & Date 08/08/19

SUMMARY OF THE INTERNAL AUDIT REPORT

Laboratory: Meghalaya State Pollution Control Board, Shillong	
Quality Manager: Dr B Nongbri, Sr Scientist	Date(s) of Internal Audit: August 22-23, 2017
Area Covered: Management requirement and Technical requirement	
Field : Testing	Discipline(s): Chemical & Biological
Facility (s): Permanent	
Auditor: Dr. D.P Mukherjee, Mrs J. Sawian , Shri. S. Swer and Shri. M.N. Warbah	
Auditees : Technical Manager, Quality Manager, Lab-In charge, and Lab personnel	
<p>AUDIT SUMMARY:</p> <p>Lab management system has been developed addressing all the elements in ISO/IEC 17025:2005/NABL criteria and implemented. Lab is equipped with necessary resources comprising of equipment, lab personnel, test methods, required chemicals and glassware and accommodation. All the lab personnel are acquainted with test methods. Lab personnel are familiar with the requirement of ISO-17025:2005 but they further need to go through the Quality manual for better understanding of quality management system. Lab has prepared the training calendar to make the lab personnel familiar with the quality system. Lab does not have the latest version of APHA standard methods. Lab maintains all the relevant NABL document. Validity of few CRMs expired.. Laboratory participated in Inter-laboratory exercise and performance evaluated in this exercise was found satisfactory based Z-score. Lab has prepared the schedule for participating ILC program but lab need to enquire authorized PT provider for participating in PT program. Lab performs duplicate testing, and recovery study to ensure reliability of data. Quality control chart was prepared for all the parameters and performance of the testing was being checked on regular basis. But now this practice has been discontinued. Retesting of remnant sample that can be preserved, is done for quality check. Internal audit plan is available. Management review meetings are conducted covering all agenda as per the schedule. Quality Manager has attended training on Quality management system and internal audit. Before internal auditing, QM engages d expert auditor to lead the internal auditor team for proper auditing to indentify the weak areas that merits attention. Lab space is adequate and housekeeping is satisfactory and environmental condition is monitored. Log books for equipment, chemicals/glassware are maintained. Job descriptions of key personnel are maintained .However job description needs to revised to allot the work to newly appointed persons. Lowest values of testing range were estimated based on calibration. Critical consumables are evaluated for most of the the relevant chemicals. Lab carries out Intermediate check for the equipment. Lab checks the reliability of analytical result by regular using CRM in accordance with procedure established by the lab. Test report is as per the ISO-17025:2005. Calibration of equipment is done by the laboratory recognized by NABL. Sources of uncertainty have been identified and estimation of uncertainty has been made.</p>	
Non-Conformities raised during the assessment: 4	
<p><i>(Signature)</i> <i>(Date)</i> Acknowledgement by Authorised Representative of Laboratory & Date <i>22.08.2017</i></p>	<p><i>(Signature)</i> <i>(Date)</i> Signature of Auditor & Date <i>22/08/2017</i></p>

Laboratory: Central Laboratory of Meghalaya State Pollution Control Board.	
Quality Manager: Dt(Mrs) B Nongbri, Sr Scientist	Date(s) of Internal Audit: August 10 ,2016
Area Covered: Management requirement and Technical requirement	
Field : Testing	Discipline(s):Chemical & Biological
Facility (s):Permanent	
Auditor: Dr. D.P Mukhopadhyay	
Auditees : Technical Manager, Quality Manager, Lab-In charge, and Lab personnel	
<p>AUDIT SUMMARY:</p> <p>Lab management system has been developed addressing all the elements in ISO-17025:2005 and implemented. Pre-assessment of the laboratory by a Lead Assessor nominated by NABL has been done to critically assess the Laboratory Quality Management system and competency of laboratory staff in implementing the the system . Two NCs along with few observations were raised. Though Lab has issued office order specifying the job description of key personnel and the laboratory staff. During this internal audit it was observed that GC is not in working condition and microbiological subculture could not be procured. In addition to these, estimation of MU for few parameters has not been done. Thereby three NCs were raised. During this audit attention was further given to verify the necessary resources comprising of equipment, lab personnel, test methods, required chemicals and glassware, CRM and accommodation. All the lab personnel, at present, has developed awareness of ISO-17025/NABL criteria. Lab personnel also attended the in-house training program for awareness of NABL criteria. Lab personnel has given adequate emphasis on implementation of QA/QC protocol such Quality control chart, use of CRM, duplicate test, retest, linearity of calibration .Environmental monitoring, housekeeping and maintenance of equipment are carried out in systematic manner. Suppliers of chemicals are done in regularly.</p>	
Non-Conformities raised during the assessment: 2	
<p><i>R.K.P. 10/8/2016</i></p> <p>Acknowledgement by Authorised Representative of Laboratory & Date</p>	<p><i>D.P. Mukhopadhyay 10/8/16</i></p> <p>Signature of Auditor & Date</p>

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SUMMARY OF THE INTERNAL AUDIT REPORT

Laboratory: Meghalaya State Pollution Control Board, Shillong	
Quality Manager: Dr B Nongbri, Sr Scientist	Date(s) of Internal Audit June 24-25, 2020
Area Covered: Management requirement and Technical requirement	
Field : Testing	Discipline(s):Chemical & Biological
Facility (s):Permanent	
Auditors: Mrs J. Sawian , Shri. S. Swer and Shri. M.N. Warbah	
Auditees : Technical Manager, Quality Manager, Lab-In charge, and Lab personnel	
<p>AUDIT SUMMARY:</p> <p>Central laboratory has converted Laboratory quality management system from ISO/IEC 17025:2005 to ISO/IEC 17025 ; 2017 addressing all the elements in new version criteria and started implement. Emphasis was given on impartiality and confidentiality. Confidentiality is maintained by obtaining self declaration from all the staff. Lab tries to identify the specific risk in producing reliable results and explore opportunities to minimize the risks. Relevant procedures, documents and records are maintained. Lab is equipped with necessary resources comprising of equipment, lab personnel, test methods, required chemicals and glassware and accommodation. Reagent water is checked only in terms of pH and conductivity but not following the standard procedure. All the lab personnel are acquainted with test methods. Lab personnel are familiar with the requirement of ISO-17025:2017 but they further need to go through the Quality manual and requirement specified in ISO/IEC 17025:2017 for better understanding of quality management system and newly added requirement. No induction training was organized for newly recruited staff. Lab has prepared the training calendar to make the lab personnel familiar with the quality system. Lab has the latest version of APHA standard methods. Lab maintains all the relevant NABL document and other external documents for estimating MU and risk assessment. All the CRMs are available but some CRMs have expired. Performance of methods are verified. Laboratory participated in Inter-laboratory exercise and performance evaluated in this exercise was found satisfactory based Z-score. Lab has prepared the schedule for participating ILC program but lab need to enquire authorized PT provider for participating in PT program. Lab performs duplicate testing, and recovery study to ensure reliability of data. Quality control chart was prepared for all the parameters and performance of the testing was being checked on regular basis.. Retesting of remnant sample that can be preserved, is done for quality check. Internal audit plan is available. Non-conforming works are identified and preventive and corrective actions are in place. Management review meetings are conducted covering all agenda specified in ISO/IEC 17025:2017 as per the schedule. Senior scientist and Scientist "C", attended training on Quality management system and internal audit. Before internal auditing, QM engages expert auditor to lead the internal auditor team for proper auditing to indentify the weak areas that merits attention. Lab space is adequate and housekeeping is satisfactory and environmental condition is monitored. Log books for equipment, chemicals/glassware are maintained. Job descriptions of key personnel are maintained. Lowest values of testing range were estimated based on calibration. Critical consumables are evaluated for most of the the relevant chemicals. Though lab carried out Intermediate check for the equipment but now that has been discontinued. Microbiological room is properly maintained and sub culture is carried out. Lab checks the reliability of analytical result by regular using CRM in accordance with procedure established by the lab. Test report is as per the ISO-17025:2017. Calibration of equipment is done by the laboratory recognized by NABL. Sources of uncertainty have been identified and estimation of uncertainty has been made.</p>	
Non-Conformities raised during the assessment: 3	
<p><i>[Signature]</i> Acknowledgement by Authorised Representative of Laboratory & Date</p>	<p><i>[Signature]</i> Signature of Auditor & Date</p> <p><i>[Signature]</i> 25/6/20</p>

(1)
 GOVERNMENT OF MEGHALAYA
 FORESTS & ENVIRONMENT DEPARTMENT

Amunni - I

Am/x

 ORDERS BY THE GOVERNOR

 NOTIFICATION

Dated Shillong, the 28th September, 2020.

No. FOR/CC/16/2018/356: In compliance of Hon'ble National Green Tribunal Order dated 12/04/2019 in O.A. No.804/2017, the Governor of Meghalaya is pleased to constitute a Monitoring Committee to monitor compliance of the Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016.

The Monitoring Committee shall consist of the following members:

- | | |
|---|--------------------|
| 1. Chief Secretary to the Govt. of Meghalaya | - Chairman |
| 2. Member Secretary, Meghalaya State Pollution Control Board | - Member Secretary |
| 3. Principal Secretary to the Govt. of Meghalaya, Forest & Environment Department | - Member |
| 4. Principal Secretary/Commissioner & Secretary to the Govt. of Meghalaya, Health & Family Welfare Department | - Member |
| 5. Principal Secretary/Commissioner & Secretary to the Govt. of Meghalaya, Commerce & Industries Department | - Member |
| 6. Principal Secretary/Commissioner & Secretary to the Govt. of Meghalaya, Labour Department | - Member |
| 7. Chairman, Meghalaya State Pollution Control Board | - Member |
| 8. Addl. Principal Chief Conservator of Forests (Planning, Development & Legal Matters), Meghalaya, Shillong | - Member |

Terms of Reference in respect of the Committee:

- (i) Compliance of the orders of the Hon'ble National Green Tribunal dated 12/04/2019 in O.A. No. 804/2017, Rajiv Narayan & Anr Vrs Union of India & Ors.
- (ii) Monitoring the compliance of the decisions of the Deshpande Committee appointed by the Hon'ble NGT vide order dated 12/04/2019 in O.A. No. 804/2017, Rajiv Narayan & Anr Vrs Union of India & Ors as reported in the order dated 20/08/2019 of the Hon'ble NGT in the aforesaid case.
- (iii) Submission of compliance report biannually to CPCB on various issues related to implementation of Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016
- (iv) Compliance of the Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016.
- (v) Compliance of recommendations of the Monitoring Committee constituted by CPCB in the matter of status of compliance of Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016.

*Flow Chart
 11/09/2020
 2 copy report copy
 with 1/11/20*

LDA (2-10)
 Pl -
 as directed
Amunni

Sd/-
 (M.S. Rao, IAS)
 Chief Secretary
 Government of Meghalaya



Memo No. FOR/CC/16/2018/386 A Dated Shillong, the 28th September, 2020.
Copy to:

1. The P/S to the Speaker, Meghalaya Legislative Assembly for kind information of the Hon'ble Speaker.
2. The P/S to the Leader of Opposition for kind information of the Hon'ble Leader of Opposition.
3. The P/S to the Chief Secretary to the Govt. of Meghalaya for information of the Chief Secretary.
4. The P/S to the Principal Secretary to the Govt. of Meghalaya, Forest & Environment Department for information of the Principal Secretary.
5. The P/S to the Principal Secretary/Commissioner & Secretary to the Govt. of Meghalaya, Health & Family Welfare Department for information.
6. The P/S to the Principal Secretary/Commissioner & Secretary to the Govt. of Meghalaya, Commerce & Industries Department for information.
7. The P/S to the Principal Secretary/Commissioner & Secretary to the Govt. of Meghalaya, Labour Department for information.
8. The Chairman, Meghalaya State Pollution Control Board, Meghalaya, Shillong for information.
9. The Addl. Principal Chief Conservator of Forests [Planning, Development & Legal Matters], Meghalaya, Shillong for information.
10. The Member Secretary, Meghalaya State Pollution Control Board, Meghalaya, Shillong for information.

By Orders etc.,



Secretary to the Govt. of Meghalaya,
Forests & Environment Department.

FORMAT FOR SEWAGE MANAGEMENT (July-September 2020) – State of Meghalaya

SL. No.	Action Plan	A	B	C=A-B	D
		Existing Status	Desired/Projected	Gap	Timeline
1.	Estimated Sewage Generation	76.41 MLD	82.93 MLD	-	
2.	Treatment Capacity (Projection for 05 years to be taken into consideration)	1.8	19.59	-	March, 2021
3.	Status of Sewerage Systems (in Km)	Nil	Nil	Nil	Nil
4.	No. of STPs (Details to be provided as Annexure)	Details of 8 STPs installed by individual Industrial Units are annexed	Nil	Nil	Nil
5.	Has bulk users identified for reuse of treated Water such as Industrial Clusters, Metro Rail, Indian Railways, Infrastructure Projects, Agriculture, Bus Depots and PWD? (Y/N)	Yes	Nil	Nil	Nil
6.	Quantity of treated wastewater being used by Bulk User (in MLD)				
	Industrial Clusters	1.419	-	-	-
	Metro Rail	Nil	Nil	Nil	Nil
	Indian Railways	Nil	Nil	Nil	Nil
	Infrastructure Projects	Nil	Nil	Nil	Nil
	Agriculture	Nil	Nil	Nil	Nil
	Bus Depots	Nil	Nil	Nil	Nil
	PWD	Nil	Nil	Nil	Nil
7.	No. of Water Aquatic Sources (Lakes, Pond, etc.) being developed through treated wastewater	Nil	Nil	Nil	Nil

QUARTERLY PROGRESS REPORT for the period from 01.07.2020 to 30.09.2020 ON SEWAGE TREATMENT PLANTS AND UTILIZATION OF SEWAGE- State of Meghalaya

Sl.No	City/Town	No. of STP	Location of each STP	Coordinates of STP (Latitude and Longitude)	STP commissioned in (Year)	Status (Operational/Non-Operational/Under Construction)	STP Installed Capacity (in MLD)	Actual Utilization of installed Capacity (in MLD)	Technology (UASB/ASP/OPP/SBR/MBR/FAB Etc.)	Consent Status	Compliance Status			
											PH	TSS	COD	BOD
1	Thangskai	1	Meghalaya Cements Ltd., Thangskai, East Jaintia Hills District	N/A	2015	Operational	0.1 MLD	0.06 MLD	ASP	Valid	Samples yet to be collected			
2	Lumshnong	1	Star Cements Ltd., Lumshnong, East Jaintia Hills District	N/A	2005	Operational	0.4 MLD	0.239 MLD	ASP	Valid	Samples yet to be collected			
3	Shillong	1	North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Mawdiangdiang	N/A	2006	Operational	1 MLD	1 MLD	ASP	Valid	7.2	120	410	95
4	Shella	5	M/s Lafarge Umiam Mining Pvt. Ltd., Nongtra	N/A	2012	Operational (Package STP) 5 (Five) numbers 20 KLPD	0.12 MLD	0.03 MLD	UASB	Valid	7.8	7	10.2	4.6
											8	10	12	4.2
											8	8	10.8	4.4
											8.2	10	12	4
											8	7	12	3.8
5	Nongsning	2	Green Valliey Industries Limited, Nongsning, East Jaintia Hills District	N/A	2019	Operational (Package STP) 2 (Two) numbers 50 KLPD	0.03 MLD	0.03 MLD	MBR	Valid	8.4	16		12.2
6	Thangskai	1	Dalmia Cement (Bharat) Limited	N/A	2019	Operational	0.05 MLD	0.04 MLD		Valid	Samples yet to be collected			
7	Mawphlang	1	Residential School, JNV		2017	Operational	0.1 MLD	0.02 MLD	-	Valid	8.8	6.0	20.0	6.5
8	Shillong	1	Polo Market		2020	Operational	0.05	-	-	Valid	Samples yet to be collected			

Quarterly Progress Report for the period from 01.07.2020 to 30.09.2020 on Compliance to E-waste Rules

SL.NO.	Challenges/Activities	Stakeholder responsibility for implementation	Action	Current Status	Desirable level of compliance in terms of status	Gap between current status & desired level	Proposal for attending the gap with timelines
a.	Checking of informal trading, dismantling, and recycling of waste	SPCBs/PCCs/ District Administration	SPCB/PCCs in coordination with District Administration has to carry out quarterly drive for checking of this activity	<ul style="list-style-type: none"> Being a continuous process, Inspection of informal sector in Shillong area has been carried in coordination with Shillong Municipal Board. Work for carrying out Inventorisation of E-waste for the whole State of Meghalaya has been allotted to M/s International Institute of Waste Management, Bengaluru and report of the same will be submitted to the Board within 3 months from 1st September, 2020 	<ul style="list-style-type: none"> Checking of informal Trading in the Whole State of Meghalaya. In the absence of dismantling and recycling centre in the State checking of the same does not arise. 	On completion of the work for Inventorisation of E-waste for the whole State of Meghalaya, checking of informal Trading in the remaining districts will be carried out.	31 st March, 2021
b.	Facilitate collection and disposal of e- waste	SPCBs/PCCs/ District Administration/ CPCB	State Government to formulate mechanism for collection and for incentivising	The State Government viz Commerce & Industries Department has been advised to consider and include the E-waste	The State Government to facilitate disposal facility for e- waste		-

			setting up of recycling	Recycling unit/Dismantling unit in the State Industrial Policy so as to encourage setting up of the same by industrialist/entrepreneur etc for safe disposal of e-waste. Response is waited.			
c.	Governance frame work for monitoring compliance	SPCBs/PCCs/ District Administration/ CPCB	Monitoring to be ensured at city/district and state levels for which nodal officers (District Magistrate) to be designated. Time Frame — Three (3) months.	<ul style="list-style-type: none"> District Level Committee was formed viz West Khasi Hills District, West Garo Hills District, East Garo Hills District, East Khasi Hills District, South West Khasi Hills District and West Jaintia Hills The Board has issued remainder to the remaining Deputy Commissioner to constitute formation of District Level Committee at the earliest. 	District Level Committee to be formed in all the District.	Remaining six District viz. East Jaintia Hills District, Ri-Bhoi District, South Garo Hills District, South West Garo Hills District and North Garo Hills District Yet to constitute District Level Committee	---
d.	Capacity building at district/State/CPCB level	SPCBs/PCCs/ District Administration /CPCB	Special workshops to educate functionaries in government/NGO	The Board in collaboration with PRO viz M/s Karo Sambhav is continuously conducting awareness programme in	Awareness programme to be carry out all across the State.	Awareness programme will be carried out to the remaining town in phase manner.	31 st March, 2021

			<i>s be run over one year.</i>	<i>various institution across Shillong and Jowai</i>			
e.	<i>IEC plan be firmed up and executed</i>	<i>SPCBs/PCCs/ District Administration /CPCB</i>	<i>State Government to firm up IEC plan for educating public at large about the system of collection, incentive structure and facilities for recycling. Time frame - three (3) month The IEC plan to be executed over one year</i>	<i>IEC plan has been prepared by the Board.</i>	<i>IEC Plan to be executed across the State</i>	<i>IEC Plan will be executed in collaboration with the District Administration.</i>	<i>31st March,2021</i>
f.	<i>Strengthen system of Enforcement</i>	<i>SPCBs/PCCs/ District Administration/ CPCB</i>	<i>Quarterly review of violations and enforcement actions at city/district/state level and quarterly report to be field with CPCB</i>	<i>Report from the District Level Committee yet to be received.</i>	<i>On completion of the Inventorisation, road map towards strengthen of enforcement can be stipulated.</i>	-	<i>31st March,2021</i>


 MEMBER SECRETARY
 Meghalaya State Pollution Control Board
 Shillong

Information, Education and Communication on E-waste

2020

MEGHALAYA STATE POLLUTION CONTROL BOARD



1805

E-Waste Campaign - Why?

- Support the implementation of E-Waste Rules
- Awareness and engagement with the target group resulting in the significant collection of the e-waste and its recycling in environment sound manner



E-Waste Campaign - What?

- Clear communication of messages on Environmental Consequences, Economic Consequences and Social Consequences
- Different target groups require different strategies in order to be successful
- Assure that you determine the target group correctly to fit your pitch to it:

**MoEF&CC/ CPCB/
MSPCB etc.**

Interested in e-waste
awareness

**Industry/
Associations**

Interested in
collaborative efforts

Media

Interested in a good story

Others



E-Waste Campaign - How? I

- Development of a Communication / outreach strategy on e-waste to communicate with a defined audience through a strategic message to achieve a certain goal
- Elements of communication strategy:
 - Stakeholder engagement
 - Target group
 - Development of Toolkit/ IEC material
 - Implementation mechanism
 - Timelines
 - Financing and resource allocation



E-Waste Campaign - How? II

Stakeholder engagement/ analysis for institutionalization

- Producers & industrial associations
- Recyclers
- Bulk Consumers including
Private and Public Enterprises,
Academic institutions etc.
- Individual Consumers including
Rotary Clubs, NGOs



E-Waste Campaign – Target Group

- Residents in the city/ state aged 15 - 45 years
- Socio-Economic Class I & II: Middle to high income earners
- High purchasing power
- Literate (College Education)
- Seek information from the media
- Have access to Television, radio and the Internet



E-Waste Campaign – Tool Kit

Press Releases/ Written Media Campaigns

- Results of Inventory shared through media
- Target setting - at least two feature stories every month for the 6-12 months of the IEC campaign
- The feature could outline the dangers of the e-waste menace, extent of the problem and the measures to curb the menace.



E-Waste Campaign – Radio

Oral Communication - Radio

- Interviews of the Experts
- Slogans on improper disposal of e-waste
- Films/ documentaries on E-waste initiatives



E-Waste Campaign – Tool Kit

Workshops/ Awareness Sessions

- Workshops with different stakeholders like Banks & PSUs, Hotels, Hospitals, Schools, NGOs, National Organizations etc. to create awareness and develop a collection mechanism.



18/3

E-Waste Campaign – Tool Kit

Curriculum Development

- Provide undergraduate students the knowledge to understand a contemporary environmental issue including e-waste
- Support in developing research projects on a technology and society related issue
- Develop skills that enhance employability



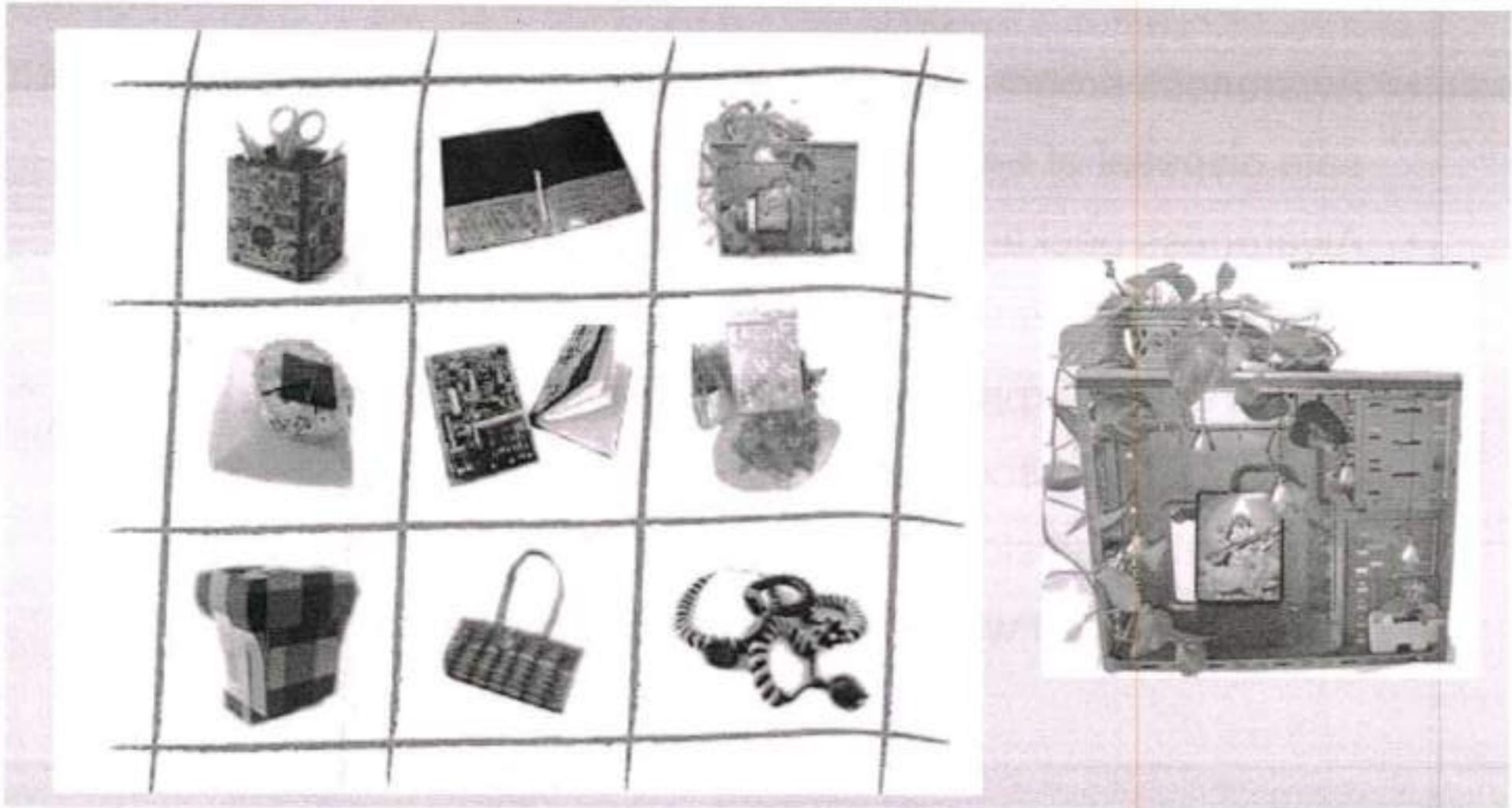
E-Waste Campaign – Engagement with Schools

- Awareness programme for school teachers & children on safe disposal of e-waste
- Awareness package including E-waste films, posters and pamphlets disseminated
- Use Creative Expression medium like gamification, theatre, art and sculpture, film making/photography
- Information session & meetings with collection agencies
- Competitions on waste to products & poster making etc.



18/5

E-Waste Campaign – Waste to Products



Meghalaya State Pollution Control Board
"Ardan" Lumpyngngad Shillong 14
<http://mepspcb.gov.in> email – mepspcb@rediffmail.com

MSPCB Outreach Activities – Shillong

- Meghalaya SPCB in collaboration with IIWM Bangalore and other organizations is regularly conducting various environment awareness programmes on various events.
- Budget will be allocated for conducting awareness programmes during 2020-2021.
- The awareness activities such as organizing seminars, workshops, campaigns, tree plantations, debate, painting, drawing competitions and other environment related activities are carried out in collaboration with PRO viz M/s karo Sambhav at Schools level.

Special-e-waste disposal drive in Shillong from Friday

By - Sentinel Digital Desk
 Update: 2018-09-27 07:35 GMT



Meghalaya State Pollution Control Board
 "Arden" Lumpyngrad Shillong 14
<http://mepspcb.gov.in> email = mepspcb@rediffmail.com

ANNEXURE R/8

Quarterly Progress Report for the period 1-10-2020 to 31-12-2020 in compliance to the NGT Order Dt. 28.02.2020 in the matter of O.A. No. 606/2018 in the matter of compliance of Municipal Solid Waste Management.

Sl. No.	Particulars
1.	Quarterly Progress Report for controlling air Pollution in Non-Attainment city/town. Annexure-I
2.	Quarterly Progress Report for restoration of polluted river stretches in the State of Meghalaya. Annexure-II
3.	Quarterly Progress Report for Solid Waste Management (including bio-mining of legacy waste dumpsite). Annexure-III
4.	Quarterly Progress Report for Bio-Medical Waste Management. Annexure-IV
5.	Quarterly Progress Report for Hazardous Waste Management. Annexure-V
6.	Quarterly Progress Report on sewage Treatment and Utilization of sewage. Annexure-VI
7.	Quarterly Progress Report on Compliance to E-Waste Rules. Annexure-VII

Secretary to the Govt. of Meghalaya
Forest and Environment Department

Secretary
to the Govt. of Meghalaya
Forest & Environment Department

(3)

**QUARTERLY PROGRESS REPORT FOR THE PERIOD 01-10-2020 TO 31-12-2020 FOR CONTROL OF AIR POLLUTION
IN NON-ATTAINMENT CITY / TOWN**

BASIC INFORMATION					
NAME OF NON-ATTAINMENT CITY			BYRNIHAT, RI-BHOI DISTRICT		
STATE / UNION TERRITORY			MEGHALAYA		
NAME OF NODAL OFFICER OF PCB / PCC			DR. B. NONGBRI		
E-MAIL ID					
CONTACT NUMBER			9436110580		
DATE TILL WHICH PROGRESS IS SUBMITTED			01-07-2020 TO 30-09-2020		
ACTION POINT CODE	SECTOR	TOTAL NO. OF ACTIONS	NO. OF ACTIONS COMPLETED	NO. OF ACTIONS UNDER PROGRESS	REMARKS
CB	Capacity Building Monitoring Network & Source Apportionment Study	1. Stress on promotion of horticulture programme and use of organic manures / compost (i) Distribution of organic manure to selected beneficiaries within Byrnihat area. (ii) Training on organic farming. (iii) Training on horticultural crop production	Completed	-	Training on production of organic compost through Barkley method (18 days composting) has been taken up in villages adjacent to Byrnihat viz. Abri Jorbil, Bara-killing, Chota-killing, Killing, Hatimara, Noksigittim @ 2 units/village, the programme will also cover the other adjacent villages in the near future as well
		2. (i) Research studies including health impact studies, exposure, impacts and other relevant studies	-	Under progress	
		3. (i) Establish an Air Quality Management Division at SPCB/PCC Head Quarters to oversee air quality management activities in	Completed	-	

		the State and interact with CPCB			
		4.(i) Set up and publicize helpline in each city/town as well as SPCB/PCC HQ for complaints against reported non-compliance	Completed	-	Awareness and Complaint Cell established in the Head office of MSPCB
		5.(i) Emission inventory to carry out source apportionment study and carrying capacity assessment in EPIP, Byrnihat Town	-	Under progress	1. CPCB has forwarded the Study proposal submitted by MSPCB to MoEF&CC for necessary sanction. 2. MSPCB has forwarded the information to CPCB on the identified towns/cities in the State of Meghalaya where Source Apportionment /Emission Inventory has not been initiated for consideration of Joint Studies by CPCB & MSPCB in Shillong city, Byrnihat town & Tura town.
		6.(i)The interim emission targets with regard to control of emissions from sources viz. vehicle, road dust, biomass and garbage burning, jhum cultivation, industries	-	Under progress	Implementation of measures to reduce emissions from vehicles, road biomass and garbage burning, jhum cultivation, industries is in progress by the concerned implementing agencies
		7.(i)To constitute a District Level Monitoring Committee – to review the progress and ensure smooth implementation of the plan	Completed	-	The MSPCB has constituted the District Level Monitoring Committee headed by the Deputy Commissioner, Ri-Bhoi District
		Total number of actions – 9	Total no. of actions completed – 4	No. of actions under progress – 5	
PO	Public Outreach	1. Launch public awareness campaign for air pollution control, vehicle maintenance, minimizing use of personal vehicles, lane discipline, etc.	Completed	Under progress	The District Transport Officer, Ri-Bhoi directed the enforcement officer to conduct random checking cum awareness to all types of vehicles.

		2. Creation of awareness to farmers to stop burning of crops residue and biomass	Completed	-	The Director of Agriculture has taken the following actions: - i) Leaflets about awareness on the ill effects of burning if crop residues have been issued to the District Agriculture Officer & District Horticulture Officer, Ri-Bhoi District ii) Field officials are deputed to conduct training on composting and creating awareness on organic farming without burning the crop residues (on-going process). Inputs for the farmers may be given for organic farming iii) The field officials have been directed to comply and include these control measures in all training programmes conducted by the office
		Observation of World Environment Day, 5 th June, 2019 in non-attainment city-Byrnihat, Ri-Bhoi District, Meghalaya Total number of action – 3	Completed		
			Total no. of actions completed – 3	No. of actions under progress –	
RD/ C&D	Road Dust and Construction & Demolition	1. Control measures for fugitive emissions from material handling, conveying and screening operations through water sprinkling, curtains, barriers and dust suppression units	Completed	-	Water sprinkling has been provided to control fugitive emissions from the storage, transportation of raw materials and transportation points to control dust pollution by industrial units at EPIP

		2. Ensure carriage of construction materials in closed/covered units	-	Under progress	Enforced by the District Administration
		3. Blacktopping of metalled road including pavement of road shoulders	Completed	-	Completed by MIDC in industrial area
		4. Prepare plan for widening of road and improvement of infrastructure for decongestion of roads	-	Under progress	The Executive Engineer, PWD (Roads), Nongpoh Division has submitted the following proposals: - i) Maintenance of road from Byrnihat point ii) Construction of road from Narbong to Santipur (L-7.00 Km) iii) Construction of road at Upper Amjok (L-1.50 km) iv) Construction of road at Upper Narbong
		5. Prepare plan for construction of expressways/bypasses to avoid congestion due to non-destined vehicles	-	Under progress	In progress by PWD
		6. Maintain potholes for free flow of traffic	Completed	-	Completed by MIDC in industrial area
		7. Prepare plan for creation of green buffers along the traffic corridors	completed	-	A total of 1510 nos. of seedlings were supplied by Forest Deptt. to various Industries to plant in vacant areas of EPIP, Byrnihat. Social Forestry Division planted the seedlings along the roadside of the approach road to EPIP, Byrnihat.
		8. Introduce water fountains at major traffic intersection, wherever feasible	Completed	-	Completed by MIDC in industrial area
		9. Greening of open areas, gardens, community places, schools and housing	Completed	-	The DFO, Social Forestry Division, Ri-Bhoi District has submitted a proposal for

		societies Total no. of actions – 9	No. of actions completed – 6	No. of actions under progress – 3	execution of the following works: - i) For raising of 0.5 Ha plantation at Byrnihat Industrial Area during 2019-20 ii) Creation of 1 Km Green Buffer Plantation at Byrnihat Industrial Area The proposal has been submitted to CPCB on recommendation of the Committee for necessary funding
VE	Vehicles	1. Prevent parking of vehicles in the non-designated areas	completed	-	The Superintendent of Police, Ri-Bhoi District, Nongpoh has designated and enforced No Parking Zones in Byrnihat areas
		2. Synchronize traffic movements/introduce intelligent traffic systems for lane driving	Completed	-	The Superintendent of Police, Ri-Bhoi District, Nongpoh has informed that due to insufficient intelligent equipments in the District, no scientific or intelligent systems were introduced for lane driving
		3. Launch extensive drive against polluting vehicles for ensuring strict compliance-Strict vigilance and no tolerance for visible emissions - stop plying of visibly polluting vehicles by impounding or heavy fine	completed	-	The District Transport Officer along with the Enforcement staff is launching drive against polluting vehicles to ensure strict compliance & vigilance and no tolerance of visible emissions by compounding fine as per M.V. Act, 1988.
		4. Introduction of public transport system in Byrnihat-Nongpoh route section	Completed	-	Public transport system is in place
		5. Introduction of electric vehicles in Byrnihat-Nongpoh route section	-	Under progress	The Transport is exploring the feasibility of introducing electric driven public transport vehicles in the Byrnihat-Nongpoh route

		6.Introducing of Mobile Vehicular Emission Testing Unit in Nongpoh-Byrnihat section	-	Under progress	District Transport Officer has suggested to the Office of the Commissioner of Transport to introduce Mobile vehicular emission testing unit in Nongpoh-Byrnihat section.
		7. Maintaining and enforcing of permissible loading limits of vehicles	Completed	-	The Enforcement Inspector is directed by the District Transport Officer to maintain and enforce strict permissible loading limits of all vehicles plying through the weighbridge
		8. Setting up of Pollution Under Control (PUC) Certification Centres	-	Under progress	The Transport Deptt. has received approval from the Govt. for setting up PUC Centre at Byrnihat,Ri Bhoi District.
		9. Strict vigilance and enforcement of PUC norms and link PUC with annual vehicle insurance to ensure 100% compliance	-	Under progress	District Transport Officer has requested the Commissioner of Transport for setting up PUC Centre in Nongpoh and to link with fitness certificates.
		10. Prepare Action Plan to check fuel adulteration and random monitoring of fuel quality data	-	Under progress	The Food Civil Supplies & Consumer Affairs Deptt. of Ri-Bhoi District has drafted an Action Plan which is deemed to be necessary for the control of fuel adulteration & monitoring of fuel quality. The following can be noted as priority: - <ul style="list-style-type: none"> • The FCS&CA Deptt. to coordinate with Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd., Hindustan Petroleum Corporation Ltd. & other

					<p>Corporations to facilitate the Action Plan</p> <ul style="list-style-type: none">• The various Oil Corporations to check the quality of the fuel in the depot/refinery before transportation to their respective destinations• The Oil Corporations thereafter to share the inspection report & other related information with the FCS&CA Deptt.• The Oil Corporations to depute their Officers for field inspection for their respective service stations & check the quality of the fuel again & for any adulteration therein. Thereafter share the report with the FCS&CA Deptt.• The Officers of FCS&CA Deptt. to conduct inspections of the fuel quality of the different service stations present in Ri-Bhoi District on receipt of the report from the Oil Corporations• On inspection of service stations, if any anomalies are detected with regard to adulteration, the service stations are liable for explanation and respective Oil Corporations to take necessary action• Samples of the fuel inspected to be maintained with FCS&CA Deptt. & may be subject to Laboratory tests for further clarity of the report• The Oil Corporations to further assist
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					<p>the FCS&CA Deptt. with technical knowhow & monitoring devices for proper & efficient inspections</p> <p>The inspections, monitoring and reports to be completed & scrutinized within 180 days from date of initiation.</p>
		<p>11. Introduction of CNG or PNG driven vehicles to reduce vehicular exhaust emission</p> <p>Total no. of actions – 11</p>	No. of actions completed -5	<p>Under progress</p> <p>No. of actions under progress-6</p>	<p>Transport Department has suggested the State Government to introduce CNG or PNG driven vehicles to reduce vehicular emission</p>
IP	Industries	1. Industrial units to install water spraying system in internal roads and washing of tyres of vehicles	Completed	-	Water sprinkling has been provided to control fugitive emissions from the storage, transportation of raw materials and transportation points to control dust pollution by industrial units at EPIP
		2. Identification of brick kilns and their regular monitoring including use of designated fuel and closure of unauthorized units	Completed	-	Identification process of Brick Kilns completed. There is no brick kiln in Byrnihat, Meghalaya.
		3. Conversion of natural draft brick kilns to induced draft kilns (Zigzag technology)	Completed	-	Not arise since there is no brick kiln in Byrnihat under Meghalaya jurisdiction
		4. Strict enforcement of all pollution control measures in all industries including those located in unauthorized areas and Action against non-complying industrial units	-	Under progress	Verification of the compliance of specified norms by industries through inspection and monitoring is carried out by MSPCB from time to time

		5. Urgent ban of furnace oil, pet coke which are dirty industrial fuels with high Sulphur and heavy metals Total no. of actions – 5	Completed No. of actions completed – 4	- No. of actions under progress – 1	
BB/DF	Waste and Biomass-Dumping and Burning	1. Launch extensive drive against open burning of bio-mass, crop residues, garbage, leaves, etc.	Completed	-	
		2. Proper collection of horticulture waste (biomass) and its disposal following composting-cum-gardening approach	-	Under progress	Training on Berkeley method of composting and compost pit making for production of organic compost is going on which is an ongoing scheme.
		3. Ensure ban on burning of agriculture waste and crop residues and its implementation	Completed	-	10 nos of awareness cum training have been conducted to convert the agricultural waste and crop residues into production of organic compost in order to control burning of waste. Moreover, out of 257 nos. of compost pits distributed in the District, 12 numbers have been allotted to the adjoining areas of Byrnihat for this purpose.
		Total no. of actions – 3	No. of actions completed – 2	No. of actions under progress -1	
AQ	Air Quality Data	1. Air quality monitoring station expansion	-	Under progress	Proposal submitted for setting up of additional stations in Byrnihat residential area to CPCB for necessary funding
		2. Air Quality Index to be calculated & disseminated to the people through website & print/electronic media in local vernacular (on maximum weekly basis for manually	Completed	-	Air Quality Index (AQI) of the station is displayed in public domain through Board's website & Shillong Times Newspaper on weekly basis (manually

		operated monitoring stations and real time basis for continuous monitoring stations)			operated monitoring stations)
		3. Monitoring of DG sets to ensure that only those DG sets that meet the standards are allowed to operate and action against violations	-	Under progress	Monitoring is in progress. Besides, the Board also proposes to seek financial assistance for procurement of monitoring instruments from MoEFF&CC/CPCB
		4. MSPCB may undertake NLM in conjunction with the Police Department and take remedial action. Police Deptt. of the States may obtain the noise monitoring devices within a period of three months and specification of such devices may be finalized in consultation with the State PCBs. Police Deptt. of the States may also train their staff regarding the use of such devices and develop a robust protocol for taking appropriate action against the defaulters. Police Deptt to check the use of sound limiters in all sound system/public addresses system for effective control of noise pollution. Total no. of actions - 4	- - -	Under progress	Monitoring by MSPCB is in progress. Besides, the Board also proposes to seek financial assistance for procurement of monitoring instruments from MoEF & CC/CPCB Response awaited Response awaited Response awaited
			Total no. of actions completed - 1	Total no. of actions under progress - Response	

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(13)

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**Nodal Officer
Meghalaya State Pollution Control Board**

QUARTERLY PROGRESS FOR THE PERIOD 01.10 .2020 TO 31.12 2020 FOR RESTORATION OF POLLUTED RIVER POLLUTED RIVER STRETCHES IN THE STATE OF MEGHALAYA

I.	Total No. of Pollution River Stretches	7 (Umkhrah & Umshyrpi river –Priority I:Umtrew, Nonbah & Kyrhukhla river –Priority IV: Myntdu & Lukha –Priority V)						
		Umkhrah	Umshyrpi	Umtrew	Nonbah	Kyrhukhla	Myntdu	Lukha
II.	In-situ Bio-remediation	PMC of Smart City has prepared the feasibility report for Nallah in-situ treatment for the drain falling within the ADB. The report was approved and accepted by the RRC. Proposal sent to the Govt. to engage the same consultant for preparation of DPR for the bio-remediation of remaining drains was approved and the same has been communicated to the PMC for finalisation of terms & conditions. The DPR will be completed by the 1 st week of March.			DPR is completed and the Water Resources Department is seeking fund for implementing the same. For Kyrhukhla and Lukha river, the Water Resources Department is processing the matter with the Deputy Commissioner, East Jaintia Hills District for funding under Meghalaya Environment Protection Fund (MEPRF)			
III.	Sewage Treatment Plant							
	Total Sewage Generation (MLD)	33.52	15.47	0.36	3.10	0.8	3.07	0.5
	Total Existing Treatment Capacity (MLD)	0.05						
	Capacity Utilization							

Note: Garbage traps have been installed in 6 nos. of drains connecting to the rivers and one oil grease trap of 5kld installed in one drain of Umkhrah River.

Town	Existing STP	Capacity Being Utilized	Whether Complying or not	STP Proposed if any	Status (DPR/tendering/under construction/ETC etc.)
Shillong (catchment of Umkhrah & Umshyrpi river)	0.05 MLD	-	-	Faecal Sludge & Septage Management (FSSM) -0.35 MLD	Tender for FSSM has been floated on the 8 th December and the last date for bid submission is on 13 th January 2021 & and for On-site Treatment System land are being identified. Estimated

• Total No. of GPIs/SPIs	None	None	1	None	None	None	None
• No. of industries having OCEMS	None	None	None	None	None	None	None

Town	Existing ETP Capacity(MLD)	Whether Complying or not	CETP Proposed if any	Status (DPR/tendering/under construction/ETC etc.)
Shillong	1.8	Complying	-	-
Byrnihat	1.0	Complying	-	-
Nongstoin	0.41	Complying	-	-
Ladrymbai & Khliehriat	0.1	Complying	-	-
Jowai	0.45	Complying	-	-
Khliehriat, Myndihati & Lumshnong	0.615	Complying	-	-

V.	Solid Waste Management	Umkhrah	Umshyrpi	Umtrew	Nonbah	Kyrhukhla	Myntdu	Lukha
	Total Municipal Solid Waste generation (TPD)	164.81		1.16	10.05	2.6	9.95	1.6
	Existing facilities (TPD)	12.72 (6.00 TPD Organic Compost + 6.72 Recyclables) a) Door to door collection is introduced in all wards and level of coverage is 100%.Segregation at source		15.0	Collection, segregation and transportation of wastes has been done by the SLRM team under SBM (Urban) .In some	Waste management soak pit household waste water management & organic	Door to door collection and transportation coverage is being done by the Jowai Municipal Board.	Waste management soak pit household waste water management & organic

	<p>is in place and the level of compliance by the residential households is 85% and by the commercial establishments about 45%. Chain link fencing has been installed at strategic garbage points. Penalty is imposed on habitual offenders.</p> <p>b) Additionally, Garbage traps have been installed in 6 nos of drains connecting to the rivers and one oil grease trap of 5 Kld installed in one drain of Umkhrah River. 170 TPD Compost Plant at Marten is completed and under testing of trial run and likely to be commissioned by the end of March 2021</p> <p>There are 4 nos of decentralised compost plants. 1 of the facilities is already functional at Marten while the other 3 have just been completed. Out of these, 2 are operational recently in Umpling and Lawjynriew. 1 is yet to be made operational.</p>		<p>households the biodegradable wastes are treated by composting method in compost pit</p>	<p>waste compost for 175 households under SBM (G)</p>	<p>Segregation at source is in place.</p>	<p>waste compost pit for 366 households under SBM (G)</p>
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	Proposed	<p>Waste to energy of 100 TPD capacity and the proposed investment is INR 24.5 crores.</p> <p>MoU has been signed on 22nd June 2020 between the Department of Urban Affairs, Government of Meghalaya and CHAMHANA GW India Pvt .Ltd on a Build, Own and Operate (BOD) basis for a period of 25 years.</p> <p>There is however ,delay in starting the project due to ongoing pandemic for transportation of equipments and other related matters to human resources .</p>	Proposed for soak pit household waste water management & organic waste compost for 112 households under SBM (G)	Land has been identified and a compost plan has been sanctioned under SBM (Urban)		Within the existing dumping site portion of land has been identified for indigenous compost plant and waste recovery. The work is to be started soon.	
	Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	Enclosed as annexure II					

VI.	Bio-medical/Hazardous/Plastic Waste Management(in TPD)	Umkhrah	Umshyrpi	Umtrew	Nonbah	Kyrhukhla	Myntdu	Lukha
	Total Bio-medical Waste generation	1.0597		0.0021	0.029	0.00608	0.41	Nil
	Total Bio-medical Waste Treatment	1.0597		0.0021	0.029	0.00608	0.41	Nil
	Bio-Medical Treatment facilities	<p>a) Common Bio-Medical waste treatment plan is completed and is under trial run</p> <p>b) The Urban Affairs has procured three Bio-medical Wastes vehicles solely for transport of Bio-medical Wastes.</p>						
	Hazardous Waste generation	Nil	Nil	1.17	Nil	Nil	Nil	0.1405
	Hazardous Waste Treatment	-	-	1.135	-	-	-	0.1405
	Plastic Waste generation	0.230		-	-	-	-	
	Plastic Waste processing	<p>(a) The plastic Waste was collected as municipal waste into dry waste and wet waste. The plastic waste was segregated from the dry waste at the dumpsite and collected for compaction and bailing and send to Cement plants for co-processing to be used as Fuel.</p> <p>(b) Used for road making in some parts of Nongstoin</p>						
	Total No. of Hospital and bio-medical waste generation/treatment	6	2	None	2	None	2	None
	Total of units generating Hazardous waste/treatment facility			6				11

		Umkhrah	Umshyrpi	Umtrew	Nonbah	Myntdu	Kyrhukhla	Lukha
VII.	Ground water regulation	For Domestic purpose –District Level Committee Ground Water Resource (Deputy commissioner of respective District as Chairman and official of Water resources as Member Secretary) looks after it and grant NOC. For Commercial purpose - State Level Committee Ground Water Resource(Commissioner & Secretary, Water Resources as Chairman and Regional Director, CGWB, NER, as Member Convener) looks after it and grant NOC						
VIII.	Maintaining minimum e-flow of river	Perennial						
IX.	Protection and management of Flood Plain Zones (FPZ)	<ol style="list-style-type: none"> 1. RFP for engaging of consultant for Flood Plain zonation in identified river stretches sent to NPMU,NHP, MOJS has been floated. Date of opening of technical report is on the 16th Dec 2020.(Due to technical reasons FPZ is being proposed only at Umkhrah, Nonbah, Umtrew and Myntdu as other rivers flow through deep gorges).Evaluation process is in progress. 2. Proposal for setting up of HO stations sent to Govt. for availing sanction. 						
X.	Rain water harvesting	<ol style="list-style-type: none"> i. Rain water harvesting implemented for Schools and government buildings ii. Incorporated as one of the condition while giving permission for any house construction 						
XI.	Plantation along river	Proposal have been submitted to CEO CAMPA for according sanction to an amount of Rs.27,17,440/- in 2021-2022 for treatment of 48.58 ha (preliminary works for creation of plantations and creation of 94.5 polypot nursery beds for future plantations.						No proposal was made since there is a Reserve Forest and green cover on both sides of the river
XII.	Development of biodiversity park on flood plains by removing encroachment	Matter of encroachment is pending in the Supreme Court .Biodiversity parks in existence.	No proposal for setting up of Bio-Diversity Park due to non-availability of Government land.					
XIII.	Reuse of Waste water	Treated wastewater are reuse for gardening/cleaning purpose						

Quarterly Progress Report for Solid Waste Management (including bio-mining of legacy waste dumpsites)

Sl. No	Questions	Remarks			
1	Number of ULBs	7			
2	Overall waste management status on States/UT				
a	Quantity of MSW generated (TPD)	229.18			
b	Quantity of MSW collected (TPD)	191.19			
c	Quantity of segregated & transported (TPD)	191.19			
d	Quantity of MSW processed (TPD)	9.64			
e	Quantity of MSW disposed in secured landfill site (TPD)	50.96			
f	Gap in Solid waste Management UTs (TPD) [1(a)-1(d)-1(e)]	168.58			
g	Solid waste Management Plan	7			
3	Waste Collection	Existing	Target	Gap	Timeframe
a	ULBs in which waste door-to door collection is implemented (No)	7	0	0	Completed
b	ULBs in which segregation of waste is implemented (No)	4	7	3	March, 2021
c	ULBs in which transportation of segregated waste is implemented (No)	4	7	3	March, 2021
4	Waste Processing				
a	Material Recovery facilities				
(i)	Total Capacity (TPD)	7.64	7.64	0	Completed
(ii)	Number	1	1	0	
(iii)	Number of ULBs covered	1	7	6	March, 2021
b	Recycling				
(i)	Total Capacity (TPD)	0	0	0	
(ii)	Number	0	0	0	
(iii)	Number of ULBs covered	0	0	0	
c	Composting				
(i)	Total Capacity (TPD)	2	170	168	April, 2021
(ii)	Number	1	1	0	April, 2021

	(iii)	Number of ULBs covered	1	2	1	April, 2021
d		Biomethanation				
	(i)	Total Capacity (TPD)	0	0	0	
	(ii)	Number	0	0	0	
	(iii)	Number of ULBs covered	0	0	0	
e		RDF				
	(i)	Total Capacity (TPD)	0	0	0	
	(ii)	Number	0	0	0	
	(iii)	Number of ULBs covered	0	0	0	
f		Waste to Energy Plants				
	(i)	Total Capacity (TPD)	0	0	0	
	(ii)	Number	0	0	0	
	(iii)	Number of ULBs covered	0	0	0	
4		Waste Disposal				
a		Landfill				
	(i)	Total Capacity	1,34,129 Cubic meter			
	(ii)	Number	1	1	0	
	(iii)	Number of ULBs covered	2	2	0	
5		Legacy Waste Management				
	a	Number of Dumpsites (No)	6			
	b	Quantity of waste dumped at dumpsites (Tons)	7,65,100 MT			
	c	Number of Dumpsites Cleared (No)	No information available			
	d	No of dumpsites in which bio mining has commented	Nil			
	e	Time frame for clearing all dumpsites	0			
6		Other Information				
	a	Information regarding development of model towns/cities/villages	No information available			
	b	Creation of Environmental cell	Yes			
	c	Standardization of rates for procurement of services/equipment (to do away with the tendering process) required for solid waste management	No information available			

Improvements Since Last Hearing				
Sl. No.	Item	Present Status	Status at the time of last hearing	Whether directed timelines have been adhered or not?
1	Door to door collection (%)	100%	66%	No
2	Source segregation of waste (%)	60%	50%	No
3	Waste Processing (TPD)	2%	2%	No
4	Dumpsites capped (No.)	0	0	Yes
5	Dumpsites Bio-remediated (No.)	0	0	Yes


Sr. Environmental Engineer, MSPCB

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Quarterly Progress Report on Bio-Medical Waste Management								
Inventory of Health Care Facilities and Status of Authorisation						Status of Bar Code	Status of CBWTF	System of BMW management in areas not covered by CBWTF
Sl. No	Health Care Facilities	Inventory	Numbers of Authorisation Granted	Numbers of Authorisation under consideration	Number of HCF'S without Authorisation			
1	Govt. Hospitals	20	20	0	0	A reminder has been sent for submitting the status of implementation of Bar Code System to the CBWTF, Shillong Municipal Board and to all the Health Care Facilities	At Present, the CBWTF set up at Marten, with a capacity of 100kgs/hr. The Facility consist of a 100kg/hr incinerator, 50kg/hr Autoclave, a 50 kg/hr Shredder and a 1KLD Effluent Treatment Plant. The facility is completed and is under trial run.	On site Disposal after dininfection according to the Bio-Medical Waste Management Rules, 2016 and its amendments.
2	Private Hospitals	17	17	0	0			
3	Nursing Home	5	2	0	3			
4	Govt PHC	110	110	0	0			
5	Govt CHC	30	30	0	0			
6	Govt. Dispensaries	13	13	0	3			
7	Govt. Sub-Centres	459	362	0	97			
8	Govt Veterinary Dispensaries	118	79	0	39			
9	Private Clinics	80	80	0	0			
10	Laboratories	34	26	0	8			
11	Urban Primary Health Care	16	16	0	0			
12	Research Institute	1	1	0	0			
	TOTAL	903	756	0	150			



Sr. Environmental Engineer, MSPCB.

Format for providing information w.r.t directions of the Tribunal dated 07.07.2020 in the matter of O.A. 804/2014 (October, 2020 – December, 2020 by Chief Secretary

Sl. No.	Recommendations	Information required to submitted
A.	Pertaining to State Government /UT Administration	
1.	<p>i Whether the State/UT Govt/Admin has taken action to monitor the implementation of recommendations of the Monitoring Committee in the interim and Final report (related to State/UT and SPCBS/PCCs)? If yes, kindly provide details (viz., committees constituted, meetings conducted, Office memorandum issued etc.) If no, please provide the action plan with timeline.</p>	<p>A state level committee is constituted I</p>
2.	<p>i Whether the State/UT Govt/Admn has taken action to sensitize about duties to be performed by concerned department/agency? (a) If yes, please provide details (b) If no, kindly provide action plan with timeline.</p> <p>ii Which Department/agency has been authorized by State Government/UT Administration to ensure earmarking or allocation of industrial space or shed for recycling, pre-processing and other utilization of hazardous or other waste in the existing and upcoming industrial park, estate and industrial clusters, (a) Whether the agency authorized as at (ii) above, has earmarked or allocated industrial space/shed for recycling, pre- processing and other utilisation of hazardous or other waste. (b) If yes, please provide no. of areas earmarked/allocated and activities for which area has been earmarked. (c) If no, kindly provide action plan with timeline.</p> <p>Which Department/agency has been authorized by State Government/UT Administration for recognition and registration of workers involved in recycling, pre-processing, and other utilization activities? Please also provide details of the recognition and registration of workers (a) Whether the agency authorized as at (iii)</p>	<p>The Government has taken action regarding duties to be performed by concerned department/agency i.e Industries Department and the Labour Department.</p> <p>With regard to Labour Department it maybe mentioned that list of Industries handling Hazardous Wastes has been forwarded to them for necessary action with regard to recognition and registration of workers for which report is awaited</p>

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	<p>above, has assisted in formation of groups of such workers to facilitate setting up such facilities? If yes, please provide no. of such groups formed and no. of workers in each groups. If no, please provide action plan with timeline.</p> <p>(b) Whether the agency authorized as at (iii) above, has undertaken industrial skill development activities for the workers involved in recycling, pre-processing and other utilization. If yes, please provide details of such skill development activities undertaken. If no, please provide action plan with timeline.</p> <p>(c) Whether the agency authorized as at (iii) above, has undertaken annual monitoring for safety and health of workers involved in recycling, pre-processing and other utilization. If yes, please provide details of the annual monitoring carried. If no, please provide action plan with timeline.</p> <p>iii. Whether State Government/UT Administration has prepared integrated plan for effective implementation of these provisions and submitted annual report to the MoEF&CC.</p> <p>iv. Provide action taken report on steps taken to ensure strengthening of institutional capacities for effective implementation of Rule 5 of HOWM Rules, 2016.</p>	
3.	<p>States/UTs who have responded are required to ensure strengthening of institutional capacities for effective implementation of the Rule 5 followed by monitoring through Chief Secretaries of State Government /UT administration. (State Government/UT Administration: 05 months)</p>	<p>The matter for strengthening of institutional capacities for effective implementation of the Rule 5 is being reviewed by the Chief Secretary.</p>

Format for providing information w.r.t directions of the Tribunal dated 07.07.2020 in the matter of O.A. 804/2014 (October, 2020 – December, 2020 by Chief Secretary

Appendix-A

Format for providing information w.r.t. directions of the Tribunal dated 07/07/2020 in the matter of 804/2017 (October, 2020-December, 2020) by SPCBs/PCCs

S. No	Recommendations	Information required to submitted
A.	Pertaining to Interim Report of Monitoring Committee	
1.	SPCBs/PCCs shall ensure timely submission of annual returns by all occupiers and in case of non-compliances (i.e. for non-submission/after lapse of timeline) action may be taken in accordance with the provisions laid down under the HOWM Rules, 2016.	<ul style="list-style-type: none"> i. Total No. of operating hazardous and other wastes handling units: 19 ii. How many hazardous or other waste generating units [of (i) above] have submitted annual returns by 30th June (2019-2020): 4 (Four) Units iii. How many units [of (i) above] have submitted annual returns after 30th June (2019-2020): NIL iv. How many units [of (i) above] have not submitted annual return (2019-2020): 15 v. In how many units [of (iii) & (iv) above] action has been taken by SPCB? 15
2.	SPCBs/PCCs shall prepare annual inventory report on hazardous and other waste generation and its management, as per CPCB's guidelines and ensure submission of same within stipulated timeframe as laid down under HOWM Rules, 2016.	<ul style="list-style-type: none"> i. Of the numbers of hazardous or other waste generating units, who have submitted annual returns, nos. of units are randomly verified, as per CPCB's guidelines, (Nos.): 1(one) Unit ii. Provide the list of such units. M/s Lafarge Umiam Mining (P) Ltd.
3.	SPCBs/PCCs to ensure verification and reconciliation of closing of manifest document for all the cases in Hazardous waste handling/ generating units.	<ul style="list-style-type: none"> i. In how many units, verification of closing of manifest documents and reconciliation of the same were done by SPCB (during the said period). iii. 1(one) Unit ii. Of which, how many pertains to interstate movement and within the state? Interstate Movement 3(three)Units

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4.	SPCBs/PCCs to ensure regular updation of website with respect to all enforcement actions along with details of industries and action taken thereof.	<p>i. Whether website of SPCB has been updated w.r.t. all enforcement actions along with (a) details of industries, (b) date of inspection including collection of effluent or other samples, (c) whether unit is compliant or not, (d) if non-compliant then action taken including the date of notice if any sent to defaulter and action taken pertaining to HOWM Rules: (Yes/No) NO</p> <p>ii. Provide specific link of all enforcement action uploaded in Board's website. N/A in view of reply above</p> <p>iii. Provide the copy of enforcement framework document developed by board for effective enforcement of Rules. N/A in view of reply above</p> <p>iv. Provide details of defaulting units as per Table 1 given below. NIL</p>
5.	Board shall take necessary action for compliance to the HOWM Rules, 2016 and recommendations of the Monitoring Committee	Enclosed at Appendix-B
6.	Board shall be directed to submit the 2nd, 3rd and 4th quarter compliance report.	

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7.	Development of sectoral process based reasonable HW generation range/ environmental benchmarking/guidelines for HW recycling/ utilization and approach for waste management hierarchy and submit the progress report on the same within 06 months to CPCB.	Document is yet to be prepared. Guidance on preparation is being sought from the Central Pollution Control Board, New Delhi
8.	Board shall be directed to submit the status on setting up of TSDF or sharing arrangement with authorized common TSDFs of neighboring states.	<p>Site identification for establishment of common TSDF has been carried out by the Board alongwith the Industries Department. However the inventorization carried out by the Board it was found that the quantum of hazardous waste generated in the State is too less for establishment of Common Hazardous Waste Treatment, Storage & Disposal Facility (CHWTSDF). Industries generating landfillable hazardous wastes were directed to dispose their wastes in an authorized disposal facility. Similarly CPCB, New Delhi has submitted a report of the Committee on Categorization of States as Small States Based on Threshold Limit of Generation of Hazardous Waste for which the report is placed at Annexure-IV.</p> <p>Moreover it was decided in the meeting of Chairmen & Member Secretaries of North Eastern State Pollution Control Boards held on 26th May 2017, it was suggested to look into the possibility of sharing a Common Hazardous Waste Treatment, Storage & Disposal Facility (CHWTSDF) to be setup in Assam for treatment and disposal of the Hazardous Waste generated in Meghalaya.</p>
B. Pertaining to Final Report of Monitoring Committee		
1.	<i>Action point 15: Clearance of Waste Oil/Sludge from Ships:</i>	

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<p><i>Concerned SPCBs/PCCs or Port Authorities of State/UT to grant/obtain necessary authorization to cover hazardous wastes generated from both normal port operations/activities and all ship generated wastes (MARPOL annexes) (e.g in case of used/waste Oil authorization for Cat. No. 5 and Cat. No. 3 of HOWM Rules, 2016). The same be also covered in the annual report submitted as per HOWM Rules, 2016. (SPCBs/PCCs and Port Authorities: 05 months)</i></p>	<p>There are no ports (land or river) in the state of Meghalaya.</p>
<p>2. Action point 15: Clearance of Waste Oil/Sludge from Ships:</p> <p><i>SPCBs/PCCs shall ensure that all the ports (including minor ports), ICDs/CFSs have mandatory authorization as per HOWM Rules, 2016. The said authorization shall be granted by the SPCB/PCC after due scientific evaluation. (SPCBs/PCCs: 05 months)</i></p>	
<p>3. Action point 18: Collaboration between regulating authorities:</p> <p><i>SPCBs/PCCs along with Customs and Port authorities to ensure regular interaction among themselves for better compliance of import and export related issues and management of ship wastes. (MoEF&CC, CPCB, SPCBs/PCC, Customs and Ports Authorities: On a regular basis)</i></p>	<p>There are no ports (land or river) in the state of Meghalaya.</p>
<p>4. Action point 19: Availability of Waste Reception Facilities at ports:</p> <p><i>SPCBs/PCCs may coordinate with DG(S) and Port Authorities for implementation of the aforesaid notification for environmentally sound management and disposal of ship wastes. (SPCBs/PCCs: 05 months)</i></p>	

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5.	<p>Action point 20: Authorization for the waste reception facilities and ports: <i>SPCBs/PCCs shall ensure authorization is granted to Ports and Waste reception facility available at all ports and all the provisions of HOWM Rules, 2016 (i.e. authorization, manifest system, inventerisation etc.) are being followed by Ports and Waste Reception Facilities. (SPCBs/PCCs : 05 months)</i></p>	<p>There are no ports (land or river) in the state of Meghalaya.</p>
6.	<p>Action point 26: Display of information outside the factory gate: <i>SPCBs/PCCs shall ensure that verification of installation/updation of display boards at all the Hazardous waste generating units on a continuous basis. (SPCBs/PCCs : 05 months)</i></p>	<ul style="list-style-type: none"> i. Number of hazardous waste generating units in the state: 19 ii. Number of units installed display board: 16 Units iii. Of (ii) above, how many has been verified by the Board: 16 Units iv. Number of hazardous waste generating units not installed/updated display board: 3(Three) UNITS v. Action taken by the board, in case of non-compliances observed: Directions is in process of being issued
7.	<p>Action point 27: Institutional Reforms: SPCBs/PCCs shall ensure that adequate manpower is available with the PCB/PCC, training shall be regularly provided with emphasis on scientific evaluation and management of hazardous waste.</p>	<ul style="list-style-type: none"> i. Is adequate manpower available with SPCB/PCC: NO ii. Steps taken to ensure adequate manpower are made available in SPCB/PCC and timeline for the same. Proposal has been sent to the Government and Central Pollution Control Board and reply is awaited iii. No. of training programs organized by SPCB/PCC during FY-2019-20. 1(One) program "MONITORING OF

Format for providing information w.r.t directions of the Tribunal dated 07.07.2020 in the matter of O.A. 804/2014 (October, 2020 – December, 2020 by Chief Secretary

		<p>INDUSTRIAL EMISSION & AMBIENT AIR QUALITY” Total no of participants – 54 persons</p> <p>iv. No. of training programs attended by SPCB/PCC officials (which are organized by other agencies). 8(eight)</p> <p>*Please provide topic of the training programmes organised by Board and no. of officials attended the same.</p>
8.	<p>Action point 27: Institutional Reforms:</p> <p><i>SPCBs/PCCs should have adequate laboratory infrastructure for analysis of HW parameters.</i></p>	<p>i. No. and list of Hazardous waste parameters for which facility for analysis is available with SPCB/PCC. Enclosed at Appendix-C</p> <p>ii. Steps taken to provide adequate laboratory infrastructure for the remaining parameters in the SPCB/PCC and timeline for the same. NIL</p> <p>iii. In case of non- availability of the infrastructure current practice of the SPCB/PCC for analysis of HW parameters. NIL</p>
9.	<p>Action point 27: Institutional Reforms: <i>R&D work shall be regularly carried out by the SPCBs/PCCs either individually, in collaboration with other SPCBs/PCCs and expert technical Institutes/agencies. Continuous dissemination of information and awareness programs shall be carried out by the SPCBs/PCCs. (SPCBs/PCCs : 05 months)</i></p>	<p>(i) Capacity building for officers of Meghalaya State Pollution Control Board is dependent on training conducted by CPCB and other renowned institutes in the Country.</p> <p>(ii) It maybe informed that the Board has undertaken a research study on “Cleaner Production in Cement Industry for Environmental</p>

Format for providing information w.r.t directions of the Tribunal dated 07.07.2020 in the matter of O.A. 804/2014 (October, 2020 – December, 2020 by Chief Secretary

		<p>Sustainability”.</p> <p>It may be informed that the Meghalaya State Pollution Control Board will be not be in a position financially to regularly undertake research specifically in the areas of green chemistry, cleaner technology, waste minimization, circular economy.</p>
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Sr. Environmental Engineer
Meghalaya State Pollution Control Board
Shillong

Format for reporting implementation and monitoring of various recommendations of the Monitoring Committee

For Quarter: October-December 2020

Name of SPCB/PCC: Meghalaya State Pollution Control Board

Compliance Status as on: 31.12.2020

Basic Information

1. (a) Whether scientific principles based identification & quantification of hazardous and other wastes are carried out at the authorization stage by the Board itself: (Yes/No) If no,

YES

2. (a) (i) Whether authorization is granted/renewed by evaluation by SPCB officials or through evaluation of expert committee? (Yes/No)

YES. Evaluation by SPCB Officials

(b) Whether authorization documents clearly stipulates respective mode of management (such as common or captive incineration/secured landfilling or pre-processing or recycling or utilization or export or captive storage, as applicable) for each category of HW being generated. (Yes/No) if no;

YES

3. (a) Whether elaborate protocols for pre-processing and recycling/utilisation facilities for enhanced level and frequency of enforcement and environmental monitoring have been laid down by the SPCB (Yes/No).

NO. There are no pre-processing and recycling facilities in the State of Meghalaya

4. Whether uniform format (as suggested by Monitoring Committee) for inspections of hazardous and other wastes handling facilities has been adopted by SPCB: (Yes/No)

YES

A. Hazardous and Other Wastes Generating Units and their authorization

5. Total No. of operating hazardous and other wastes handling units: 19

6. Total No. of Units (having valid authorization): 11

7. (a) New Units applied for fresh authorization (during the quarter): NIL

(b) (i) New Units of (a) above granted authorization: NIL in view of reply at Sl. 7(a)

(ii) Of (b)(i) above, uniform inspection format as at (4) above has been enclosed in how many authorisations:

(c) (i) No. of fresh authorization granted (during the quarter) to new units (who applied in previous quarter) and other than (b) above: NIL

(ii) Of (c)(i) above, how many units were inspected & HW data and facilities have been scientifically verified (during the quarter) before grant of authorization: NIL



- (iii) Of (c)(ii) above, uniform inspection format as at (4) above has been enclosed in how many authorizations: **NIL**
- (d) Of (a) above, how many units were refused authorization: **NIL**
- (e) Of (a) above, how many authorizations cancelled or suspended: **NIL**
- (f) Other units (other than (a) above) who applied in previous quarter and authorization was refused: **NIL**
8. (a) Units applied for renewal of authorization (during the quarter): **5**
- (b) (i) Of units of (a) above, how many units have been granted renewal: **1**
- (ii) Of (b)(i) above, uniform inspection format as at (4) above has been enclosed in how many authorizations: **1**
- (c)(i) No. of authorization renewed (during the quarter) to units (who applied prior in previous quarter) and other than (b) above: **NIL**
- (ii) Of (c)(i) above, how many units were inspected & HW data and facilities have been scientifically verified (during the quarter) before renewal of authorization: **1**
- (iii) Of (c)(ii) above, uniform inspection format as at (4) above has been enclosed in how many authorizations: **1**
- (d) Of (a) above, how many units were refused renewal of authorization: **NIL**
- (e) Other units (other than (a) above) who applied in previous quarter and renewal of authorization was refused: **NIL**
- 9.(a) Nos. of units inspected by SPCB (during the quarter) only w.r.t. fresh/renewal of authorization: **1**
- (b) Nos. of hazardous and other wastes handling units (including recycling/utilizing/pre-processing/common TSDF facilities) inspected by SPCB (during the quarter) for other purposes other than (a) above, where observations on compliance of HOWM Rules too were made (only nos. of units to be given and not nos. of inspections): **5**

B. Scientific identification & quantification of HW

- 10.(a) Of the fresh authorization granted [i.e. among 7(b)(i) and 7(c)(i)] above, in how many cases additional categories of hazardous wastes (other than that declared by the applicant) were: **NO FRESH AUTHORIZATION GRANTED**
- 11.(a) Of the authorization renewed [i.e. among 8(b)(i), and; 8(c)(i)], in how many cases additional categories of hazardous wastes (other than that stipulated in the previous authorization) were: **NIL**
- (b) Of the authorization renewed [i.e. among 8(b)(i), and; 8(c)(i)], in how many cases category of other hazardous wastes (other than that stipulated in the previous authorization) were: **NIL**
12. Of the units inspected for other than grant/renewal of authorization purpose [i.e. among 9(b) above],
- (a) in how many units, discrepancies in categories of hazardous/other wastes or quantities thereof or both to that stipulated in authorizations were observed: **NIL**
- (b) Of (a) above, in how many cases authorizations were amended accordingly: **NIL**

13. Based on (10), (11) and (12) above, authorizations of how many similar process based units were amended ((during the quarter) accordingly: **NIL**
14. (a) Of (10), (11), (12) and (13), in how many units "other waste" categories or quantities thereof or both have been added (during the quarter): **NIL**
(b) Of (14a) above, how many other waste category has been added: **NIL**
- C. Enhanced frequency of enforcement and environmental monitoring in hazardous or other waste recycling/ utilizing/ pre-processing/ waste collector facilities:**
15. Of (5) above:
- (a) How many units are only "hazardous wastes" recycling or utilization units: **NIL**
 - (b) How many units are only "other wastes" recycling or utilizing units: **NIL**
 - (c) How many units are recycling or utilization units of both i.e. hazardous waste and "other waste": **NIL**
 - (d) How many units are hazardous or other waste pre-processing units: **NIL**
 - (e) How many units are waste collectors: **NIL**
16. No. of inspections carried (during the quarter) in units as at (15) above, as part of inspections for renewal of authorization: **NIL**
17. No. of inspections (other than 16 above) carried (during the quarter) in units as at (15) above: **NIL**
18. No. of units (of 15 above) where monitoring (sampling & analysis) has been carried out by SPCB/PCC itself: **NIL**
19. No. of units (of 15 above) where monitoring (sampling & analysis) has been carried out by private labs engaged by SPCB/PCC: **NIL**
20. No. of units (of 15 above) whose annual return has been verified and validated by SPCB: **NIL**
- D. Manifest document**
21. Of (5) above, verification of closing of manifest documents and reconciliation of the same were done by SPCB (during the quarter) in how many units: **1**
- E. Inventory**
22. Of (5) above
- (a) How many hazardous or other waste generating units have submitted annual returns by 30th June of preceding year: **9(Nine)**
 - (b) How many units have submitted annual returns after 30th June of Preceding year: **3 (Three)**
 - (c) How many units have not submitted annual return for preceding year: **7**
 - (d) Of (b) & (C) above, in how many units action has been taken by SPCB? **7**
23. Of (a) above, how many units have been verified and validated by SPCB w.r.t. annual inventory submitted by them viz. products produced/categories of waste generation/ quantities generated/ daily record and manifest being maintained, etc.: **1(ONE)**

24. (a) For how many industrial sectors, hazardous waste or other waste generation range has been developed by SPCB: NOT DEVELOPED
- (b) List the sector of (a) above for which hazardous waste or other waste generation range has been developed: N/a in view of reply at (a) above
- (c) If not, what is the time target by which such sector process based HW generation range would be initiated (Month & Year). 31.12.2020

F. Enforcement actions (after 31/3/2019)

25. How many units were found violating one or other provisions of the HOWM Rules: 2
26. In how many units, documentation of non-compliance while processing renewal of authorisation or inspection has been done (after 31/3/2019) by SPCB to invoke powers of refusal or revocation: 2
26. Whether enforcement framework for effective enforcement of Rules based on principal of proportionality and precautionary principal has been developed by SPCB: (Yes/No) NO
27. Of 25 above, In how many defaulting units, Rule 23(1) has been enforced by SPCB as per CPCB guidelines: NIL
28. Of 25 above, In how many defaulting units, Rule 23(2) has been enforced by SPCB as per CPCB guidelines: NIL
29. (a) Of (25) above, how many units have been identified by SPCB as habitual and serious defaulters: NIL
- (b) Of (a) above, how many unit's authorisation have been refused or revoked: NIL
- (c) Of (a) above, how many unit has been prosecuted under the EPA: NIL
- (d) Of (a) above, FIR has been lodged against how many defaulting units: NIL
30. Of (25) above,
- (a) how many unit's authorisation (other than 29 above) have been refused or revoked: NIL
- (b) Of (a) above, how many unit (other than 29 above) has been prosecuted under the EPA: NIL
- (c) Of (a) above, FIR has been lodged against how many defaulting units (other than 29 above): NIL
31. (a) Whether website of SPCB has been updated w.r.t. all enforcement actions along with details of industries and action taken pertaining to HOWM Rules: (Yes/No): NO
- (b) Provide link address of the above site: N/a in view of reply at 31(a)

G. Common TSDF

32. (a) Whether State/UT has common or captive TSDF? If yes;

• NO

If no;

(b) Name of the common TSDF, where any sharing arrangement has been made for disposal of landfillable HW. **NO arrangement made**

(c) Name of the common TSDF, where any sharing arrangement has been made for disposal of incinerable HW. **No incinerable wastes in the State of Meghalaya**

(d) Whether SPCB/PCC has initiated any action for setting up of common TSDF?(yes/no)if yes, **YES**

(e) Whether site has been identified? **YES**

(f) EIA completed? **NO**

(g) EC granted? **NO**

(h) Provide the progress report in brief -

Site identification for establishment of common TSDF has been carried out by the Board alongwith the Industries Department. However the inventorization carried out by the Board it was found that the quantum of hazardous waste generated in the State is too less for establishment of Common Hazardous Waste Treatment, Storage & Disposal Facility (CHWTSDF). Industries generating landfillable hazardous wastes were directed to dispose their wastes in an authorized disposal facility.

33. (a) whether SPCB has directed common TSDF operator in their state not to return the HW consignment and do the needful as recommended by the Monitoring Committee: (Yes/No) **NO**

(b) Number of incidences returning of the HW consignment by the common TSDF (after 31/03/2019) noted by SPCB: **NIL**

34. Whether SPCB has planned environmental audit including site selection criteria, design & layout for both captive and common SLF: (Yes/No) **NO**

35. (a) Of (32)(a)(i) above, how many have opened escrow account as per O.M. dated 16/04/2009 of MoEF&CC: **N/a**

(b) List name of the common TSDF who have opened escrow account: (Insert Table for multiple entries): **N/a**

(c) Of (a) above, how many have deposited mandatory amount in the escrow account: **N/a**

(d) Of (a) above, in how many units SPCB/PCC has verified deposited amount as per above O.M. dated 16/04/2009 of MoEF&CC: (No.s) **N/a**

(d) Of (a) above, in how many units SPCB/PCC have verified Mandatory amount being deposited in the escrow account annually is displayed on the website of common TSDF operator: (No.s) **N/a**

(e) What actions have been taken by SPCB in case of non-opening/non-deposition of mandatory escrow account/ displaying on website: (not more than 100 words) **N/a**

36. (a) Whether laboratory facility for the analysis of all HW parameters as required under the HOWM Rules has been available in all of the common TSDFs as (32) above. If no, **N/a**

I. Impact of other regulation

37. (a) Brief note on action taken to bring domestic hazardous waste into the ambit of HW inventory (2018-19): **No action plan**

- (b) How many domestic hazardous waste deposition centers exists in the State/UT: **NIL**
- (c) How many of (b) above have been authorised under HOWM Rules, 2016: **NIL**
- (d) Quantity of domestic HW received in deposition center for (till 31/03/2019)
- Disposal into TSDF
 - Recycling/Utilisation
- } No information available
- (e) Quantity of domestic HW received in deposition center for (after 31/03/2019)
- Disposal into TSDF
 - Recycling/Utilisation
- } No information available
- (e) Quantity of domestic HW disposed in TSDF (till 31/03/2019) } No information available
- (f) Quantity of domestic HW disposed in TSDF (after 31/03/2019) }
- (g) Brief note on action taken to bring fluorescent & other mercury containing lamp into the ambit of HW inventory (2018-19): **No action plan**
- (h) Quantity of fluorescent & other mercury containing lamp disposed in TSDF (before 31/03/2019) **N/a**
- (i) Quantity of fluorescent & other mercury containing lamp disposed in TSDF (after 31/03/2019) **N/a**
- (j) Whether Common TSDF operator has declared the above received as at (e) and (i) (domestic HW and fluorescent & other mercury containing lamp) in their annual inventory report (2017-18) separately (Yes/No) **NO**

J. Capacity Building

38. (a) Whether SPCB has at least one laboratory where all HW parameters as required under the HOWM Rules can be analyzed: (Yes/No) **YES**
- (b) * Time (in terms of month month/year) by which (a) above would be commissioned in SPCB/PCC: **31.03.2023**
- (c) Whether Capacity building in terms of qualified and experienced manpower has been provided (yes/no) **YES**
- (d)*Time (in terms of month month/year) by which (c) above would be provided: (provide calendar) **N/a**

K. Action Plan for recycling/utilization (with upload option)

39 (a) Whether SPCB/PCC has evolved any approach in recycling and utilization of hazardous waste in terms of waste management hierarchy. **NO**

40 Whether any benchmarks/guidelines have been developed by SPCB/PCC for the possibilities of HW recycle/utilization on case to case basis? **NO**

if yes, provide the details.(upload option)

* If no, (ii) Target date for developing the same (Calendar/Upload option)

41 Whether SPCB/PCC has developed any environmental benchmarking among the similar industries generating HW which can be useful to ensure consistency and uniformity for rationalizing the HW generation and reuse/utilization.(yes/no)

NO

Sr. Environmental Engineer
Meghalaya State Pollution Control Board

(140)

QUARTERLY PROGRESS REPORT ON SEWAGE TREATMENT PLANTS AND UTILIZATION OF SEWAGE

Sl.No	City/Town	No. of STP	Location of each STP	Coordinates of STP (Latitude and Longitude)	STP commissioned in (Year)	Status (Operational/N on-Operational/Under Construction)	STP Installed Capacity (in MLD)	Actual Utilization of installed Capacity (in MLD)	Technology (UASB/ASP/OP/SBR/MBR/FAB Etc.)	Consent Status	Compliance Status			
											PH	TSS	COD	BOD
1	Thangskai	1	Meghalaya Cements Ltd., Thangskai, East Jaintia Hills District	N/A	2015	Operational	100 KLPD	60 KLPD	ASP	Valid	Samples yet to be collected			
2	Lumshnong	1	Star Cements Ltd., Lumshnong, East Jaintia Hills District	N/A	2005	Operational	400 KLPD	239 KLPD	ASP	Valid	Samples yet to be collected			
3	Shillong	1	North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Mawdiangdiang	N/A	2006	Operational	1 MLPD	1 MLPD	ASP	Valid	7.2	120	410	95
4	Shella	5	M/s Lafarge Umiam Mining Pvt. Ltd., Nongtral	N/A	2012	Operational (Package STP) 5 (Five) numbers 20 KLPD	120 KLPD	30 KLPD	UASB	Valid	7.8	7	10	4.6
											8	10	12	4.2
											8	8	11	4.4
											8.2	10	12	4
											8	7	12	3.8
5	Nongsning	2	Green Valliey Industries Limited, Nongsning, East Jaintia Hills District	N/A	2019	Operational (Package STP) 2 (Two) numbers 50 KLPD	30 KLD	30 KLD	MBR	Valid	8.4	16		12.2
6	Thangskai	1	Dalmia Cement (Bharat) Limited	N/A	2019	Operational	50 KLD	40 KLD		Valid	Samples yet to be collected			

Sr. Environmental Engineer, MSPCB

Quarterly Progress Report for the period on Compliance to E-waste Rules

Sl.NO.	Challenges/Activities	Stakeholder responsibility for implementation	Action	Current Status	Desirable level of compliance in terms of status	Gap between current status & desired level	Proposal for attending the gap with timelines
a.	Checking of informal trading, dismantling, and recycling of waste	SPCBs/PCCs/ District Administration	SPCB/PCCs in coordination with District Administration has to carry out quarterly drive for checking of this activity	<ul style="list-style-type: none"> Work for carrying out Inventorisation of E-waste for the whole State of Meghalaya has been allotted to M/s International Institute of Waste Management, Bengaluru and report of the same is awaited. 	<ul style="list-style-type: none"> Checking of informal Trading in the Whole State of Meghalaya. In the absence of dismantling and recycling centre in the State checking of the same does not arise. 	On completion of the work for Inventorisation of E-waste for the whole State of Meghalaya, checking of informal Trading in the remaining districts will be carried out.	31 st March, 2021
b.	Facilitate collection and disposal of e- waste	SPCBs/PCCs/ District Administration/ CPCB	State Government to formulate mechanism for collection and for incentivising setting up of recycling	The State Government viz Commerce & Industries Department has been advised to consider and include the E-waste Recycling unit/Dismantling unit in the State Industrial Policy so as to encourage setting up of the same by industrialist/entrepreneur etc for safe disposal of e-waste. Response is waited.	The State Government to facilitate disposal facility for e- waste		-
c.	Governance frame work for monitoring	SPCBs/PCCs/ District	Monitoring to be ensured at	<ul style="list-style-type: none"> District Level Committee was 	District Level Committee to be	Remaining six District viz.	-

	compliance	Administration/ CPCB	city/district and state levels for which nodal officers (District Magistrate) to be designated. Time Frame — Three (3) months.	formed viz West Khasi Hills District, West Garo Hills District, East Garo Hills District, East Khasi Hills District, South West Khasi Hills District, West Jaintia Hills and Ri Bhoi District. • The Board has issued remainder to the remaining Deputy Commissioner to constitute formation of District Level Committee at the earliest.	formed in all the District.	East Jaintia Hills District, Ri-Bhoi District, South Garo Hills District, South West Garo Hills District and North Garo Hills District Yet to constitute District Level Committee	
d.	Capacity building at district/State/CPCB level	SPCBs/PCCs/ District Administration /CPCB	Special workshops to educate functionaries in government/NGOs be run over one year.	The Board in collaboration with PRO viz M/s Karo Sambhav is continuously conducting awareness programme in various institution across Shillong and Jowai	Awareness programme to be carry out all across the State.	Awareness programme will be carried out to the remaining town in phase manner.	31 st March, 2021
e.	IEC plan be firmed up and executed	SPCBs/PCCs/ District Administration /CPCB	State Government to firm up IEC plan for educating public at large about the system of collection,	IEC plan has been prepared by the Board.	IEC Plan to be executed across the State	IEC Plan will be executed in collaboration with the District Administration.	31 st March, 2021

			<i>incentive structure and facilities for recycling.</i> <i>Time frame - three (3) month</i> <i>The IEC plan to be executed over one year</i>				
f.	<i>Strengthen system of Enforcement</i>	<i>SPCBs/PCCs/ District Administration/ CPCB</i>	<i>Quarterly review of violations and enforcement actions at city/district/state level and quarterly report to be filed with CPCB</i>	<i>Report from the District Level Committee yet to be received.</i>	<i>On completion of the Inventorisation, road map towards strengthen of enforcement can be stipulated.</i>	-	<i>31st March, 2021</i>


Sr. Environmental Engineer, MSPCB.

BEFORE THE NATIONAL GREEN TRIBUNAL.

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 593/2017

ANNEXURE R/9

IN THE MATTER OF:

Paryavaran Suraksha Samiti & Anr.

...Applicant

Versus

Union of India & Ors.

...Respondents

INDEX

Sr. No.	Particulars	Pages
1.	Affidavit on behalf of the respondent state of Meghalaya	1-3
2.	ANNEXURE A/1 A copy of statement on the above mentioned 231 Nos. of unit	4-13

Filed by

Dated : 16.02.,2021

New Delhi

**Avijit Mani Tripathi**

Advocate for Respondent- State of Meghalaya
B-17, Fourth Floor, Jangpura Extension,
New Delhi - 110014
Phone: 011-43582788; 9958537705
Email: avijitmani@gmail.com

BEFORE THE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 593/2017

IN THE MATTER OF:

Paryavaran Suraksha Samiti & Anr.

...Applicant

Vrs.

Union of India & Ors.

...Respondents

AFFIDAVIT ON BEHALF OF THE RESPONDENT STATE OF
MEGHALAYA

I, Shri Manjunatha C., S/o. Shri Channabasappa T., aged about 43 years, the Secretary to the Government of Meghalaya, Forest and Environment Department, having office at Main Secretariat, Shillong- 739001, presently at New Delhi do hereby solemnly affirm and state on oath as under:-

Secretary
to the Govt. of Meghalaya
Forest Department

That I am the Secretary to the Government of Meghalaya, Forest and Environment Department and as such I am competent and authorised to swear to the contents of this affidavit on behalf of Respondent- State of Meghalaya, wherein the action taken report by the State of Meghalaya is being placed before this Hon'ble Tribunal.

That this Hon'ble Tribunal was pleased to pass an Order Dated 21st Sept., 2020 in the captioned case, inter-alia, directing as follows:-

"36. Accordingly, we issue following directions:

(v) It must be ensured that no untreated sewage/effluent is discharged into any water body. Prompt remedial action may be taken by the State PCBs/PCCs against non-compliant ETPs/CETPs by closing down or restricting the effluents generating activity, recovering compensation and taking other coercive measures following due process of law."

That it is most respectfully submitted that the Meghalaya State Pollution Control Board has identified that there are 231 industrial units in the State that require ETPs. That out of these 231 units, 25 (twenty five) units have been found to have been working without installing the ETPs, and the rest 206 Nos. of units have installed the ETP. On the 25 Nos. of units that have not installed ETP, the MSPCB has revoked 'Consent' of 7 (seven) Nos. of units and has issued closure notice to 18 (eighteen) Nos. of units and the MSPCB is still processing confirmation of their closure. A copy of statement on the above mentioned 231 Nos. of unit is annexed herewith and makes as **ANNEXURE-I**.

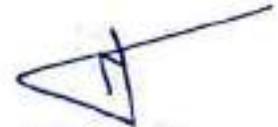
That it is most respectfully submitted that this Hon'ble Tribunal may be pleased to take the aforesaid compliance on record.


Secretary
to the Govt. of Meghalaya
Secretariat, Dispur

It is prayed accordingly.

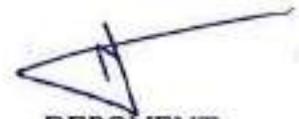
VERIFICATION

Verified at New Delhi on this 16th day of February, 2021 that the contents of the above affidavit are true and correct to the best of my knowledge and belief and no part of it is false and nothing material is concealed therefrom.



DEPONENT

Secretary
to the Govt. of Meghalaya
Forest Department



DEPONENT

Secretary
to the Govt. of Meghalaya
Forest Department

STATUS OF ETP INSTALLED BY INDUSTRIAL UNITS					
Sl. No	Name & Address of Industries	Type of Industry	ETP installed/ Not	ETP is in operation/ Not	Remarks
1	Supercare Hospital, Demthring, East Khasi Hills District	Hospital	Yes	Yes	
2	Bethany Hospital, Nongrim Hills, East Khasi Hills District	Hospital	Yes	Yes	
3	The Children's Hospital, Pohkseh, East Khasi Hills District	Hospital	Yes	Yes	
4	Tura Christian Hospital, Tura, West Garo Hills District	Hospital	Yes	Yes	
5	Holy Cross Hospital, Tura, West Garo Hills District	Hospital	Yes	Yes	
6	Dr. Norman Tunnels, Jowai, West Jaintia Hills District	Hospital	Yes	Yes	
7	Holy Cross Health Centre, Mairang, West Khasi Hills District	Hospital	Yes	Yes	
8	Bansara Eye Care Hospital, Laitumkhrah, East Khasi Hills District	Hospital	Yes	Yes	
9	M's Central Dairy, Mawrong, East Khasi Hills District	Dairy Products and Milk Processing	Yes	Yes	
10	-	Cement	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled
11	M's Star Cement Meghalaya Ltd., Lumshnong, East Jaintia Hills District	Cement	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled
12	M's Megha Technical Engineer Pvt. Ltd.	Clinker Grinding Unit	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled
13	M's Meghalaya Power Ltd., Lumshnong, East Jaintia Hills District	Thermal Power Plant	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled
14	M's Jud Cement Ltd., Wahaiajer, East Jaintia Hills District	Cement	Yes		There is no discharge of process water used in cooling into the environment. It is being recycled
15	M's Meghalaya Cement Ltd., Thangskai, East Jaintia Hills District	Cement	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled

16	M/s Adhunik Cement Ltd., Thangskai, East Jaintia Hills District	Cement & Thermal Power Plant	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled Neutralization cum settling tank is provided for Reject water arising from Demineralised plant.
17	M/s Meghalaya Cement Ltd., Thangskai, East Jaintia Hills District	Thermal Power Plant	Yes	Yes	Neutralization cum settling tank is provided for Reject water arising from Demineralised plant.
18	M/s Hills Cement Company Ltd., Mynkro, East Jaintia Hills District	Cement	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled
19	M/s Green Valley Industries Ltd., Nongsning, East Jaintia Hills District	Cement	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled
20	M/s Amrit Cement Ltd., Umlaper, East Jaintia Hills District	Cement & Thermal Power Plant	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled Neutralization cum settling tank is provided for Reject water arising from Demineralised plant.
21	M/s Goldstone Cement Ltd., Musiang Lamare (Old), East Jaintia Hills District	Cement & Thermal Power Plant	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled Neutralization cum settling tank is provided for Reject water arising from Demineralised plant.
22	M/s Jaintia Cement Ltd, Latyrke, East Jaintia Hills District	Cement	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled
23	M/s RNB Cement Ltd., Umiam Industrial Area, Ri-Bhoi District	Cement	Yes	Yes	There is no discharge of process water used in cooling into the environment. It is being recycled
24	M/s Mawmluh Cherra Cement Ltd., Sohra, East Khasi Hills District	Cement	YES	YES	There is no discharge of process water used in cooling into the environment. It is being recycled
25	M/s Virgo Cement Ltd., Damas, East Garo Hills District	Cement	NO		There is no discharge of process water used in cooling into the environment. It is being recycled

26	M/s CMJ Breweries (P) Ltd., Extended EPIP, Ri-Bhoi District	Distillery	YES	YES	237	Liquid Discharge is adopted by the Unit
27	M/s CMJ Breweries (P) Ltd., Extended EPIP, Ri-Bhoi District	Brewery	YES	YES		
28	M/s A.A. Nutrition, 10th Mile, Mawmai, Ri-Bhoi District	Food Processing	YES	YES		
29	M/s Excel Food, 10th Mile, Mawmai, Ri-Bhoi District	Food Processing	YES	YES		
30	M/s Meghalaya Energy Foods, 9th Mile, Ri-Bhoi District	Food Processing	yes			
31	The Fruit Preservation Center, Fruit Garden, Shillong, East Khasi Hills District	Food Processing	Yes	Yes		
32	M/s Mathan Alloys Ltd, EPIP, Ri-Bhoi District	Thermal Power Plant	YES			
33	M/s Shyam Century Ferrous Ltd, EPIP, Byrnihat, Ri-Bhoi District	Thermal Power Plant	YES			
34	M/s Shakambari Ferrous Ltd., Rwtang, West Khasi Hills District	Thermal Power Plant	YES			
35	Sparkling Car Wash, Kyntorlieh, Mawtai, Mawroh, Shillong, EKH.	Automobile Servicing Unit	Yes	Yes		
36	Frank Yamaha, Nongthymmai, Shillong, EKH	Two Wheeler Servicing Unit	Yes	Yes		
37	E J R Bakery, Nongthymmai Shillong, EKH	Bakery unit	NO			Closure Notice issued
38	Premier Bakery, Umiam Industrial Estate, Ri-Bhoi District	Bakery unit	NO			Closure Notice issued
39	Little Chef Bakery, Laitmuktrah Shillong, EKH	Bakery unit	Yes	Yes		
40	Nodrowel & Daughter, Bakers & Confectioners, Malki, Shillong, EKH	Bakery unit	Yes	Yes		
41	B. Kharmawphiang, Lower Nongrim Hills, Shillong, EKH	Bakery unit	Yes	Yes		
42	RB'S Bakery, Police Bazar, Shillong, EKH	Bakery unit	Yes	Yes		
43	Shyam Food, Killing, Ri-Bhoi District	Bakery unit	Yes	Yes		
44	J S Bakery & Confectionery, Jaiaw, Langsring, Shillong, EKH	Bakery unit	Yes	Yes		
45	S.J. Bakery & Confectionery, Ryrjah Shillong, EKH	Bakery unit	NO			Closure Notice issued
46	E M Car Servicing Unit, Marakaphon, Sohra, EKH	Automobile Servicing Unit	Yes	Yes		
47	Bansari World Cars, Mawlai Nongkwar, Shillong, EKH	Automobile Workshop cum Servicing Unit	NO			Closure Notice issued
48	Rani Motors, Mawblei, Madanrying, Shillong, EKH	Automobile Workshop cum Servicing Unit	NO			Closure Notice issued
49	Chesa Automobile Workshop, Matchikoigre, Tura, WGH	Automobile & Servicing Unit	Yes	Yes		
50	Catherine Mynsong Motor Works, Keating Road Shillong, EKH	Automobile Servicing Unit	Yes	Yes		
51	Servicing Centre, Jiengkieng, Nongrim Hills, Shillong, EKH	Automobile Servicing Unit	Yes	YES		
52	Car Washing Centre, K.A Road, Tura, WGH	Automobile Servicing Unit	Yes	Yes		

53	Nokrek Servicing Centre, Lower Mission Compound, Tura, WGH	Automobile Servicing Unit	Yes	Yes	
54	R. Car Wash, Mawlai Nongpdeng, Shillong, EKH	Automobile Servicing Unit	Yes	Yes	
55	Janson Servicing Centre, Laitmukhrah, Shillong, Ekh	Automobile Servicing Unit	Yes	Yes	
56	Goenka Engineering Works, Keating Road, Shillong, EKH	Automobile Workshop cum Servicing Unit	Yes	Yes	
57	Teiang Automobile Servicing Unit, 7th Mile, Upper Shillong	Automobile Servicing Unit	Yes	Yes	
58	Rezz Auto Works Servicing Center, Pohkseh, Shillong	Automobile Servicing Unit	NO		Closure notice issued
59	M/s DH Royal, Mawblei, Shillong	Automobile Workshop/ Servicing Centre	Yes	Yes	
60	M/s Rani Motors Workshop, Sunny Hill, Shillong	Automobile Workshop/ Servicing Centre	No	No	Closure notice issued
61	M/s Modrina Auto Enterprise, Mawlai Nongkwar, Shillong	Automobile Workshop/ Servicing Centre	Yes	Yes	
62	M/s Unique Manufacturer, Industrial Estate, Shillong	Sweets & Snack	Yes	Yes	
63	M/s Vasna Pearl Bamon, Lawbyrwa, Raid Mawbah, Ri Bhoi District	Water Packaging unit	YES	YES	
64	M/s NTL Steels, EPIP, Bymihat Ri Bhoi District	1) Galvanising Octagonal Steel Poles, 2) Tubular Steel Poles 3) Galvanised steel structures	Yes	Yes	
65	M/s Shyam Foods Killing, Ri-Bhoi District	Food Manufacturing unit	YES	YES	
66	M/s CMJ Breweries (P) Limited, EPIP Bymihat Ri Bhoi District	IMFL bottling Unit	Yes	Yes	
67	M/s Oaken Gold Bottling Pvt Ltd, 8th Mile Baridua, Ri-Bhoi	IMFL bottling Unit	yes		
68	M/s Sriram Wires Products (Meghalaya) 13th Mile, Tanukuchi, Bymihat, Ri-Bhoi District	M.S Black Wires	YES	YES	
69	M/s Marwet Bottling Industries, Them Marwet, Ri-Bhoi District	IMFL bottling Unit	No	NO	Consent is revoked
70	M/s Kamakshi Ispat Pvt Ltd. E.P.I.P, Bymihat, Ri-Bhoi District	M.S Ingots	YES	YES	
71	M/s Renaissance Bottling, 9th Mile Baridua Ri Bhoi District	IMFL bottling Unit	No	NO	Consent is revoked

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72	M/s Iamou Food Products, Umiam Industrial Area, Ri Bhoi District	Non Alcoholic Beverages	No	NO	Closure Notice issued
73	M/s M. D. H. Beverages (P) Ltd Umiam Industrial Area Ri Bhoi District	IMFL bottling Unit	No	NO	Closure Notice issued
74	M/s Milestone Beverages (P) Ltd, 15th Mile, Bymihat	IMFL bottling Unit	No	NO	Closure Notice issued
75	M/s Shilong ISPAT & Rolling Mill, 13th Mile, Tamulkuchi, Bymihat	Re Rolling Mill	Yes	Yes	
76	M/s Meghalaya Mineral Products, EPIP, Bymihat	M.S. Bars & Rods	No	NO	Closure Notice issued
77	M/s Brahm India (P) Ltd, EPIP, Bymihat Ri Bhoi District	1) Grey Iron Ingot Moulds, 2) Ductile Iron Ingots Moulds, 3) Ductile Iron Pipe	No	NO	Closure Notice issued
78	M/s Shree Sai Smelters (India) Pvt. Ltd EPIP, Bymihat Ri Bhoi District	M. S. Ingots	No	NO	Closure Notice issued
79	M/s Meghalaya Alloys (P) Ltd, Bymihat Industrial Area Ri Bhoi District	M. S. Rods, Bars, Flats, Angles, Etc	No	NO	Consent is revoked
80	M/s Ri-Bhoi Ispat & Rolling Mills, 13th Mile Tamulkuchi, Ri-Bhoi District	M.S ingot Unit	YES	YES	
81	M/s Meghalaya Cast And Alloys (P) Ltd Haribagan, Bymihat Ri Bhoi District	M.S ingot Unit	Yes	Yes	
82	M/s Birma Ispat & Alloys (P) Ltd, 13th Mile Tamulkuchi, Ri-Bhoi District	Ferro-silicon & M.S ingot Unit	No	NO	Consent is revoked
83	M/s Greystone Smelters Limited, EPIP, Bymihat Ri Bhoi District	M.S ingot & Billets Unit	No	NO	Consent is revoked
84	M/s Anrudha Steels Pvt Ltd EPIP, Bymihat	M.S Rods/Coils/Bars & Angles	No	NO	Consent is revoked
85	M/s North East Bottling Ltd, 9th Mile, Baridua, Ri-Bhoi District	IMFL bottling Unit	No	NO	Consent is revoked
86	M/s Pine Polypacks, Umiam Industrial Area, Barapani 9th Mile, Baridua, Ri-Bhoi District	Water Packaging unit	Yes	Yes	
87	M/s K.K. Beverages (P) Limited, Khanapara, 9th Mile, Ri-Bhoi District	Water Packaging unit	YES	YES	
88	M/s Meghalaya Steel Ltd EPIP, Bymihat in Ri-Bhoi District	M.S Ingot & Re Rolling Mill	YES	YES	
89	M/s Shilong ISPAT & Rolling Mill, 13th Mile, Tamulkuchi, Bymihat	(I) M.S Ingots & M.S Rolled	Yes	Yes	
90	M/s Nazoni Pipes & Structures, Extended EPIP Bymihat, 9th Mile, Baridua, Ri-Bhoi District	M.S Black & G.I Pipe, M.S Pole & Structure	Yes	Yes	
91	M/s Indomech Industries, Them Marwet, Khanapara, Ri-Bhoi District	DG Set Assembler	No	No	Closure Notice issued
92	M/s Matran Alloys Ltd, EPIP Bymihat 9th Mile, Baridua, Ri-Bhoi District	M.S Ingot & Ferro Silicon Unit	YES	YES	
93	M/s F.W. Ferrotech (P) Ltd, EPIP Bymihat 9th Mile, Baridua, Ri-Bhoi District	M.S ingot & Re Rolling Unit	YES	YES	
94	M/s B. Shylla Health Care inc, Khien Umbluh, Dkhian, East Jaintia Hills District	Packaged Drinking Water	No	No	Closure Notice issued

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95	M/s Est Bee Industries, Mawlai Mawroh, East Khasi Hills District	Packaged Drinking Water	yes	yes	
96	M/s Fine Polypacks, Umiam Industrial Area, Barapani	Packaged Drinking Water	Yes	Yes	
97	M/s K.K. Beverages (P) Limited, Khanapara, 9th Mile, Ri-Bhoi District	Packaged Drinking Water	YES	YES	
98	M/s Calm Mineral Water, Nongtalang Village, West Jaintia Hills District	Packaged Drinking Water	Yes	Yes	
99	M/s Marwein Fruits & Beverages, Kynshi Bangla, West Khasi Hills District	Packaged Drinking Water	yes	yes	
100	M/s Ngerson & Sons, Jongksha, East Khasi Hills District	Packaged Drinking Water	yes	yes	
101	M/s Eden Restaurant, Next to Star Plaza Shopping Complex Police Bazar Shillong	Restaurant	YES	YES	
102	M/s Chennai Junction, Near Khyndalad Police Bazar, Shillong	Restaurant	YES	YES	
103	M/s Oriental Restaurant & Bar, Police Bazar, Shillong	Restaurant cum Bar	YES	YES	
104	M/s Neolith Restaurant, Motphran, Shillong	Restaurant	YES	YES	
105	M/s Palomino Restaurant, Opp. St.Edmund School NH 44, Shillong	Restaurant	YES	YES	
106	M/s Regal Restaurant,D'Mar Shopping Complex Police bazar, Shillong.	Restaurant	YES	YES	
107	M/s Palace Centre Point,Police Bazar, Centre Point Bulking, Shillong	Restaurant	YES	YES	
108	M/s Hotel Suruchi, Police Bazar, Shillong	Restaurant	YES	YES	
109	M/S City Hut Family Dhaba, Oakland, Shillong	Restaurant	YES	YES	
110	M/S Bamboo Hut Restaurant, Kchari Road, Raps Mansion, Shillong	Restaurant	YES	YES	
111	M/s Barbeque Chinese Restaurant, Starlins Complex, G S Road, Police Bazar,Shillong	Restaurant	YES	YES	
112	M/S Splendid Restaurant, Iewduh,Shillong	Restaurant	YES	YES	
113	M/S Swish Cafe Shoppers Cave,Laitumkhrak, Shillong	Restaurant	Yes	Yes	MSPCB moved the court for penalisation
114	M/s Volga Mistan Bhandar, Laitumkhrak Bazar, Shillong	Restaurant	YES	YES	
115	M/s sharma Tea Stall,Umsohsun Road, Shillong	Restaurant	YES	YES	
116	M/s Sherma Bhojanalaya, Umsohsun Road, Shillong	Restaurant	YES	YES	
117	Great Wall Restaurant, Hen Complex, Thana Road, Police Bazar, Shillong	Restaurant	YES	YES	
118	M/s Rice Bowl Restaurant, Glory's Plaza, Police Bazar, Shillong	Restaurant	YES	YES	
119	M/s Anupama Restaurant, Police Bazar, Shillong	Restaurant	YES	YES	
120	M/s Annapurna Restaurant, Police Bazar,Thana Road Shillong	Restaurant	YES	YES	
121	M/s Vaishali Restaurant, Thana Road, Shillong	Restaurant	YES	YES	
122	M/s Subhjan Restaurant, Quinton Road, Police Bazar, Shillong	Restaurant	YES	YES	
123	Kaochen Restaurant, Umsohsun,GS Road, Shillong	Restaurant	YES	YES	
124	MAA KALI HOTEL, Police Bazar,Shillong	Restaurant	YES	YES	

125	Hong Kong Restaurant Police Bazar, Shillong	Restaurant	YES	YES
126	M/s Palace Restaurant Motphran, Shillong, East Khasi Hills	Restaurant	YES	YES
127	- ANM CEE CAFÉ FAST FOOD, Jail Road, Shillong	Restaurant	YES	YES
128	TIBET KITCHEN RESTAURANT, Police Bazar, Shillong	Restaurant	YES	YES
129	Dehi Mistan Bhandar (EKH), Police Bazar, Shillong	Restaurant	YES	YES
130	New Hope Restaurant(EKH), Barik, Shillong	Restaurant	YES	YES
131	EEE CEE Restaurant Police Bazar Shillong	Restaurant	YES	YES
132	M/s HOTEL INDIANA, Police Bazar, Shillong (Proprietor Kubir Singh)	Hotel	YES	YES
133	M/s TRAVELLER'S BED & BREAKFAST, Buddhist Temple Road, Polo, Shillong	Guest House	YES	YES
134	M/s GOLDEN EARTH HOTEL INDIA LTD, Thana Road, Police Bazar, Shillong	Hotel- Cum- Restaurant	YES	YES
135	M/s THE ZARA RESIDENCY, Keating Road, Police Bazar, Shillong	Hotel	YES	YES
136	M/s HOTEL HERITAGE, Police Bazar, EKHD	Hotel	YES	YES
137	M/S HOTEL RAJTILAK, JAIL ROAD, SHILLONG	Hotel	YES	YES
138	M/S SWASTIK HOTEL, M.T.C. BUILDING, JAILROAD SHILLONG	Hotel	YES	YES
139	M/S HOTEL UTSAV, POLICE BAZAR	Hotel	YES	YES
140	M/S HOTEL MEGHALAYA, Police Bazar	Hotel	YES	YES
141	M/S SUNRISE GUEST HOUSE, LABAN	Guest House	YES	YES
142	M/S HOTEL NATRAJ	Hotel	YES	YES
143	M/S AMIT SINGHANIA	Hotel	YES	YES
144	M/S HOTEL GOLDEN PEAK, "The Quad"	Hotel	YES	YES
145	M/S ATITHI GUEST HOUSE	Guest House	YES	YES
146	M/S CITY VIEW INN	Hotel	YES	YES
147	M/S HOTEL J.K INTERNATIONAL	Hotel	YES	YES
148	M/S DELHI HOTEL	Hotel	YES	YES
149	M/S HOTEL EMBASSY, Mr. S.S.DIDDAN	Hotel	YES	YES
150	M/S HOTEL ELGIN, Mr. B.N.S. DIDDAN	Hotel	YES	YES
151	M/S RAJHANS HOTEL Upper Jail Road	Hotel	YES	YES
152	M/S HOTEL SERENE, MD. HABIB	Hotel	YES	YES
153	M/S SHAURYA INN, POLICE BAZAR	Hotel	YES	YES
154	M/S Majestic Hotel, R.H.Loungani, Polo Market	Hotel & Restaurant	YES	YES
155	M/S HOTEL MONSOON, R.H.LONGANI,	Hotel & Restaurant	YES	YES
156	M/s BONNIE GUEST HOUSE, Laban, Shillong	Guest House	YES	YES
157	M/S HOTEL ORCHID ANNEX, POLO ROAD, Shillong	hotel & restaurant	YES	YES
158	M/s ROYAL HERITAGE TRIPURA CASTLE, Cleve Colony, Shillong	Hotel & Restaurant	YES	YES
159	M/s PINWOOD HOTEL, Rita Road, Shillong	Hotel & Restaurant	YES	YES

160	M/s ORCHID LAKE, Polo Rd, Shillong	Hotel & Restaurant	YES	YES
161	M/s STATE CONVENTION CENTRE, Bishop Cotton Rd, Shillong	Hotel	YES	YES
162	M/s WHITE ORCHID GUEST HOUSE, Upper Laachumiere	Guest House	YES	YES
163	M/s BEST HOLIDAY INN GUEST HOUSE, Upper Lachumiere, Shillong	Guest House	YES	YES
164	M/S NEW STAY IN GUEST HOUSE, Keating Road, Shillong	Guest House	YES	YES
165	M/s ELDORADO GUEST HOUSE, Lummawrie, Shillong	Guest House	YES	YES
166	M/s HOTEL SAPPHIRE, Keating Road, Shillong	Hotel & Restaurant	YES	YES
167	M/s HIGHWINDS GUEST HOUSE, Pine Mount Ridge, Bark, Shillong	Guest House	YES	YES
168	M/s LADY BIRD LODGE, Umsohsun, Shillong	Hotel	YES	YES
169	M/S AVISAAR, D DAS & Associates, 1st Floor MTC Bldg	Guest House	YES	YES
170	M/s BED AND BREAKFAST GUEST HOUSE, Bishop Cotton Road, Shillong	Guest House	YES	YES
171	M/s LATEL VILLE INN, Langkyrding, Shillong	Guest House	YES	YES
172	M/s R. DOWN HILL CITY GUEST HOUSE, Laban, Shillong	Guest House	YES	YES
173	M/s WOODLAND GUEST HOUSE, Lachumiere, Shillong	Guest House	YES	YES
174	M/s Hotel Alpine Continental, Thana Road, Shillong	Hotel	YES	YES
175	M/s Hotel Hill Star, Police Bazar, Near Dreamland Cinema Hall, Shillong	Hotel	YES	YES
176	M/s Greenland Hotel, Police Bazar, Shillong.	Hotel	YES	YES
177	M/S Hotel Seven Sisters, Police Bazar, Shillong	Hotel	YES	YES
178	M/S Hotel Broadway, G S Road, Police Bazar, Shillong	Hotel/ Restaurant	YES	YES
179	M/s Baba Tourist Lodge, Police Bazar, Shillong	Hotel/ Restaurant	YES	YES
180	M/S Hotel Centre Point, Police Bazar, shillong	1) Hotel, 2) Restaurant, 3) Bar	YES	YES
181	M/S Hotel Rainbow above Lila Bros, Police Bazar, shillong	Hotel	YES	YES
182	The Earle Holiday Home, Oakland, Shillong	Guest House	YES	YES
183	M/S Anand Hotel, Quinton Road Shillong	Lodge	YES	YES
184	M/s Garden Hotel, Quinton Road, Police Bazar, Shillong	Lodge	YES	YES
185	M/s Godwin Hotel, Police Bazar, Shillong	Hotel	YES	YES
186	M/s Hotel Lotus, Police Bazar, G.S Road, Shillong	Hotel	YES	YES
187	M/s Hotel Shubnam, Police Bazar, G.S Road, Shillong	Hotel	YES	YES
188	PAYAL TOURIST HOTEL, Thana Road, Shillong	Hotel	YES	YES

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189	Stay Inn Guest House, Keating Road, Shillong	Hotel	YES	YES
190	EEE CEE HOTEL, Khyndallad, Police Bazaar, Shillong	Hotel	YES	YES
191	The Shillong Club, M G Road, Shillong	Hotel, Restaurant & Wastewater Treatment Plant	YES	YES
192	Assembly Hotel and Restaurant, Police Bazar, Shillong	Hotel and Restaurant	YES	YES
193	Hotel Grace, Jail Road, Shillong	Hotel	YES	YES
194	Prakash Hotel and Restaurant Laitumkhras, Shillong	Hotel & Restaurant	YES	YES
195	Ambassador Hotel Police Bazar, Shillong, East Khasi Hills	Hotel	YES	YES
196	HOTEL BLUEPINE, Gulista Market, G.S. Road, Shillong	Hotel	YES	YES
197	Hotel Lake View Inn, Police Bazar, Shillong	Hotel	YES	YES
198	HOTEL ANURADHA, Thana Road Shillong	Hotel	YES	YES
199	HOTEL BRIWEL, Quinton Road, Shillong	Hotel	YES	YES
200	Hotel Polo Tower, Polo, Shillong	Hotel	YES	YES
201	Hotel Highway Inn, Laitumkhras, Shillong	Hotel	YES	YES
202	Ashutosh Inn-HOTEL, Mimuloh Building, Police Bazar, Shillong	Hotel	YES	YES
203	PEGASUS Crown (EKH), Police Bazar, Shillong	Hotel	YES	YES
204	Hotel Santineketan (EKH), Police Bazar, Shillong	Hotel	YES	YES
205	Hotel Magnum (EKH), Police Bazar, Shillong	Hotel	YES	YES
206	Yalana Hotel, Laitumkhras, Shillong	Hotel	YES	YES
207	Hotel Pine Borough, Police Bazar	Hotel cum Restaurant	YES	YES
208	M/s Hotel Hariom, Quinton Road, Police Bazar, Shillong	Hotel	YES	YES
209	M/s Hotel Ponisuk, Laitumkhras, Shillong	Hotel	YES	YES
210	M/s R.K.'s CITY HUB HOTEL - Keating Road, Shillong, East Khasi Hills	Hotel	YES	YES
211	M/S SILK ROUTE HOTEL AND RESORT PVT. LTD., Keating Road, Shillong, East Khasi Hills	Hotel	YES	YES
212	M/s EVA KURBAH HPT ORCHID RESORT, Nohngthiang Falls, Sohra (Polo Orchid)	Hotel & Restaurant	YES	YES
213	G H. M Hotel, Jowai Bye Pass, Jowai, West Jaintia Hills District	Hotel cum Restaurant	YES	YES
214	M/s Sundara Hotel, Circular Road, Tura Bazar, Tura, West Garo Hills District	Hotel cum Restaurant	YES	YES
215	M/s Rajkamal Hotel, Tura, Police Parade ground, West Garo Hills District	Hotel	YES	YES
216	M/s Paramount complex, H.K Road, Tura Bazar, West Garo Hills District	Hotel	YES	YES
217	M/s Hotel Natraj, C/O Bishu Choudhary, Anandamath, Tura, West Garo Hills District	Hotel	YES	YES

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218	M's Megha Beverages, Umtru Road, Balyan,	Soft Drinks	No	No	Closure Notice issued
219	M's Milestone Beverages, 15 th Mile	IMFL betting Unit	No	244	Closure Notice issued
220	Ganesh Das Hospital, Lawmali, Shillong	Hospital	yes	yes	
221	MIMHANS, Lawmali, Shillong	Hospital			
222	R.P. Chest Hospital, Jhalupara, Shillong	Hospital			
223	Civil Hospital, Shillong	Hospital			
224	Civil Hospital, Jowai	Hospital			
225	Civil Hospital, Khliehriat	Hospital			
226	Civil Hospital, Nongpoh	Hospital			
227	Trot Singh Memorial Hospital, Mairang	Hospital			
228	Civil Hospital, Williamnagar	Hospital			
229	Civil Hospital, Tura	Hospital			
230	Civil Hospital Nongstoin	Hospital			
231	Civil Hospital Baghmara	Hospital			

ANNEXURE R/10

Item Nos. 01&02

Court No. 1

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

Original Application No. 593/2017

(With report of CMC dated 12.02.2021,
reports of OC dated 12.02.21 & 13.02.21)

Paryavaran Suraksha Samiti & Anr.

Applicant(s)

Versus

Union of India & Ors.

Respondent(s)

WITH

Original Application No. 673/2018

In re: News item published in "The Hindu" authored by Shri Jacob Koshiy titled "More river stretches are now critically polluted: CPCB

Date of hearing: 22.02.2021

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Respondent(s): Mr. D.P. Mathuria, Executive Director, NMCG
Mr. Raj Kumar, Advocate for CPCB
Mr. Pradeep Misra and Mr. Daleep Dhyani, Advocates for UPPCB
Ms. Madhumita Bhattacharjee, Advocate for State of West Bengal
Mr. Avijit Roy, Advocate for Assam PCB

ORDER

1. These two matters are being dealt with together in continuation of order dated 21.9.2020. **The first matter is follow up of judgment of the Hon'ble Supreme Court dated 22.02.2017 in Paryavaran Suraksha Samiti Vs. Union of India¹**, which mandates establishment and functioning of requisite ETPs/CETPs/STPs by 31.3.2018 and in default,

¹(2017) 5 SCC 326

to take coercive measures. The judgement also laid down rigid timelines, enforcement mechanism and sources of funding. Even in absence of the said judgement, doing so is the mandate of the Water (Prevention and Control of Pollution) Act, 1974. The said Act established Central and State Pollution Board for prevention, abatement and control of rivers and streams and to restore wholesomeness of watercourses and controlling discharge of domestic and industrial wastes. Penalties are provided for contravention of the provisions of the Act. The Constitution of India under Article 243 W read with 12th Schedule entrusts responsibility of “*public health, sanitation conservancy and solid waste management*” to Municipalities. The Hon’ble Supreme Court held that the States will provide necessary support to such local bodies. This is to be monitored by the PCBs and the Secretaries, Environment in States and thereafter by the NGT. This Tribunal has been accordingly monitoring compliance in the last four years but regrettably with little progress as will be shown by the statistics. We propose to direct further monitoring by the Executive authorities henceforth for the reasons in this order.

2. **The second matter relates to remedial action for rejuvenation of 351 identified polluted river stretches in the country**, for which major step is preventing discharge of industrial and domestic waste in rivers or drains connected thereto. On this aspect both the matter overlap. **Other steps include preventing dumping of solid waste, plastic, hazardous, bio-medical and electronic wastes, regulation of flood plain zones, by keeping catchment areas free from encroachments, maintaining environment flow by adopting appropriate water conservation practices and other steps, controlling extraction of ground water, afforestation etc.** The Tribunal required setting of River Rejuvenation Committees (RRCs) in all States for the purpose. They were

to prepare and execute action plans, with budgets and timelines to give effect to the mandate of law. The Chief Secretaries of all States/UTs are to monitor compliance at State level and the Central Monitoring Committee (CMC) headed by the Secretary Jal Shakti, GoI, with CPCB and NMCG is to monitor compliance at national level. The situation continues to be grim, as has been repeatedly observed by this Tribunal. The polluted river stretches include Ganga and Yamuna, which have been dealt with by separate orders, apart from some other rivers which have been dealt with by separate orders individually, to which reference will be made. **This is affecting aquatic life, safety of food chain on account of contamination of water and resulting in drinking water crisis in the country. There are also large number of deaths and diseases due to water contamination. Further monitoring is proposed to be by the authorities themselves in terms of directions at the end of the order.**

3. **We now proceed to give the procedural history of the two matters, the status reports filed and directions for future compliance.**

Original Application No. 593/2017

4. Since this matter is follow up of the judgement of the Hon'ble Supreme Court in **Paryavaran Suraksha Samiti Vs. Union of India**, supra, directions in the judgement are quoted below:

“7. Having effectuated the directions recorded in the foregoing paragraphs, the next step would be, to set up common effluent treatment plants. We are informed, that for the aforesaid purpose, the financial contribution of the Central Government is to the extent of 50%, that of the State Government concerned (including the Union Territory concerned) is 25%. The balance 25%, is to be arranged by way of loans from banks. The above loans, are to be repaid, by the industrial areas, and/or industrial clusters. We are also informed that the setting up of a common effluent treatment plant, would ordinarily take approximately two years (in cases where the process has yet to be commenced).

The reason for the above prolonged period, for setting up “common effluent treatment plants”, according to the learned counsel, is not only financial, but also, the requirement of land acquisition, for the same.

X.....X.....X.....

- 10.** *Given the responsibility vested in municipalities under Article 243-W of the Constitution, as also, in Item 6 of Schedule XII, wherein the aforesaid obligation, pointedly extends to “public health, sanitation conservancy and solid waste management”, we are of the view that the onus to operate the existing common effluent treatment plants, rests on municipalities (and/or local bodies). Given the aforesaid responsibility, the municipalities (and/or local bodies) concerned, cannot be permitted to shy away from discharging this onerous duty. In case there are further financial constraints, the remedy lies in Articles 243-X and 243-Y of the Constitution. It will be open to the municipalities (and/or local bodies) concerned, to evolve norms to recover funds, for the purpose of generating finances to install and run all the “common effluent treatment plants”, within the purview of the provisions referred to hereinabove. Needless to mention that such norms as may be evolved for generating financial resources, may include all or any of the commercial, industrial and domestic beneficiaries, of the facility. The process of evolving the above norms, shall be supervised by the State Government (Union Territory) concerned, through the Secretaries, Urban Development and Local Bodies, respectively (depending on the location of the respective common effluent treatment plant). **The norms for generating funds for setting up and/or operating the “common effluent treatment plant” shall be finalised, on or before 31-3-2017, so as to be implemented with effect from the next financial year. In case, such norms are not in place, before the commencement of the next financial year, the State Governments (or the Union Territories) concerned, shall cater to the financial requirements, of running the “common effluent treatment plants”, which are presently dysfunctional, from their own financial resources.***
- 11.** *Just in the manner suggested hereinabove, for the purpose of setting up of “common effluent treatment plants”, the State Governments concerned (including, the Union Territories concerned) will prioritise such cities, towns and villages, which discharge **industrial pollutants and sewer, directly into rivers and water bodies.***
- 12.** *We are of the view that in the manner suggested above, **the malady of sewer treatment, should also be dealt with simultaneously.** We, therefore, hereby direct that “sewage treatment plants” shall also be set up and made functional, within the timelines and the format, expressed hereinabove.*

13. **We are of the view that mere directions are inconsequential, unless a rigid implementation mechanism is laid down.** We, therefore, hereby provide that the directions pertaining to continuation of industrial activity only when there is in place a functional “primary effluent treatment plants”, and the setting up of functional “common effluent treatment plants” within the timelines, expressed above, shall be of the Member Secretaries of the Pollution Control Boards concerned. **The Secretary of the Department of Environment, of the State Government concerned (and the Union Territory concerned), shall be answerable in case of default. The Secretaries to the Government concerned shall be responsible for monitoring the progress and issuing necessary directions to the Pollution Control Board concerned, as may be required, for the implementation of the above directions.** They shall be also responsible for collecting and maintaining records of data, in respect of the directions contained in this order. The said data shall be furnished to the Central Ground Water Authority, which shall evaluate the data and shall furnish the same to the Bench of the jurisdictional **National Green Tribunal.**

14. To supervise complaints of non-implementation of the instant directions, the Benches concerned of the National Green Tribunal, will maintain running and numbered case files, by dividing the jurisdictional area into units. The abovementioned case files will be listed periodically. **The Pollution Control Board concerned is also hereby directed to initiate such civil or criminal action, as may be permissible in law, against all or any of the defaulters.**

X.....X.....X.....

16. *It however needs to be clarified, that the instant directions and time lines, shall not in any way dilute any time lines and directions issued by Courts or Benches of the National Green Tribunal, hitherto before, wherein the postulated time lines would expire before the ones expressed through the directions recorded above. **It is clarified, that the time lines, expressed hereinabove will be relevant, only in situations where there are no prevalent time line(s), and also, where a longer period, has been provided for.***

(emphasis supplied)

5. The Tribunal issued notice to all States/UTs, PCBs/ PCCs, and sought status reports. It considered the status reports about the gaps in waste generation and setting up of requisite number of treatment plants. The CPCB was directed to prepare an action plan for compliance of the order of the Hon’ble Supreme Court and file quarterly reports before this

Tribunal and also upload the same on its website. Penal action was to be taken for failure in compliance of the orders of the Hon'ble Supreme Court by way of recovery of compensation and other coercive means. **Orders passed by this Tribunal earlier include those dated 25.05.2017, 03.08.2018, 19.02.2019, 28.08.2019, 21.05.2020 and 21.09.2020.**

6. By order of **28.08.2019 in OA 593/2017, the Tribunal set up a compensation regime for default.** The Tribunal considered the CPCB reports dated 30.05.2019, 19.07.2019 and 14.08.2019 with compiled status of setting up of ETPs/ CETPs/STPs and methodology for assessment of environmental compensation. The compensation regime discussed in the said order is quoted below:

"14. A report has also been prepared on the scale of environmental compensation to be recovered from individual/authorities for causing pollution or failure for preventing causing pollution, apart from illegal extraction of ground water, failure to implement Solid waste Management Rules, damage to environment by mining and steps taken to explore preparation of an annual environmental plan for the country. Extracts from the report which are considered significant for this order are:

"I. Environment Compensation to be levied on Industrial Units

Recommendations

The Committee made following recommendations:

1.5.1 To begin with, Environmental Compensation may be levied by CPCB only when CPCB has issued the directions under the Environment (Protection) Act, 1986. In case of a, band c, Environmental Compensation may be calculated based on the formula "EC= Pl x N x Rx S x LF", wherein, Pl may be taken as 80, 50 and 30 for red, orange and green category of industries, respectively, and R may be taken as 250. Sand LF may be taken as prescribed in the preceding paragraphs

1.5.2 In case of d, e and f, the Environmental Compensation may be levied based on the detailed investigations by Expert Institutions/Organizations.

1.5.3 The Hon'ble Supreme Court in its order dated 22.02.2017 in the matter of Paryavaran Suraksha Samiti and another v/s Union of India and others {Writ

Petition (Civil) No. 375 of 2012), directed that all running industrial units which require "consent to operate" from concerned State Pollution Control Board, have a primary effluent treatment plant in place. Therefore, no industry requiring ETP, shall be allowed to operate without ETP.

1.5.4 EC is not a substitute for taking actions under EP Act, Water Act or Air Act. In fact, units found polluting should be closed/prosecuted as per the Acts and Rules.

II. Environmental Compensation to be levied on all violations of Graded Response Action Plan (GRAP) in NCR.

Table No. 2.1: Environmental Compensation to be levied on all violations of Graded Response Action Plan (GRAP) in Delhi-NCR.

Activity	State Of Air Quality	Environmental Compensation (₹)
Industrial Emissions	<i>Severe +/-Emergency</i>	<i>Rs 1.0 Crore</i>
	<i>Severe</i>	<i>Rs 50 Lakh</i>
	<i>Very Poor</i>	<i>Rs 25 Lakh</i>
	<i>Moderate to Poor</i>	<i>Rs 10 Lakh</i>
Vapour Recovery System (VRS) at Outlets of Oil Companies		
i. Not installed	<i>Target Date</i>	<i>Rs 1.0 Crore</i>
ii. Non functional	<i>Very poor to Severe +</i>	<i>Rs 50.0 Lakh</i>
	<i>Moderate to Poor</i>	<i>Rs 25.0 Lakh</i>
Construction sites (Offending plot more than 20,000 Sq.m.)	<i>Severe +/-Emergency</i>	<i>Rs 1.0 Crore</i>
	<i>Severe</i>	<i>Rs 50 Lakh</i>
	<i>Very Poor</i>	<i>Rs 25 Lakh</i>
	<i>Moderate to Poor</i>	<i>Rs 10 Lakh</i>
Solid waste/ garbage dumping in Industrial Estates	<i>Very poor to Severe +</i>	<i>Rs 25.0 Lakh</i>
	<i>Moderate to Poor</i>	<i>Rs 10.0 Lakh</i>
Failure to water sprinkling on unpaved roads		
a) Hot-spots	<i>Very poor to Severe +</i>	<i>Rs 25.0 Lakh</i>
b) Other than Hot-spots	<i>Very poor to Severe +</i>	<i>Rs 10.0 Lakh</i>

III. Environmental Compensation to be levied in case of failure of preventing the pollutants being discharged in water bodies and failure to implement waste management rules:

Table No. 3.3: Minimum and Maximum EC to be levied for untreated/partially treated sewage discharge

Class of the City/Town	Mega-City	Million-plus City	Class-I City/Town and others

Minimum and Maximum values of EC (Total Capital Cost Component) recommended by the Committee (Lacs Rs.)	Min. 2000 Max. 20000	Min. 1000 Max. 10000	Min. 100 Max. 1000
Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./day)	Min. 2 Max. 20	Min. 1 Max. 10	Min. 0.5 Max. 5

Table No. 3.4: Minimum and Maximum EC to be levied for improper municipal solid waste management

Class of the City/Town	Mega-City	Million-plus City	Class-I City/Town and others
Minimum and Maximum values of EC (Capital Cost Component) recommended by the Committee (Lacs Rs.)	Min. 1000 Max. 10000	Min. 500 Max. 5000	Min. 100 Max. 1000
Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./day)	Min. 1.0 Max. 10.0	Min. 0.5 Max. 5.0	Min. 0.1 Max. 1.0

3.3 Environment Compensation for Discharge of Untreated/Partially Treated Sewage by Concerned Individual/ Authority:

BIS 15-1172:1993 suggests that for communities with population above 100,000, minimum of 150 to 200 lpcd of water demand is to be supplied. Further, 85% of return rate (CPHEEO Manual on Sewerage and Sewage Treatment Systems, 2013), may be considered for calculation of total sewage generation in a city. CPCB Report on "Performance evaluation of sewage treatment plants under NRCD, 2013", describes that the capital cost for 1 MLD STP ranges from 0.63 Cr. to 3 Cr. and O&M cost is around Rs. 30,000 per month. After detail deliberations, the Committee suggested to assume capital cost for STPs as Rs. 1.75 Cr./MLD (marginal average cost). Further, expected cost for conveyance system is assumed as Rs. 5.55 Cr./MLD (marginal average cost) and annual O&M cost as 10% of the combined capital cost. Population of the city may be taken as per the latest Census of India. Based on these assumptions, Environmental Compensation to be levied on concerned ULB may be calculated with the following formula:

EC= Capital Cost Factor x [Marginal Average Capital Cost for Treatment Facility x (Total Generation-Installed Capacity) + Marginal Average Capital Cost for Conveyance Facility x (Total Generation -Operational Capacity)]+ O&M Cost Factor x Marginal Average O&M Cost x (Total Generation- Operational Capacity) x No. of Days for which facility was not available + Environmental Externality x No. of Days for which facility was not available

Alternatively;

EC (Lacs Rs.)= [17.S{Total Sewage Generation - Installed Treatment Capacity)+ 55.S{Total Sewage Generation-Operational Capacity}] + 0.2(Sewage Generation-Operational Capacity) x N + Marginal Cost of Environmental Externality x (Total Sewage Generation-Operational Capacity) X N

Where; N= Number of days from the date of direction of CPCB/SPCB/PCC till the required capacity systems are provided by the concerned authority

Quantity of Sewage is in MLD

xxx xxxxxx

3.4 Environment Compensation to be Levied on Concerned Individual/Authority for Improper Solid Waste Management:

Environmental Compensation to be levied on concerned ULB may be calculated with the following formula:

EC = Capital Cost Factor x Marginal Average Cost for Waste Management x (Per day waste generation-Per day waste disposed as per the Rules) + O&M Cost Factor x Marginal Average O&M Cost x (Per day waste generation-Per day waste disposed as per the Rules) x Number of days violation took place + Environmental Externality x N

Where;

Waste Quantity in tons per day (TPD)

N= Number of days from the date of direction of CPCB/SPCB/PCC till the required capacity systems are provided by the concerned authority

Simplifying;

EC (Lacs Rs.) = 2.4(Waste Generation - Waste Disposed as per the Rules) +0.02 (Waste Generation Waste Disposed as per the Rules) x N + Marginal Cost of Environmental Externality x

(Waste Generation - Waste Disposed as per the Rules) x N

XXX XXXXXX

IV. Environmental Compensation in Case of Illegal Extraction of Ground Water

4.5 Formula for Environmental Compensation for illegal extraction of ground water

The committee decided that the formula should be based on water consumption (Pump Yield & Time duration) and rates for imposing Environmental Compensation for violation of illegal abstraction of ground water. The committee has proposed following formula for calculation of Environmental Compensation (EC_{Gw}):

$EC_{Gw} = \text{Water Consumption per Day} \times \text{No. of Days} \times \text{Environmental Compensation Rate for illegal extraction of ground water } \{ECR_{Gw}\}$

Where water Consumption is in m^3/day and ECR_{Gw} in $Rs./m^3$

Yield of the pump varies based on the capacity/power of pump, water head etc. For reference purpose, yield of the pump may be assumed as given in **Annexure-VI**.

Time duration will be the period from which pump is operated illegally.

In case of illegal extraction of ground water, quantity of discharge as per the meter reading or as calculated with assumptions of yield and time may be used for calculation of EC_{Gw} .

4.6 Environmental Compensation Rate (ECR_{Gw}) for illegal use of Ground Water:

The committee decided that the Environmental Compensation Rate (ECR_{Gw}) for illegal extraction of ground water should increase with increase in water consumption as well as water scarcity in the area. Further, ECR_{Gw} are kept relaxed for drinking and domestic use as compared to other uses, considering the basic need of human being.

As per CGWB, safe, semi-critical, critical and over-exploited areas are categorized from the ground water resources point of view (CGWB, 2017). List of safe, semi-critical, critical and over-exploited areas are available on the website of CGWB and can be accessed from <http://cgwa->

noc.gov.in/LandingPage/NotifiedAreas/CategorizationOfAssessmentUnits.pdf#ZOOM=150.

Environmental Compensation Rates (ECR_{Gw}) for illegal use of ground water (ECR_{Gw}) for various purposes such as drinking/domestic use, packaging units, mining and industrial sectors as finalized by the committee are given in tables below:

4.6.1 ECR_{Gw} for Drinking and Domestic use:

Drinking and Domestic use means uses of ground water in households, institutional activity, hospitals, commercial complexes, townships etc.

SI. No.	Area Category	Water Consumption (m^3/day)			
		<2	2 to <5	5 to <25	25 & above
Environmental Compensation Rate (ECR_{Gw}) in Rs./ m^3					
1	Safe	4	6	8	10
2	Semi Critical	12	14	16	20
3	Critical	22	24	26	30
4	Over-Exploited	32	34	36	40
Minimum EC_{Gw}=Rs 10,000/- (for households) and Rs. 50,000 (for institutional activity, commercial complexes, townships etc.)					

4.6.2 ECR_{Gw} for Packaged drinking water units:

SI. No.	Area Category	Water Consumption (m^3/day)			
		<200	200 to <1000	1000 to <5000	5000 & above
Environmental Compensation Rate (ECR_{Gw}) in Rs./ m^3					
1	Safe	12	18	24	30
2	Semi critical	24	36	48	60
3	Critical	36	48	66	90
4	Over-exploited	48	72	96	120
Minimum EC_{Gw}=Rs 1,00,000/-					

4.6.3 ECR_{Gw} for Mining, Infrastructure and Dewatering Projects

SI. No.	Area Category	Water Consumption (m^3/day)			
		<200	200 to <1000	1000 to <5000	5000 & above
Environmental Compensation Rate (ECR_{Gw}) in Rs./ m^3					
1	Safe	15	21	30	40
2	Semi critical	30	45	60	75
3	Critical	45	60	85	115
4	Over-exploited	60	90	120	150
Minimum EC_{Gw}=Rs 1,00,000/-					

4.6.4 ECR_{Gw} for Industrial Units:

SI. No.	Area Category	Water Consumption (m^3/day)			
		<200	200 to <1000	1000 to <5000	5000 & above
Environmental Compensation Rate (ECR_{Gw}) in					
1	Safe	20	30	40	50
2	Semi critical	40	60	80	100
3	Critical	60	80	110	150

4	Over-exploited	80	120	160	200
Minimum EC_{Gw} = Rs 1,00,000/-					

4.8 Recommendations

The committee has given following recommendations:

- The minimum Environmental Compensation for illegal extraction of ground water for domestic purpose will be Rs. 10,000, for institutional/commercial use will be 50,000 and for other uses will be 1,00,000.
- In case of fixation of liability, it always lies with current owner of the premises where illegal extraction is taking place.
- Time duration may be assumed to be one year in case where no evidence for period of installation of bore well could be established.
- For Drinking and Domestic use, where metering is not present but storage tank facility is available, minimum water consumption per day may be assumed as similar to the storage capacity of the tank.
- For industrial ground water use, where metering is not available, water consumption may be assumed as per the consent conditions. Further, where in case industry is operating without consent, water consumption may be calculated based on the plant capacity (on the recommendation of SPCB/PCC, if required). SPCB/PCC may bring the issue of illegal extraction of ground water in industries in to the notice of CGWA for appropriate action by CGWA.
- Authorities assigned for levy EC and taking penal action are listed below:

S. No.	Actions	Authority
1.	To seal the illegal bore-well/tube-well to stop extraction of water and further closure of project	District Collector
2.	To levy EC _{Gw} as per prescribed method	District Collector,
3.	To levy EC on water pollution, as per the method prescribed in report of CPCB- "EC on industrial pollution"	CPCB/SPCB/PCC
4.	Prosecution of violator	CGWA under EP Act SPCB/PCC under Air and Water Act

- CGWA may maintain a separate account for collection and utilization of fund, collected through the prescribed methodology in this report.”

The Tribunal noted that **deficit in capacity of liquid waste treatment was 62 percent which was the major source of polluting rivers and water bodies**. In the said order, the following directions were issued:-

“21. We may now sum up our directions:

- (i) **The Environmental compensation regime fixed for industrial units, GRAP, solid waste, sewage and ground water in the report dated 30.05.2019 is accepted** and the same may be acted upon as an interim measure.
- (ii) SPCBs/PCCs may ensure remedial action against non-compliant CETPs or individual industries in terms of not having ETPs/fully compliant ETPs or operating without consent or in violation of consent conditions. This may be overseen by the CPCB. CPCB may continue to compile information on this subject and furnish quarterly reports to this Tribunal which may also be uploaded on its website.
- (iii) **All the Local Bodies and or the concerned departments of the State Government have to ensure 100% treatment of the generated sewage and in default to pay compensation which is to be recovered by the States/UTs, with effect from 01.04.2020. In default of such collection, the States/UTs are liable to pay such compensation. The CPCB is to collect the same and utilize for restoration of the environment.**
- (iv) The CPCB needs to collate the available data base with regard to ETPs, CETPs, STPs, MSW facilities, Legacy Waste sites and prepare a river basin-wise macro picture in terms of gaps and needed interventions.
- (v) **The Chief Secretaries of all the States/UTs may furnish their respective compliance reports on this subject also in O.A. No. 606/2018.**

List for further consideration on 21.05.2020, unless required earlier. A copy of this order be placed on the file of O.A. No. 606/2018 relating to all States/UTs and be sent to Chief Secretaries of all States/UTs, Secretary MoEF&CC, Secretary Jal Shakti and Secretary, MoHUA.”

(emphasis supplied)

7. Thereafter on **21.05.2020, the Tribunal directed data collection by river basin; reduction of timelines; the Central Government to**

facilitate the State/UTs efforts; and CPCB to study extent of reduction of pollution load. The following directions were issued:-

“26. *Summary of directions:*

- i. *All States/UTs through their concerned departments such as Urban/Rural Development, Irrigation & Public Health, Local Bodies, Environment, etc. may ensure formulation and execution of plans for sewage treatment and utilization of treated sewage effluent with respect to each city, town and village, adhering to the timeline as directed by Hon'ble Supreme Court. STPs must meet the prescribed standards, including faecal coliform.*

CPCB may further continue efforts on compilation of River Basin-wise data. *Action plans be firmed up with Budgets/Financial tie up. Such plans be overseen by Chief Secretary and forwarded to CPCB before 30.6.2020. CPCB may consolidate all action plans and file a report accordingly.*

Ministry of Jal Shakti and Ministry of Housing and Urban Affairs may facilitate States/UTs for ensuring that water quality of rivers, lakes, water bodies and ground water is maintained.

*As observed in para 13 above, 100% treatment of sewage/effluent must be ensured and strict coercive action taken for any violation to enforce rule of law. Any party is free to move the Hon'ble Supreme Court for continued violation of its order after the deadline of 31.3.2018. This order is without prejudice to the said remedy as direction of the Hon'ble Supreme Court cannot be diluted or relaxed by this Tribunal in the course of execution. **PCBs/PCCs are free to realise compensation for violations but from 1.7.2020, such compensation must be realised as per direction of this Tribunal failing which the erring State PCBs/PCCs will be accountable.***

- ii. **The CPCB may study and analyse the extent of reduction of industrial and sewage pollution load on the environment, including industrial areas and rivers and other water bodies and submit its detailed report to the Tribunal.**
- iii. *During the lockdown period there are reports that the water quality of river has improved, the reasons for the same may be got studied and analysed by the CPCB and report submitted to this Tribunal. If the activities reopen, the compliance to standards must be maintained by ensuring full compliance of law by authorities statutorily responsible for the same.*

- iv. Accordingly, we direct that States which have not addressed all the action points with regard to the utilisation of sewage treated water may do so promptly latest before 30.06.2020, reducing the time lines in the action plans. **The timelines must coincide with the timelines for setting up of STPs since both the issues are interconnected.** The CPCB may compile further information on the subject accordingly.
- v. Needless to say that since the issue of sources of funding has already been dealt with in the orders of the Hon'ble Supreme Court, the States may not put up any excuse on this pretext in violation of the judgment of the Hon'ble Supreme Court."

8. The matter was last considered on 21.09.2020 in light of the CPCB report dated 16.09.2020 giving the river basin wise data and also the status of industrial and sewage pollution load. The consideration on this aspect in the order dated 21.09.2020 is as follows:-

“Review of Compliance Status Reports

CPCB Report dated 16.09.2020

7. In light of the order of 21.05.2020, CPCB filed a report dated 16.09.2020. In substance, the report states that 1831 industries are working without ETP, 1123 with non-compliant ETPs, there are 62 non-compliant CETPs, 530 non-compliant STPs, several projects are still at proposal/construction stage, OCEMS data for 11 PCBs/PCCs is not in public domain, there is a gap in waste generated and treated and large number of dump sites are not scientifically managed resulting in contamination of water. **There is, thus, a need for more rigorous and continuous monitoring, including further steps for coercive measures to enforce rule of law and citizens' right to clean environment. The authorities must ensure reduction in pollution load for meaningful good governance.**

8. The findings in the report include:-

“A. 2.0 Compliance Status of ETPs, CETPs & STPs reported by SPCBs/PCCs

- i. As per the data received from SPCBs/PCCs, out of total 64,484 number of industries requiring ETPs, 62,653 industries are operating with functional ETPs and **1,831 industries are operating without ETPs.** Show-cause notices and closure directions have been issued to 856 and 824 industries,

respectively for operating without ETPs. Legal cases have been filed against 6 industries and action is under process for 145 industries. Out of 62,653 operational industries, 61,530 industries are complying with environmental standards and **1,123 industries are noncomplying**. Show-cause notices and closure directions have been issued to 613 and 135 industries, respectively, for non-compliance. Legal cases have been filed against 13 industries and action is under process for 362 industries.

- ii. As per the data received from SPCBs/PCCs, there are total 191 CETPs, out of which 129 CETPs are complying with environmental standards and **62 CETPs are non-complying**. Show-cause notices and closure directions have been issued to 20 and 5 CETPs, respectively for noncompliance. Legal cases have been filed against 8 CETPs and action is under process for 29 CETPs.
- iii. As per the data received from SPCBs/PCCs, there are total 15,730 STPs (including municipal and other than municipal (non-municipal/stand-alone) STPs), out of which, 15,200 STPs are complying with environmental standards and **530 STPs are non-complying**. Show-cause notices and closure directions have been issued to 262 and 28 STPs, respectively, for non-compliance. Legal cases have been filed against 17 STPs and action is under process for 223 STPs.
- iv. As per the data received from SPCBs/PCCs, there are 84 CETPs in construction/proposal stage, whereas, for STPs, 1,081 projects (municipal and non-municipal) are under construction/proposal stage.
- v. As per the data received from SPCBs/PCCs, 15 SPCBs/PCCs (namely- Andhra Pradesh, Assam, Bihar, Goa, Haryana, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Odisha, Puducherry, Tamil Nadu, Telangana and West Bengal) are displaying OCEMS data in public domain. **The links provided by Gujarat and Uttarakhand SPCBs are password protected and data is not available in public domain. The 4 SPCBs (namely, Chhattisgarh, Jammu & Kashmir, Punjab and Sikkim) have not provided appropriate web links. Further, Chandigarh PCC has clarified that OCEMS data will be displayed after upgradation of STPs. Karnataka SPCB has requested for time till 30.09.2020 to make the system operational. Mizoram SPCB has informed that there is no industry**

requiring OCEMS connectivity. Lakshadweep PCC informed that there is no industry in the Union Territory of Lakshadweep.

OCEMS data of 11 SPCBs/PCCs (Andaman & Nicobar, Arunachal Pradesh, Daman & Diu, Dadra Nagar Haveli, Delhi, Manipur, Meghalaya, Nagaland, Rajasthan, Tripura and Uttar Pradesh) is not available in public domain.

B. 3.1 Sewage Management

3.1.1 Compliance status w.r.t. the directions under Para 24 and 26 (iv)

- i. CPCB requested all States/UTs vide email/letter dated 03.06.2020, 24.06.2020 and 24.08.2020 to submit action plans as per the format and compliance reports. Further, CPCB has also provided link of the report submitted to the Hon'ble NGT indicating observations/shortcomings on action plans of reuse of treated sewage, to the SPCBs/PCCs. A copy of the correspondences is attached at **Annexure-II**.
- ii. Accordingly, action plan was received from the State of Punjab and revised action plans were received from Jammu and Kashmir (UT), Lakshadweep, Rajasthan (specific to Ajmer district), and Sikkim. Information is awaited from other States. **The gap analysis of action plans is attached as Annexure-III.**
- iii. 4 States/UTs (Arunachal Pradesh, Manipur, **Uttar Pradesh, Uttarakhand**) have not submitted any information till date.

3.1.2 Compliance w.r.t. directions under Para 26 (i)

- i. CPCB communicated to all SPCBs/PCCs to provide information on STPs inventory as per the format, vide letter dated 15/07/2020. A copy of letter is attached as Annexure-IV. Based on continuous follow-up, all SPCBs/PCCs have provided information on STPs and same is attached as Annexure-V.
- ii. CPCB vide letter dated 24.08.2020 has requested all States/UTs to submit action plans through online portal of CPCB.

C. 3.2 River basin-wise macro picture of ETPs, CETPs, STPs, MSW Facilities and Legacy Waste Sites

The Hon'ble NGT, in the matter of OA No. 593 of 2017, vide order 28.08.2019, directed CPCB to collect the data of ETPs, CETPs, STPs, MSW facilities and legacy waste sites

and prepare a river-basin-wise macro picture in terms of gaps.

In compliance of the Hon'ble NGT's directions, CPCB has developed an online portal for the collection of river-basin wise information. The details of the river basins associated with the concerned states, as adopted from River Basin Classification, 2019 of Central Water Commission, is given at **Annexure-VI**. The portal, with modules for ETPs, CETPs and STPs, is operational and SPCBs/PCCs are in the process of using the same for submission of information.

3.2.1. Status of ETPs:

CPCB has been collecting the industry specific information related to river basin, locational coordinates (latitude & longitude), disposal point for trade effluent, treatment capacity & actual treatment, environmental compliance status, action taken by concerned authority in case of non-compliance, etc. Further, provision for capturing information regarding pollution load of four major water quality parameters i.e. pH, BOD, COD and TSS are being also incorporated. SPCBs/PCCs have been reminded to expedite the work for data submission, vide letter dated 12.05.2020, 30.07.2020 and 25.08.2020 (email). Copy of the correspondences is given at **Annexure-VII (a to c)**.

So far, information from 6 SPCBs/PCCs (namely; Delhi, Haryana, Daman & Diu, Mizoram, Odisha and Tripura) have been received through CPCB portal. Rest of the SPCBs/PCCs are under the process of compilation and submission of data. The data submitted by Haryana, Daman & Diu, Delhi and Odisha SPCB/PCC has some shortcomings, which were communicated vide letter dated 07.09.2020 & 09.09.2020. A Copy of the correspondences to concerned SPCBs/PCCs is given at **Annexure-VIII (a to d)**.

Although, to have the complete and clear picture, data from all the States/UTs is required, however, preliminary analysis based on the information received from 04 SPCBs/PCCs, is as follows:

a. River basin-wise disposal point of industrial units for the discharge of trade effluent:

As per the river basin-wise information received from 04 SPCBs/PCCs (Delhi, Daman & Diu, Mizoram and Tripura), there are total 1,544 industrial units in these States/UTs.

The river basin-wise number of units with respect to their effluent discharge points is summarized in the following table:

Table No. 1: River basin-wise status of trade effluent generating units and their disposal points

SI. No.	River Basin	State/ UT	Number of units w.r.t. their effluent disposal points								Total	
			CETP	Canal	Drain	Land/Irrigation	River	Sewer	STP	ZLD		Others
1	Ganga	Delhi	817	1	571	0	0	26	1	3	0	1419
2	West flowing rivers from Tapi to Tadri	Daman & Diu	0	0	0	2	1	0	0	20	21	44
3	Minor river basins drainage to Bangladesh & Burma	Mizoram	0	0	61	0	0	0	0	0	0	61
		Tripura	4	0	2	I	2	0	0	0	II	20
Total			821	1	634	3	3	26	1	23	32	1544

b. River basin-wise discharge of treated/partially treated effluents

Based on the information received from Delhi, Daman & Diu, Mizoram and Tripura SPCB/PCC, river basin-wise quantum of treated/partially treated industrial effluents, is summarized in the following table:

Table No. 2: River basin-wise status of discharge of treated/partially treated effluent at various disposal points

SI. No.	River Basin	State/UT	Discharge Volume at the				Particular discharge point (KLD)					Total
			CETP	Canal	Drain	Land/irrigation	River	Sewer	STP	ZLD	Others	
1	Ganga	Delhi	6178	0	6721	0	0	177	195	6	0	13277
2	West flowing rivers from Tapi to Tadri	Daman & Diu	0	0	0	24	400	0	0	1210	233	1867
3	Minor river basins drainage to Bangladesh & Burma	Mizoram	0	0	43	0	0	0	0	0	0	43
		Tripura	545	0	2	18	1320	0	0	0	0	470
Total			6723	0	6766	42	1720	177	195	1216	703	17542

c. River basin-wise discharge of untreated/partially treated industrial trade effluent

As per the available information for the 04 States/UTs, the Table No. 3 summarizes the river basin-wise status of the designed capacity of ETPs, daily average volume of effluent

generation and Discharge of untreated/partially treated effluent (KLD).

Table No. 3 River-basin wise industrial effluent generation and treatment

SI. No.	River Basin	State/UT	Designed capacity of ETPs (KLD)	Daily Average Volume of Effluent Generation	Daily average volume of treated effluent (KLD)	Discharge of untreated/partially treated effluent (KLD)
			(i)	(ii)	(iii)	(iv) = (ii) – (iii)
1	Ganga	Delhi	32358	13417	13338	79
2	West flowing rivers from Tapi to Tari	Daman & Diu	4351	1867	1867	0
3	Minor river basins drainage to Bangladesh & Burma	Mizoram	95	44	43	1
		Tripura	13869	2359	2355	4
Total			50673	17687	17603	84

3.2.2 River basin-wise status of CETPs:

So far, river basin-wise information of CETPs have been received from 6 SPCBs/PCCs (namely Chandigarh, Delhi, Mizoram and Tripura, Daman & Diu and Dadra Nagar Haveli). The Chandigarh, Mizoram Daman & Diu and Dadra Nagar Haveli, have informed that there is no CETP in their State/UT. The information from other SPCBs/PCCs is awaited.

3.2.3 River basin-wise status of STPs:

CPCB has developed a portal to facilitate submission of river basin-wise data for STPs. CPCB vide letter dated 24.08.2020 has requested all States/UTs to submit action plans and river basin-wise data through portal. The information from SPCBs/PCCs is awaited.

3.2.4 River basin-wise status of MSW Facilities and Legacy Waste Sites:

CPCB developed the formats for collection of information regarding Municipal solid Waste (MSW) processing facilities, landfill sites and dumpsites from all the States/UTs, to ensure compliance with Hon'ble NGT Directions. The formats circulated to all States/UTs vide letter dated July 31, 2020 **Annexure-IX**. Information has been received from 10 States/UTs (namely; Kerala, Maharashtra, Jammu & Kashmir, Himachal Pradesh, Mizoram, Tamil Nadu, Delhi, West Bengal, Meghalaya & Pondicherry). Out of the 10 states, Tamil Nadu has provided

information for only dumpsites. On the basis of information, as submitted by States/UTs, the status is as follow:

3.2.4.1 Status of MSW facilities and legacy waste sites

a) State wise distribution of the SWM facilities is given in Table No. 4. River basin-wise distribution of the SWM facilities is given in Table No. 5.

Table No. 4: State-wise Distribution of Solid Waste Management Facilities

Sl. No.	Name of the State	Waste Processing	Landfill Sites	Dumpsite
1.	Delhi	40	2	3
2.	Himachal	52	0	15
3.	Jammu &	3	7	53
4.	Kerala	20	-	39
5.	Maharashtra	103	19	62
6.	Meghalaya	2	1	5
7.	Mizoram	26	1	5
8.	Puducherry	4	3	3
9.	Tamil Nadu	Not Provided	Not Provided	136
10.	West Bengal	9	2	107
TOTAL		259	35	428

Table No. 5: River basin-wise Distribution of Solid Waste Management Facilities

Sl. No.	River basin	Name of the State	Waste Processing	Landfill	Dumpsite
1.	Alur	Kerala	0	0	1
2.	Amravati	Maharashtra	0	0	1
3.	Anchar	Jammu & Kashmir	1	1	1
4.	Beas	Himachal Pradesh	5	0	3
5.	Bharthpuza	Kerala	0	0	1
6.	Bhatsa	Maharashtra	0	0	1
7.	Bhawani	Tamil Nadu	0	0	1
8.	Bindusar	Maharashtra	1	0	1
9.	Binwa Khud	Himachal Pradesh	0	0	1
10.	Bori	Maharashtra	1	0	1
11.	Cauvery	Tamil Nadu	0	0	3
12.	Chalakydy	Kerala	1	0	0
13.	Chandrabhaga	Maharashtra	1	1	1
14.	Chitra Puzha	Kerala	1	0	2
15.	Darna	Maharashtra	1	0	1
16.	Devanathi	Tamil Nadu	0	0	1
17.	Gandhari	Maharashtra	1	1	0
18.	Ganga	West Bengal	4	0	0
19.	Ghodnadi	Maharashtra	1	0	1
20.	Girna	Maharashtra	1	0	2
21.	Godavari	Maharashtra	5	1	5
22.	Gomai	Maharashtra	1	0	1
23.	Grad	Jammu & Kashmir	0	0	1

24.	Haldi	West Bengal	2	2	0
25.	Hatheli Khud	Himachal Pradesh	1	0	1
26.	Hiwara	Maharashtra	1	0	1
27.	Indrayani	Maharashtra	2	1	2
28.	Jhelum	Jammu & Kashmir	0	2	2
29.	Kadalundi River	Kerala	1	0	2
30.	Kalam	Himachal Pradesh	1	0	0
31.	Kalyan creek	Maharashtra	3	1	1
32.	Kan	Maharashtra	0	0	1
33.	Kanhan	Maharashtra	3	0	2
34.	Karamana	Kerala	0	0	1
35.	Karuwannoor	Kerala	0	0	1
36.	Khira Ganga	Himachal Pradesh	1	0	0
37.	Kolar	Maharashtra	1	0	1
38.	Kora Puzha	Kerala	1	0	1
39.	Koringa	Puducherry	0	0	1
40.	Koyana	Maharashtra	1	1	1
41.	Krishna	Maharashtra	6	2	6
42.	Kundalika	Maharashtra	1	1	1
43.	Maharaza	Tamil Nadu	0	0	1
44.	Manjara	Maharashtra	1	1	1
45.	Markanda River	Himachal Pradesh	1	0	0
46.	Marna	Maharashtra	0	0	1
47.	Meenachil	Kerala	0	0	1
48.	Minkjai	Meghalaya	0	0	1
49.	Mithi	Maharashtra	0	0	1
50.	Mula	Maharashtra	38	0	1
51.	Nallathanni	Kerala	0	0	1
52.	Nira	Maharashtra	1	1	1
53.	Pabbar river	Himachal Pradesh	2	0	0
54.	Panchganga	Maharashtra	2	1	2
55.	Panzara	Maharashtra	1	0	1
56.	Patalganga	Maharashtra	2	0	2
57.	Pedhi	Maharashtra	0	0	1
58.	Pelhar	Maharashtra	1	0	1
59.	Penganga	Maharashtra	2	0	2
60.	Puzhakal	Kerala	0	0	1
61.	Rangavali	Maharashtra	1	0	1
62.	Ravi	Himachal Pradesh	1	0	1
63.	Ringre	Meghalaya	1	0	1
64.	Satluji	Himachal Pradesh	4	0	1
65.	Savitri	Maharashtra	0	0	1
Sl.	River basin	Name of the State	Waste	Landfill	Dumpsite
66.	SEER KHAD	Himachal Pradesh	1	0	0
67.	Sina	Maharashtra	1	0	1
68.	Sirsa	Himachal Pradesh	0	0	1
69.	Suketi Khad	Himachal Pradesh	1	0	0
70.	Swan river	Himachal Pradesh	1	0	0
71.	Tapi	Maharashtra	2	1	2
72.	Tawi	Jammu & Kashmir	0	0	1
73.	Tirur	Kerala	0	0	1
74.	Titur	Maharashtra	1	0	1
75.	Tuirial	Mizoram	1	1	0
76.	Ulhas	Maharashtra	3	0	3
77.	Umiam	Meghalaya	1	1	1
78.	Una Khad	Himachal Pradesh	1	0	0

79.	<i>Uppanaru</i>	<i>Tamil Nadu</i>	0	0	1
80.	<i>Valapattanam</i>	<i>Kerala</i>	0	0	1
81.	<i>Wainganga</i>	<i>Maharashtra</i>	5	3	5
82.	<i>Wardha</i>	<i>Maharashtra</i>	3	2	2
83.	<i>Wena</i>	<i>Maharashtra</i>	1	0	1
84.	<i>Yamuna</i>	<i>Delhi</i>	41	2	3
85.	<i>NA</i>	<i>Break-up given</i>	88	8	325
		<i>TOTAL</i>	259	35	428

b) *The SWM facilities located in the ten states are spread over 84 river basins, a majority of them are significantly small.*

c) *The information, regarding river basin in which a particular solid waste management facility is falling, has not been reported for 34% of the waste processing facilities, 22% of the landfills and 75% of the dumpsites. State wise number of states for which the river basin in which the waste management facility has not been provided is given in the Table No. 6.*

Table No. 6: SWM facilities for which river basin has not been indicated

State/UT	Waste processing facilities	Landfills	Dumpsites
<i>Himachal Pradesh</i>	31	<i>No sanitary landfill site</i>	7
<i>Jammu & Kashmir</i>	2	4	48
<i>Kerala</i>	16	<i>Not provided</i>	25
<i>Maharashtra</i>	7	1	1
<i>Meghalaya</i>	0	0	2
<i>Mizoram</i>	25	0	5
<i>Puducherry</i>	4	3	2
<i>Tamil Nadu</i>	<i>Not provided</i>	<i>Not provided</i>	128
<i>West Bengal</i>	3	0	107
Total	88	8	325

d) ***The number of dumpsites (428) is substantially higher than the number of scientifically designed landfills (35). As no arrangement for collection and treatment of leachate is provided in these dumpsites, there is a high potential of contamination of surface and groundwater resources at these dumpsites.***

e) *Capacity of one landfill site in Maharashtra is exhausted.*

f) ***Fresh waste is reported to be dumped at 224 out of 428 dumpsites.***

g) ***Disposal of legacy waste is not under consideration in 46 out of 428 dumpsites***

h) ***Bio-remediation in 72 out of 428 dumpsites is not being done in accordance with CPCB guidelines.***

- i) Ground water analysis report is not available for 215 out of the 259 waste processing sites, 26 out of 35 landfill sites, 222 of the 428 dumpsites.
- j) 174 out of the 259 waste processing facilities, 16 out of 35 landfill sites and 422 out of 428 dumpsites have not provided leachate treatment facilities.
- k) Only 22 out of the 259 waste processing facilities, 14 out 35 landfill sites and 109 out of 428 dumpsites have confirmed that the leachate complies with the stipulated norms.
- l) Locational coordinates for waste processing facilities have not been provided for 60 out of 259 facilities and point of disposal for 214 out of 259 facilities; 8 out of 35 landfill sites and 20 out of 35 point of disposal of leacheates; 80 out of 428 dumpsites and 376 out of 428 point of disposal of leachates.

Going Forward

11. The Tribunal has already issued directions vide orders dated 28.08.2019 and 21.05.2020 for ensuring that no untreated sewage/effluent is discharged into any water body and for any violation compensation is to be assessed and recovered by the CPCB so that the same can be utilized for restoration of the environment, complying with the principle of 'Polluter Pays' which has been held to be part of 'Sustainable Development' and part of right to life. Control of such pollution is crucial for environment, aquatic life, food safety and also human health. Since CMC headed by the Secretary, Ministry of Jal Shakti has taken over monitoring of abatement of pollution of polluted river stretches in the country in coordination with the Chief Secretaries who are heading the RRCs in the States, henceforth the monitoring of directions for ensuring requisite number of pollution control devices may also be monitored by the CMC with a view to enable compliance of mandate of law. The CMC may give a consolidated quarterly report covering the status of compliance with regard to adequate number of pollution control equipments as well as steps taken for rejuvenation of rivers in terms of orders already passed in OA 673/2018 and in the light of observations in paras 7 and 9 above."

Original Application No. 673/2018

9. The second matter being OA 673/2018 overlaps with the first on the subject of preventing water pollution. It relates to directions for abatement of pollution and rejuvenation of 351 polluted river stretches. The matter has been earlier dealt with mainly by orders dated 20.9.2018, 19.12.2018, 8.4.2019, 28.8.2019, 6.12.2019,

29.6.2020 and lastly on 21.9.2020. We may first refer to order dated 6.12.2019 which also makes reference to earlier orders:

“3. Present proceedings were initiated based on a news item dated 17.09.2018 in ‘The Hindu’ under the heading ‘More river stretches are now critically polluted: CPCB’². According to the news item, 351 polluted river stretches have been identified by the Central Pollution Control Board (CPCB). 117 such stretches are in the States of Assam, Gujarat, and Maharashtra. The CPCB has apprised the concerned States of the extent of pollution in the rivers. **Most polluted stretches are from Powai to Dharavi – with Biochemical Oxygen Demand (BOD) 250 mg/L; the Godavari - from Someshwar to Rahed – with BOD of 5.0-80 mg/L; the Sabarmati – Kheroj to Vautha – with BOD from 4.0-147 mg/L; and the Hindon – Saharanpur to Ghaziabad – with a BOD of 48-120 mg/L. The CPCB has a programme to monitor the quality of rivers by measuring BOD. BOD greater than or equal to 30mg/L is termed as ‘Priority-I’, while that between 3.1-6 mg/L is ‘Priority-V’. The CPCB considers BOD less than 3mg/L an indicator of a healthy river. In its 2015 Report³, the CPCB had identified 302 polluted stretches on 275 rivers, spanning 28 States and six Union Territories. The number of such stretches had now increased to 351 in 2018.**

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6. The Hon’ble Supreme Court noticed the level of degradation of rivers in India and apathy of the authorities as follows:

“58. Rivers in India are drying up, groundwater is being rapidly depleted, and canals are polluted. Yamuna in Delhi looks like a black drain. Several perennial rivers like Ganga and Brahmaputra are rapidly becoming seasonal. Rivers are dying or declining, and aquifers are getting over pumped. Industries, hotels, etc. are pumping out groundwater at an alarming rate, causing sharp decline in the groundwater levels. Farmers are having a hard time finding groundwater for their crops e.g. in Punjab. In many places there are serpentine queues of exhausted housewives waiting for hours to fill their buckets of water. In this connection John Briscoe has authored a detailed World Bank Report, in which he has mentioned that despite this alarming situation there is widespread complacency on the part of the authorities in India.⁴

“4. We see Yamuna river virtually turned into a sullage. We take judicial notice of this situation. Similar is the position with Ganges. As it proceeds,

²<https://www.thehindu.com/news/national/more-river-stretches-critically-polluted-cpcb/article24962440.ece>

³<http://cpcb.nic.in/cpcb/RESTORATION-OF-POLLUTED-RIVER-STRETCHES.pdf>

⁴ State of Orissa v. Govt. of India, (2009) 5 SCC 492

industrial effluents are being poured in rivers. Sewage is also being directly put in rivers contributing to the river water pollution. We direct the Pollution Control Boards of the various States as well as the Central Pollution Control Board and various Governments to place before us the data and material with respect to various rivers in the concerned States, and what steps they are taking to curb the pollution in such rivers and to management as to industrial effluents, sewage, garbage, waste and air pollution, including the water management. We club the ending case of water management with this matter.⁵

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11. *In spite of above, in flagrant violation of law of the land, polluted water in the form of sewage, industrial effluents or otherwise has continued to be discharged in the water bodies including the rivers or the canals meeting the rivers. Violation of law is not only by private citizens but also statutory bodies including the local bodies and also failure of the regulatory authorities in taking adequate steps. **There is no corresponding coercive action posing danger to rule of law when large scale violation of law is not being remedied. This leads to lawlessness.***

12. *It will be appropriate to note the crisis situation in the country on the subject of availability of potable water. The matter has been considered in the report of Niti Aayog on Composite Water Management Index (CWMI).⁶ Following further information also needs to be noted:*

(i) *India is suffering from the worst water crisis in its history and millions of lives and livelihoods are under threat. Currently, **600 million Indians face high to extreme water stress and about two lakh people die every year due to inadequate access to safe water⁷. The crisis is only going to get worse. By 2030, the country's water demand is projected to be twice the available supply, implying severe water scarcity for hundreds of millions of people and an eventual ~6% loss in the country's GDP⁸. As per the report of National Commission for Integrated Water Resource Development of MoWR, the water requirement by 2050 in high use scenario is likely to be a milder 1,180 BCM, whereas the present-day availability is 695BCM. The total availability of water possible in country is still lower than this projected demand, at 1,137BCM. Thus, there is an imminent need to deepen our***

⁵ M.C. Mehta Vs Union of India- W.P. (Civil) No. 13029/1985 dated 25.11.2019

⁶ Niti Ayog on "Composite Water Management Index", June 2018, https://niti.gov.in/writereaddata/files/document_publication/2018-05-18-Water-Index-Report_vS8-compressed.pdf.

⁷Source: WRI Aqueduct; WHO Global Health Observatory

⁸Source: McKinsey & WRG, 'Charting our water future', 2009; World Bank; Times of India

understanding of our water resources and usage and put in place interventions that make our water use efficient and sustainable.

- (ii) *India is undergoing the worst water crisis in its history. Already, more than 600 million people⁹ are facing acute water shortages. Critical groundwater resources – which account for 40% of our water supply – are being depleted at unsustainable rates.¹⁰*
- (iii) **Most states have achieved less than 50% of the total score in the augmentation of groundwater resources, highlighting the growing national crisis—54% of India’s groundwater wells are declining, and 21 major cities are expected to run out of groundwater as soon as 2020, affecting ~100 million people¹¹.**
- (iv) **With nearly 70% of water being contaminated, India is placed at 120th amongst 122 countries in the water quality index.**

13. **As per statistics mentioned before the Lok Sabha on April 6, 2018, waterborne diseases such as cholera, acute diarrhoeal diseases, typhoid and viral hepatitis continue to be prevalent in India and have caused 10,738 deaths, over the last five years since 2017. Of this, acute diarrhoeal diseases caused maximum deaths followed by viral hepatitis, typhoid and cholera.¹²**

14. **As per ‘National Health Profile’ published by Central Bureau of Health Investigation, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India, a total of 1535 Deaths due to Acute Diarrhoeal Diseases was reported during the year 2013.¹³**

Main Causes of Pollution of Rivers

15. **As already noted, well known causes of pollution of rivers are dumping of untreated sewage and industrial waste, garbage, plastic waste, e-waste, bio-medical waste, municipal solid waste, diversion of river waters for various purposes affecting e-flow, encroachment of catchment areas and floodplains, over drawl of groundwater, river bank erosion on account of illegal sand mining. In spite of directions to install Effluent Treatment Plants (ETPs), Common Effluent Treatment Plants (CETPs), Sewage Treatment Plants (STPs), and adopting other anti-pollution measures, satisfactory situation has not been**

⁹ Source: World Resource Institute

¹⁰ Source: World Resource Institute

¹¹ Source: UN Water, ‘Managing water under uncertainty and risk’, 2010; World Bank (Hindustan Times, The Hindu).

¹² <https://www.indiaspend.com/diarrhoea-took-more-lives-than-any-other-water-borne-disease-in-india-58143/>

¹³ <http://pib.nic.in/newsite/PrintRelease.aspx?relid=106612>

achieved. As per CPCB's report 2016¹⁴, it has been estimated that 61,948 million liters per day (mld) sewage is generated from the urban areas of which treatment capacity of 23,277 mld is currently existent in India. **Thereby the deficit in capacity of waste treatment is of 62%.** There is no data available with regard to generation of sewage in the rural areas.

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18. Procedures for remedial action have to be shortened so that there is no delay to check pollution wherever found. The Tribunal vide Order dated 18.10.2019 in **Compliance of Municipal Solid Waste Management Rules, 2016 and other environmental issues- O.A. No. 606/2018** while dealing with the issue of procedures of DPRs and tendering process, observed:

“8. Expeditious compliance of directions for clearance of legacy waste sites as well as stopping of discharge of untreated sewage and directions on associated subjects require immediate implementation for protection of environment and public health by curtailing undue delay. As suggested, necessary technologies need to be standardized with cost breakups for operation and maintenance, including procurement. Besides this, the service providers need to be identified and empaneled. This exercise may also require the concerned authorities to explore business models.”

The Tribunal has constituted a Committee headed by Niti Ayog on the subject to give a report within two months.

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21. **In view of above, this Tribunal found it necessary to take up the matter and direct preparation and execution of river action plans to control pollution and restore water quality of the river as per norms within reasonable time.** Accordingly, vide order dated 20.09.2018 proceedings were initiated as already mentioned para 3 above. It may be noted that there have been successful river cleaning programmes in other countries such as relating to river Thames (England), Rhine (Germany) and Danube (France). There being no reason as to why our polluted river stretches also cannot be restored, the Tribunal issued following directions:

- “ i) **All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e BOD < 3 mg/L and FC < 500 MPN/100 ml)**

¹⁴ http://www.sulabhenvi.nic.in/Database/STST_wastewater_2090.aspx July 16, updated on December 6, 2016

- within six months from the date of finalisation of the action plans.*
- ii) The action plans may be prepared by four-member Committee comprising, Director, Environment, Director, Urban Development., Director, Industries., Member Secretary, State Pollution Control Board of concerned State. This Committee will also be the Monitoring Committee for execution of the action plan. The Committee may be called "River Rejuvenation Committee" (RRC). The RRC will function under the overall supervision and coordination of Principal Secretary, Environment of the concerned State/Union Territory.*
- iii) The action plan will include components like identification of polluting sources including functioning/ status of STPs/ETPs/CETP and solid waste management and processing facilities, quantification and characterisation of solid waste, trade and sewage generated in the catchment area of polluted river stretch. The action plan will address issues relating to; ground water extraction, adopting good irrigation practices, protection and management of Flood Plain Zones (FPZ), rain water harvesting, ground water charging, maintaining minimum environmental flow of river and plantation on both sides of the river. Setting up of biodiversity parks on flood plains by removing encroachment shall also be considered as an important component for river rejuvenation. The action plan should focus on proper interception and diversion of sewage carrying drains to the Sewage Treatment Plant (STP) and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water. The action plan should have speedy, definite or specific timelines for execution of steps. Provision may be made to pool the resources, utilizing funds from State budgets, local bodies, State Pollution Control Board/ Committee and out of Central Schemes.*

- iv) **The Action Plans may be subjected to a random scrutiny by a task team of the CPCB.**
- v) **The Chief Secretaries of the State and Administrators/ Advisors to Administrators of the Union Territories will be personally accountable for failure to formulate action plan, as directed.**
- vi) **All States and Union Territories are required to send a copy of Action Plan to CPCB especially w.r.t Priority I & Priority II stretches for approval.**
- vii) **The States and the Union Territories concern are directed to set up Special Environment Surveillance Task Force, comprising nominees of District Magistrate, Superintendent of Police, Regional Officer of State Pollution Control Board and one person to be nominated by District Judge in his capacity as Chairman of Legal Services Authority on the pattern of direction of this Tribunal dated 07.08.2018, in Original Application No. 138/2016 (T_{NHRC}), “Stench Grips Mansa’s Sacred Ghaggar River (Suo-Motu Case).**
- ix) **The Task Force will also ensure that no illegal mining takes place in river beds of such polluted stretches.**
- x) **The RRC will have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement and failure may also be published on such website. The Committee may consider suitably rewarding those contributing significantly to the success of the project.”**

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23. Table showing location and categories have been reproduced in the said order and reference to the same will also be made in the later part of this order. **The action plans were directed to cover the following:-**

A) Source Control

Source control includes industrial pollution control and treatment and disposal of domestic sewage as detailed below:-

(a) Industrial pollution control

(i) Inventorisation of industries

(ii) Categories of industry and effluent quality

(iii) Treatment of effluents, compliance with standards and mode of disposal of effluents

(iv) Regulatory regime.

(b) Channelization, treatment, utilization and disposal of treated domestic sewage.

(i) Identification of towns in the catchment of river and estimation of quantity of sewage generated and existing sewage treatment capacities to arrive at the gap between the sewage generation and treatment capacities;

(ii) Storm water drains now carrying sewage and sillage joining river and interception and diversion of sewage to STPs,

(iii) Treatment and disposal of septage and controlling open defecation,

(iv) Identification of towns for installing sewerage system and sewage treatment plants.

(B) River catchment/Basin Management-Controlled ground water extraction and periodic quality assessment

(i) Periodic assessment of groundwater resources and regulation of ground water extraction by industries particularly in over exploited and critical zones/blocks.

(ii) Ground water re-charging / rain water harvesting

(iii) Periodic ground water quality assessment and remedial actions in case of contaminated groundwater tube wells/bore wells or hand pumps.

(iv) Assessment of the need for regulating use of ground water for irrigation purposes.

(C) Flood Plain Zone.

(i) Regulating activities in flood plain zone.

(ii) Management of Municipal, Plastic, Hazardous, Bio-medical and Electrical and Electronic wastes.

(iii) Greenery development- Plantation plan.

(D) Ecological/Environmental Flow (E-Flow)

(a) Issues relating to E-Flow

(b) Irrigation practices

(E) Such other issues which may be found relevant for restoring water quality to the prescribed standards.

Order dated 19.12.2018 reviewing the progress of execution of order dated 20.09.2018:

24. On review of the matter on 19.12.2018 to consider status of compliance of order dated 20.09.2018, we found that 16 States/UTs had prepared action plans, but the same were not complete. Base line data was not been given. Preparation of action plans was assigned to third parties. Details of STPs etc. were not given. Timelines given were too long. Status of e-flow was not been given. Action plans were not proposed to be placed on websites to involve educational and other institutions and the public at large. The said States/ UTs were directed to give revised reports on or before 31.01.2019 to CPCB after complying with the deficiencies. The CPCB was to examine the action plans and, if they met the scientific and technical

yardstick, to approve the same and convey it to the respective States/UTs. The States/ UTs, after approval were to place/host these action plans on the respective websites giving clear timelines for execution indicating the agencies responsible for execution along with the matching budgetary provisions. **By way of last opportunity, we extended the time for preparation of action plans till 31.01.2019 with the stipulation that for delay thereafter, compensation for damage to the environment would be payable by each of the States/ UTs at the rate of Rs. One Crore per month for each of the Priority- I and Priority- II stretches, Rs. 50 lacs per month for stretches in Priority- III and Rs. 25 lacs per month each for Priority- IV and Priority- V stretches. The payment was to be the responsibility of the Chief Secretaries of the States/Administrators of the UTs and the amount could be recovered from the erring officers. The CPCB was to prominently place the names of the defaulting States and UTs and a notice to this effect on its website.**

25. **The SPCBs and Pollution Control Committees of UTs were to display the quality of the water of polluted river stretches on their respective websites within one month alongwith action taken, if any, which was to be revised every three months. The CPCB was also to display the water quality of the river stretches and action/inaction by such States on its websites. It was made clear that BOD will not be the sole criteria to determine whether a particular river stretch is a polluted river stretch but would also include Faecal Coliform (FC) bacteria as one of the criteria for such classification or otherwise. CPCB was to devise within two weeks a mechanism for classification wherein two criteria pollutants, that is BOD and FC, shall henceforth be basis of classification in Priority Classes besides pH, D.O. and COD. Further direction in the order dated 19.12.2018 was that any incomplete action plan would be treated as non-compliance. It was made necessary to furnish Performance Guarantees to ensure implementation of action plans within the above stipulated time to the satisfaction of Central Pollution Control Board in the sum of:**

- (i) Rs. 15 crore for each of Priority I & II stretches
- (ii) Rs. 10 crore for each of Priority III stretches
- (iii) Rs. 5 crore for each of Priority IV & V stretches.

Order dated 16.01.2019 in O.A. No. 606/2018 requiring Chief Secretaries of all the States/UTs to appear before this Tribunal after fully acquainting themselves on the subject of Polluted River Stretches, apart from other significant environmental issues and subsequent directions:

26. While noticing large scale violation of environmental norms particularly with regard to waste and sewage management in the country, **this Tribunal directed the Chief Secretaries of all the States/UTs to appear before this**

Tribunal in person after acquainting themselves with the status of compliance of environmental laws on such issues and action plans for remedying the situation. Accordingly, all the Chief Secretaries appeared on various dates and this Tribunal directed further remedial action including with regard to the restoration of polluted river stretches in terms of the action plans of the States/UTs within six months. The said period of six months is complete in respect of most of the States and Chief Secretaries are required to be present on the dates already fixed. Thus, all the States/UTs have had sufficient notice of their respective failures to comply with the statutory obligations and any further failure has to be viewed seriously and visited with requirement to pay compensation already stipulated.

Order dated 08.04.2019 extending time for execution of action plans till 31.03.2021 and requiring Central Monitoring Committee (CMC) to prepare a National Plan for Rejuvenation of Polluted River Stretches as per prescribed timeline:

27. The matter was thereafter taken up on 08.04.2019 in light of consolidated and updated report filed by the CPCB on 05.04.2019 to the effect that 28 States and 3 Union Territories had constituted River Rejuvenation Committees (RRCs). The CPCB constituted a 'Task Team' for scrutiny of the action plans under the Chairmanship of Member Secretary, CPCB. **CPCB received 41 out of 45 action plans with reference to P-I, 14 out of 16 action plans with reference to P-II and total 182 action plans were received with reference to P-III to P-V polluted river stretches. 6 out of 61 action plans in respect of P-I and P-II were not received from the States of Assam (P-I: 3 viz., Bharalu, Borsola, Silsako) and P-II:1 (Sorusola)), Manipur (P-II: 1 viz., Nambu) and Uttar Pradesh (P-I: viz., river Hindon).** It was submitted that the action plan in respect of River Hindon was required to be implemented by the Government of Uttar Pradesh in compliance of the NGT Orders in Original Application No. 231/2014 & Original Application No.66/2015.

28. The Tribunal further observed:-

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34. As already noted, pollution of 351 river stretches has caused serious threat to safety of water and environment. On account of use of polluted water in irrigation, there is threat to food safety. **On account of consumption of polluted water in absence of any other source of drinking water being available and partly on account of ignorance of the persons consuming such water, health of human being is threatened, apart from the aquatic flora and fauna, animals wild and domestic who may consume such water. It is therefore, necessary to have regular hygienic survey of the rivers particularly with reference to pathogenic**

organisms having impact on human health directly or indirectly. It is also important to note that biological health of the rivers is an important aspect. Much of the important biodiversity is lost on account of severe pollution in the rivers. There has to be a regular study of the Indian rivers with regard to biological health and its diversity. We understand that bio-mapping of rivers and setting biological goals/criteria is part of River Rejuvenation Programmes in some countries. There is threat to the environmental rule of law of the country.

35. *These are substantial questions relating to the environment. For enforcing legal right to clean environment, which is also a fundamental right, this Tribunal has to pass appropriate orders for relief to the victims of pollution and for restoration of the environment even in absence of an identified victim. All the States and UTs have been duly put to notice of the present case.*
36. *In this endeavor, this Tribunal directed constitution of RRCs by the concerned States/UTs by including Departments of Environment, Urban Development, Industries and the Pollution Control Boards/Pollution Control Committees and further directions to the Chief Secretaries of the States/UTs to monitor the progress. At the national level, CPCB has been required to assist the Tribunal by way of compiling the data and furnishing its views. A copy of order dated 29.09.2018 was directed to be forwarded to the Niti Ayog, Ministry of Water Resources, Ministry of Environment, Forest & Climate Change, Ministry of Housing and Urban Affairs, National Mission for Clean Ganga, apart from other authorities as the said authorities were represented in a chamber meeting before this Tribunal to consider the problem of pollution of rivers.*
- 41. We accept the proposal of CPCB to revise the scale of performance guarantee with regard to timeline. We also accept the suggestions of CPCB to extend the timeline for execution of action plans to the extent that upper limit for execution of the action plans will be two years from 01.04.2019 and the monitoring of the action plans may be done not only at the level of the Chief Secretaries of the States/UTs but also by the CPCB.**
42. *We direct that CPCB with SPCBs and PCCs to launch nationwide programme on biodiversity monitoring and indexing of the rivers to assess the efficacy of river cleaning programme. Further, for safety of human health and maintaining sanctity of the rivers, regular hygienic surveys of the rivers should be carried out with reference to fecal coliform and fecal streptococci, as indicated in the*

primary water quality criteria for bathing waters. Nodal agency will be CPCB.

- 43. Having given due consideration to the serious issue and inadequacy of success achieved so far, we find it necessary to constitute a Central Monitoring Committee to undertake a national initiative by way of preparation and enforcement of a national plan to make river stretches pollution free comprising a senior representative of NITI Aayog, Secretaries Ministry of Water Resources, Ministry of Urban Development, Ministry of Environment, Forest and Climate Change, Director General, National Mission for Clean Ganga and Chairman CPCB. Chairman CPCB will be the nodal authority for coordination. Senior most among them will preside over the deliberations.**
- 44. The Central Monitoring Committee will also coordinate with the RRCs of the States and oversee the execution of the action plans, taking into account the timelines, budgetary mechanism and other factors. Chief Secretaries of States will be the nodal agency at State level. The Chief Secretaries of the States may undertake review of progress of RRCs by involving concerned Secretaries of Department of Urban Development, Environment, Industries, Irrigation and Public Health, Health etc.**
- 45. We also direct the MoEF& CC to consider a policy for giving environmental awards to outstanding persons (natural and juristic) and Institutions/States and introducing dis-incentives for non compliant states. Such scheme may be framed preferably before 30.06.2019.**

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33. We may note the observations of the Hon'ble Supreme Court:

“26. Enactment of a law, but tolerating its infringement, is worse than not enacting a law at all. The continued infringement of law, over a period of time, is made possible by adoption of such means which are best known to the violators of law. Continued tolerance of such violations of law not only renders legal provisions nugatory but such tolerance by the enforcement authorities encourages lawlessness and adoption of means which cannot, or ought not to, be tolerated in any civilized society. Law should not only be meant for the law-abiding but is meant to be obeyed by all for whom it has been enacted. A law is usually enacted because the legislature feels that it is necessary. It is with a view to protect and preserve the environment

and save it for the future generations and to ensure good quality of life that Parliament enacted the anti-pollution laws, namely, the Water Act, Air Act and the Environment (Protection) Act, 1986. These Acts and Rules framed and notification issued thereunder contain provisions which prohibit and/or regulate certain activities with a view to protect and preserve the environment. When a law is enacted containing some provisions which prohibit certain types of activities, then, it is of utmost importance that such legal provisions are effectively enforced. If a law is enacted but is not being voluntarily obeyed, then, it has to be enforced. Otherwise, infringement of law, which is actively or passively condoned for personal gain, will be encouraged which will in turn lead to a lawless society. **Violation of anti-pollution laws not only adversely affects the existing quality of life but the non-enforcement of the legal provisions often results in ecological imbalance and degradation of environment, the adverse effect of which will have to be borne by the future generations.**¹⁵

“45..... The Government could not pass such orders of exemption having dangerous potential, unmindful of the fate of lakhs of citizens of the twin cities to whom drinking water is supplied from these lakes. Such an order of exemption carelessly passed, ignoring the “precautionary principle”, could be catastrophic.”¹⁶

“61. If the laws are not enforced and the orders of the courts to enforce and implement the laws are ignored, the result can only be total lawlessness. It is, therefore, necessary to also identify and take appropriate action against officers responsible for this state of affairs. Such blatant misuse of properties at large-scale cannot take place without connivance of the officers concerned. It is also a source of corruption. Therefore, action is also necessary to check corruption, nepotism and total apathy towards the rights of the citizens.”¹⁷

“15. Time has come to require the State Governments to explain why they should not be asked to compensate the persons who are being affected by bad air quality. Obviously, the State is run by the administration, why liability should not be imposed for such a tort on the concerned machinery also of the various States which are failing to discharge their basic duties. This Court in *Municipal Council, Ratlam Vs. Vardhichand & Ors.*, reported in (1980) 4 SCC 162 has held they have to take proper and positive action in this

¹⁵ INDIAN COUNCIL FOR ENVIRO-LEGAL ACTION Vs. UNION OF INDIA AND OTHERS (1996) 5 SCC 281

¹⁶ A.P. Pollution Control Board II v. Prof. M.V. Nayudu, (2001) 2 SCC 62

¹⁷ M.C. Mehta v. Union of India, (2006) 3 SCC 399 – Public functionaries

*direction. It is their bounden duty to provide civic amenities, and also to see that self-created bankruptcy does not come in the discharge of the statutory obligation which are necessary for existence of human life. We have seen during the course of the arguments that one State is passing the burden upon the Centre and then it is stated on behalf of the Central Government that they have framed scheme and it for the State Governments to implement it. We expect not only the 'policy making' but also its 'implementation'. Let the States of Punjab, Haryana, Uttar Pradesh and the Government of NCT of Delhi respond, due to the air pollution, why the concerned Government and its concerned machinery, from top to bottom, should not be asked to compensate the citizens of Delhi and adjoining areas for various diseases which are being caused and sufferings and troubles which are being faced and the report indicates the life span is being shortened. Let show cause notice be issued to the various State Governments, and to the Chief Secretaries, to submit reply within six weeks. Let the matter be listed for consideration on 17.01.2020. The Chief Secretaries to the States of Punjab, Haryana, Uttar Pradesh and Government of NCT of Delhi be personally present on that date."*¹⁸

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35. *Vide order dated 22.08.2019 in Original Application 200/2014, dealing with the pollution of river Ganga, the Tribunal issued directions and laid down coercive measures to be taken for discharge of untreated sewage in river Ganga:-*

*"16.....As already observed by this Tribunal including in the order dated 14.05.2019 that River Ganga being National River with distinct significance for the country, even a drop of pollution therein is a matter of concern. **All the authorities have to be stringent and depict zero tolerance to the pollution of River Ganga. Wherever STPs are not operating, immediate bioremediation and/or phyto-remediation may be undertaken if feasible. To avoid procedural delay of tender processes, etc. specifications and norms for undertaking such activities may be specified in consultation with the CPCB as was earlier directed in our order dated 29.11.2018.** Performance guarantees may be required to be furnished for ensuring timely performance. It needs to be ensured that setting up of STPs and sewerage network to be completed and carried out so as to avoid any idle capacities being created. Performance guarantees may be taken for preventing such defaults.*

¹⁸ M.C. Mehta Vs Union of India- W.P. (Civil) No. 13029/1985 dated 25.11.2019

17. **Wherever the work has not commenced, it is necessary that no untreated sewage is discharged into the River Ganga. Bioremediation and/or phytoremediation or any other remediation measures may start as an interim measure positively from 01.11.2019, failing which the State may be liable to pay compensation of Rs. 5 Lakhs per month per drain to be deposited with the CPCB. This however, is not to be taken as an excuse to delay the installation of STPs. For delay of the work, the Chief Secretary must identify the officers responsible and assign specific responsibilities. Wherever there are violations, adverse entries in the ACRs must be made in respect of such identified officers. For delay in setting up of STPs and sewerage network beyond prescribed timelines, State may be liable to pay Rs. 10 Lakhs per month per STP and its network. It will be open to the State to recover the said amount from the erring officers/contractors.**

18. **With regard to works under construction, after 01.07.2020, direction for payment of environmental compensation of Rs. 10 lakhs per month to CPCB for discharging untreated sewage in any drain connected to river Ganga or its tributaries and Rs. 10 lakhs per month to CPCB per incomplete STP and its sewerage network will apply. Further with regard to the sectors where STP and sewerage network works have not yet started, the State has to pay an Environmental Compensation of Rs. 10 lakhs per month after 31.12.2020. The NMCG will also be equally liable for its failure to the extent of 50% of the amount to be paid. Till such compliance, bioremediation or any other appropriate interim measure may start from 01.11.2019.”**

Order dated 28.08.2019 in O.A. No. 593/2017, Paryavaran Suraksha Samiti Vs. Union of India, in pursuance of Hon’ble Supreme Court judgment in (2017) 5 SCC 326, for 100% treatment of sewage:

36. *Vide order dated 28.08.2019, the Tribunal held:-*
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15. **It is clear from the order of the Hon’ble Supreme Court¹⁹ that the responsibility of operating STPs under Article 243W and item 6 of Schedule XII to the Constitution is of local bodies who have to evolve norms to recover funds for the purpose which is to be supervised by the States/UTs. The norms were to be finalized upto 31.03.2017 to be implemented from the next year, i.e 01.04.2018. In absence thereof, the States/UTs**

¹⁹Para 10-13 in *Paryavaran Suraksha Samiti Vs. Union of India*, *Supra*

have to cater to the financial requirement from its own resources. The States/UTs are to prioritize the cities, towns, villages discharging effluents/sewage directly into the water bodies. Industrial activity without proper treatment plants (ETPs and CETPs) is not to be allowed by the State PCBs and the Secretaries, Environment of the States/UTs are to be answerable. Thus, the source for financial resources for the STPs, stands finalized under the binding judgment of the Hon'ble Supreme Court. Authorities and persons accountable are identified. Rigid implementation has been laid down. This Tribunal has been required to monitor compliance of the directions and timelines.

16. It is in this background that the present report needs to be appraised and further directions given. As regards the Environmental compensation regime fixed for industrial units, GRAP, solid waste, sewage and ground water is accepted as an interim measure. With regard to setting up of STPs, while we appreciate the extensive work of the CPCB based on information furnished by States/UTs, the challenge remains about verification of the said data on the one hand and analysis of the steps taken and required on the other. There is already a database available with the CPCB with regard to ETPs, CETPs, STPs, MSW facilities, Legacy Waste sites. This needs to be collated and river basinwise macro picture needs to be prepared by the CPCB in terms of need for interventions, existing infrastructure and gaps therein. The States have given timelines which need to be effectively monitored both by the CPCB and the Chief Secretaries in terms of its execution.

17. **As already noted, prevention of pollution of water is directly linked to access to potable water as well as food safety. Restoration of pristine glory of rivers is also of cultural and ecological significance. This necessitates effective steps to ensure that no pollution is discharged in water bodies. Doing so is a criminal offence under the Water Act and is harmful to the environment and public health. 'Precautionary' principle of environmental law is to be enforced. Thus, the mandate of law is that there must be 100% treatment of sewage as well as trade effluents. This Tribunal has already directed in the case of river Ganga that timelines laid down therein be adhered to for setting up of STPs and till then, interim measures be taken for treatment of sewage. There is no reason why this direction be not followed, so as to control pollution of all the river stretches in the country. The issue of ETPs/CETPs is being dealt with by an appropriate action against polluting industries. Setting up of STPs and MSW facilities is**

the responsibility of Local Bodies and in case of their default, of the States. Their failure on the subject has to be adequately monitored. Recovery of compensation on 'Polluter Pays' principle is a part of enforcement strategy but not a substitute for compliance. It is thus necessary to issue directions to all the States/UTs to enforce the compensation regime, latest with effect from 01.04.2020. We may not be taken to be condoning any past violations. The States/UTs have to enforce recovery of compensation from 01.04.2020 from the defaulting local bodies. On failure of the States/UTs, the States/UTs themselves have to pay the requisite amount of compensation to be deposited with the CPCB for restoration of environment. The Chief Secretaries of all the States may furnish their respective compliance reports as per directions already issued in O.A. No. 606/2018.

21. *We may now sum up our directions:-*

(iii) All the Local Bodies and or the concerned departments of the State Government have to ensure 100% treatment of the generated sewage and in default to pay compensation which is to be recovered by the States/UTs, with effect from 01.04.2020. In default of such collection, the States/UTs are liable to pay such compensation. The CPCB is to collect the same and utilize for restoration of the environment."

Order dated 11.09.2019 – Directions in pursuance of orders of Hon'ble Supreme Court in (2012) 13 SCC 736 and dated 24.04.2017 in W.P. No. 725/1994 "And Quite Flows Maily Yamuna" and earlier orders of this Tribunal regarding control of pollution of river Yamuna:

37. *Vide the order dated 11.09.2019, in Original Application No. 06/2012, dealing with river Yamuna, the Tribunal observed as follows:*

"12. One of the major concerns of this Tribunal is that repeated directions remain un-complied and inspite of largescale failures, no accountability is fixed. There is huge loss to public exchequer for which no action is taken. Timelines are conveniently and unilaterally changed. Officers indulge in blame game in shifting responsibility from one to another. There is failure at higher levels in monitoring and taking actions. If this continues, it is difficult to expect any positive change for long. This requires paradigm shift in approach adopted so far. The approach to be adopted is to have clear time- bound plan with flexibility and due to accountability for

failure by way of departmental action and monetary compensation. The rescheduled timelines have to be compressed so as to complete every action by December, 2020 except where shorter timelines are specified in this order or are otherwise possible. If any contract permits longer timeline, it is clearly in violation of binding orders of the Tribunal which has attained finality. Violation thereof is per se criminal offence. Such longer timeline has to be consistent with orders of the Tribunal and compressed within 31.12. 2020. Failing to do so may invite criminal prosecution NMCG may also monitor the compliance. The Chief Secretaries of Delhi, Haryana and U.P. have to personally see the compliance and have to set up Monitoring Cell directly under them. Vice Chairman, DDA can also monitor and coordinate with Chief Secretary, Delhi. All other departments can monitor subject to overall directions of the Chief Secretaries. This can avoid shifting of responsibilities once ownership is with highest authorities in the State. Monthly review reports may be shared with the Monitoring Committee and also placed on websites of concerned States. Failure and successes of the individual involved may be specifically recorded and reflected in service record of the concerned officer. Stock taking may be done by the Chief Secretaries of the failure and successes so far and appropriate actions be initiated against those who have been responsible for the failure. Nodal Officers may be identified in respect of different projects clearly defining the responsibilities. Wherever there is misappropriation of funds, criminal case has to be registered. Posting of Officers entrusted with the responsibility may be reviewed from time to time depending on their responsibility. Procedure for giving of contracts may be shortened and standardized at State level and if possible at National level by NMCG and CPCB. Giving of contracts should be based on successful credentials instead of mere lowest rates. Pollution load at entry and exist point of each concerned State may or at entry points of each drains need to be recorded periodically. The Chief Secretaries of Delhi, Haryana and U.P. may furnish action taken reports in this regard at the time of their personal appearance before this Tribunal in O.A. 606/2018.

13. *Priorities need to be planned. The first step is to ensure that no pollutant is discharged into the river or drains connected thereto. **Projects of setting up and upgradation of STPs including setting up of interceptors, laying of sewerage line network etc. have to be completed within strict timelines. Pending such action, immediate bioremediation***

and/or phytoremediation or any other alternative remediation measure may be undertaken as an interim measure. Pollution of river or water bodies is a criminal offence which needs to be checked by setting up ETPs/CETPs/STPs. The Hon'ble Supreme Court has directed²⁰ that establishment and proper functioning of ETPs/CETPs/STPs in the country be ensured. This is to enforce the right of access to water. It has been noted by the Hon'ble Supreme Court that water pollution is the cause of various diseases and also affects food safety apart from affecting the environment as such. Following the said judgment, this Tribunal has directed²¹ that "All the local bodies have to ensure 100% treatment of the generated sewage and in default to pay compensation which is to be recovered by the States/UTs, with effect from 01.04.2020. In default of such collection, the States/UTs are liable to pay such compensation. The CPCB is to collect the same and utilize for restoration of the environment." While dealing with the pollution of river Ganga, this Tribunal directed:

"Bioremediation and/or phytoremediation or any other remediation measures may start as an interim measure positively from 01.11.2019, failing which the State may be liable to pay compensation of Rs. 5 Lakhs per month per drain to be deposited with the CPCB. This however, is not to be taken as an excuse to delay the installation of STPs. For delay of the work, the Chief Secretary must identify the officers responsible and assign specific responsibilities. Wherever there are violations, adverse entries in the ACRs must be made in respect of such identified officers. For delay in setting up of STPs and sewerage network beyond prescribed timelines, State may be liable to pay Rs. 10 Lakhs per month per STP and its network. It will be open to the State to recover the said amount from the erring officers/contractors.

With regard to works under construction, after 01.07.2020, direction for payment of environmental compensation of Rs. 10 lakhs per month to CPCB for discharging untreated sewage in any drain connected to river Ganga or its tributaries and Rs. 10 lakhs per month to CPCB per incomplete STP and its sewerage network will apply. Further with regard to the sectors where STP and sewerage network works have not yet started, the State has to pay an Environmental Compensation of Rs.

²⁰ (2017) 5 SCC 326

²¹ Order dated 28.08.2019 in Paryavaran Suraksha Samiti & Anr. Vs. Union of India & Ors., O.A No. 593/2017

10 lakhs per month after 31.12.2020. The NMCG will also be equally liable for its failure to the extent of 50% of the amount to be paid. Till such compliance, bioremediation or any other appropriate interim measure may start from 01.11.2019.”²²

“15. A. (iv):

e). DJB to complete the task of setting up of STPs by 31.12.2020.

g) Bioremediation and/or phytoremediation or any other remediation measures may start as an interim measure positively from 01.01.2020, failing which the Govt. of NCT of Delhi may be liable to pay compensation of Rs. 5 Lakhs per month per drain to be deposited with the CPCB. This however, is not to be taken as an excuse to delay the installation of STPs, sewerage network and its connectivity. For delay of the work, the Chief Secretary, Govt. of NCT Delhi must identify the officers responsible and assign specific accountability. Wherever there are violations, adverse entries in the ACRs must be made in respect of such identified officers for delay in setting up of STPs, sewerage network and its connectivity by the concerned head of the department.

h) The Govt. of NCT, Delhi will be liable to pay Environment Compensation if defaults take place as under:

- i. The operational deficiencies of the existing STPs must be rectified within three months failing which Environmental compensation of Rs. 5 Lacs per month for STP shall be deposited with CPCB.
- ii. With regard to works under construction, after 01.07.2020, direction for payment of environmental compensation of Rs. 10 lakhs per month to CPCB for discharging untreated sewage in any drain connected to river Yamuna and Rs. 10 lakhs per month to CPCB per incomplete STP, sewerage network and its connectivity will apply.
- iii. With regard to the situation where works with regard to STP, sewerage network and its connectivity have not yet started, the Govt. of NCT, Delhi has to pay an Environmental Compensation at the rate of Rs. 10 lakhs per month per STP, Sewerage network and its connectivity after 31.12.2020 for the delay in setting up of the same. It will be open to Govt. of NCT of Delhi

²²O.A No. 200/2014 order dated 22.08.2019

to recover the said amount from erring officers/contractors.”

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42. We may now refer to the report of the CPCB on the subject of 351 polluted river stretches. Extracts from the report are:

“i) Status on Approval of Action Plans for Restoration of Identified Polluted River Stretches: -

61 out of 61 total action plans were received as on 06.09.2019 and 60 action plans have been approved along with the conditions. **Revised action plan for restoration of River Yamuna within Delhi State is awaited from Delhi State Government.** Minutes of all the eight Task Team meetings were also uploaded in CPCB website at <https://cpco.nic.in/mcncgt-restoration/>. Also, minutes of all the eight task team meetings were also communicated to the concerned authorities for further necessary action at their end. State-wise status of action plans received, action plans approved with conditions by CPCB Task Team w.r.t Priority I & Priority II Polluted River Stretches are annexed at **Annexure-V, Annexure-VI and Annexure-VII**. All the action plans already approved by CPCB Task Team also uploaded by the concerned States/UTs and web links have been provided in CPCB website at <https://cpcb.nic.in/mcncit-restoration/> for having access to the general public.

ii) Criteria for Prioritization of Polluted River Location

In pursuance to Hon'ble NGT order dated 19.12.2018 and to devise a mechanism for classification of polluted river stretch by considering two criteria pollutants such as Bio-chemical Oxygen Demand (BOD) and Faecal Coliform (FC), CPCB has prepared "draft criteria for prioritization of polluted river location". The draft criteria was circulated to all the concerned stakeholders mainly State Pollution Control Boards (SPCBs) and the Pollution Control Committees (PCCs) vide CPCB letter dated 09.01.2019, for providing comments or views by January 2019. Based on the comments received from stakeholders, the draft criterion has been finalised and appraised to Hon'ble NGT on 29.7.2019 (Copy enclosed as **Annexure-VIII**). Afore-said finalised criteria also uploaded in CPCB website at https://cpcb.nic.in/wqm/Guidelines_wqm-23.07.2019.

iii) Submission of Performance Guarantee by the States/UTs for ensuring timely implementation of approved action plans for rejuvenation of identified polluted river stretches: -

As per Hon'ble NGT order dated 8.4.2019, States/ UTs are required to submit performance guarantee as per revised scale i.e. No. of Polluted River Stretches in a State/UT > 10, 5 to 10 &< 5, the performance guarantee

to be submitted in Rupees is 15 Crore, 10 Crore & 5 Crore respectively. **Till date, 09 States (viz., Goa, Gujarat, Haryana, Jharkhand, Madhya Pradesh, Manipur, Odisha, Puducherry, West Bengal and 02 UTs (Viz., Daman, Diu and Dadra Nagar Haveli, Delhi) out of 31 States/UTs have submitted Performance/ Bank Guarantee to CPCB.** State-wise details of performance guarantee or bank guarantees submitted is annexed at **Annexure-IX.**

iv) Review meeting with 11 States/UTs for review of action plans falling under Priority III to V classes

As per Hon'ble NGT Order dated 20.09.2018, all States and Union Territories are required to send a copy of RRC approved action plan to CPCB especially w.r.to only Priority I & Priority II stretches for approval. The Action Plans may be subjected to a random scrutiny by a task team of the CPCB.

The States/UTs which are not required to submit action plans to CPCB seeking approval, CPCB convened a review meeting on 12.09.2019 in CPCB with such 11 States/UTs for reviewing the RRC approved action plans for restoration of polluted river stretches falling under Priority III to V classes in the respective States. 09 out of 11 States/UTs have attended the meeting. CPCB reviewed the action plans and suggested necessary improvements in light of the Hon'ble NGT order dated 20.09.2018. The minutes of the review meeting were also communicated to all the concerned States/UTs vide CPCB letter dated 14.10.2019 (Copy annexed as **Annexure-X**) with a request to take necessary actions.

Following general suggestions were made for incorporation in the prepared action plans and thereafter for taking approval of RRC constituted by the respective State Government or UT Administration for implementation of action plans in respect of P-III to P-V polluted river stretches: -

- (i) **Identification of polluting sources including drains contributing to river pollution**
- (ii) **Map showing Polluted River, its tributaries, drains, major towns, industrial estates, location of STPs/CETPs**
- (iii) **Functioning status of STPs/ETPs/CETPs and solid waste management and processing facilities in the catchment area of the identified polluted river stretch;**
- (iv) **Detailed gap analysis w.r.t town-wise water consumption (including ground water consumption), sewage generation,**

- existing infrastructure in the catchment area and the gap analysis;*
- (v) *Detailed gap analysis w.r.t industrial water consumption, wastewater generation, existing infrastructure for treatment of industrial effluent (both captive ETPs/CETPs and their performance assessment), gap analysis;*
 - (vi) *Quantification and characterisation of waste (such as solid waste, industrial hazardous waste, bio-medical waste, E-Waste), STP sludge management, existing infrastructure and detailed gap analysis;*
 - (vii) *Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;*
 - (viii) *Aspects such as ground water extraction, adopting good irrigation practices, protection and management of Flood Plain Zones (FPZ), rain water harvesting, ground water charging, maintaining minimum environmental flow of river (by having watershed management provisions), plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment., proper interception and diversion of sewage carrying drains to Sewage Treatment Plant (STP), upgradation of existing sewage treatment plants if not in a position to comply with effluent discharge norms, emphasis on utilization of treated sewage so as to minimize extraction of ground or surface water be included,*
 - (ix) *Speedy, definite or specific timelines for execution of action plans and the estimated budget including the monitoring agency*
 - (ix) *Achievable goals with specific timelines for restoration of water quality of polluted rivers.*
 - (x) *Organisation-wise action plans with timelines and the estimated budget for implementation of action plans.*
- v) **Format for obtaining status on implementation of Action plans for restoration of polluted River Stretches**

In order to assess the progress on implementation of action plans already approved by CPCB, a format seeking status on implementation of action plans for restoration of polluted river stretches has been communicated to the Chief Secretaries of concerned States/UTs and State Pollution Control Boards/ Pollution Control Committees, vide CPCB letter dated 26.9.2019. A copy of CPCB letter

dated 26.09.2019 along with the format circulated is annexed at **Annexure-XI**. As on 06.11.2019, filled in formats have been received from 3 States/UTs viz Daman, Diu, Dadra & Nagar Haveli, Andhra Pradesh and Meghalaya.

State-wise Identified Polluted Rivers and the Status of Action Plans received by CPCB in compliance to Hon'ble NGT Orders dated 20.09.2018, 19.12.2018 and 08.04.2019 in OA No. 673 of 2018 (as on 07.11.2019)

Name of the State / UT	Total No. of Identified Polluted River stretches (PRS)	Priority I Identified Polluted River stretches		Priority II Identified Polluted River stretches		Priority — III to V Identified Polluted River stretches		Total Action Plans Received
		No. of P-I PRS	Action Plans received w.r.to P-I	No. of P-II PRS	Action Plans received w.r.to P-II	No. of P-III to V	Action Plans received w.r.to P-III to V	
Andhra Pradesh	5	0	0	0	0	5	5	5
Assam	44	3	3	1	1	40	40	44
Bihar	6	0	0	0	0	6	6	6
Chhattisgarh	5	0	0	0	0	5	5	5
DD & DNH	1	1	1	0	0	0	0	1
Delhi	1	1	1	0	0	0	0	1
Goa	11	0	0	0	0	11	11	11
Gujarat	20	5	5	1	1	14	14	20
Haryana	2	2	2	0	0	0	0	2
Himachal Pradesh	7	1	1	1	1	5	5	7
J & K	9	0	0	1	1	8	8	9
Jharkhand	7	0	0	0	0	7	7	7
Karnataka	17	0	0	0	0	17	17	17
Kerala	21	1	1	0	0	20	20	21
Madhya* Pradesh	22	3	3	1	1	18	18	22
Maharashtra	53	9	9	6	6	38	38	53
Manipur	9	0	0	1	1	8	8	9
Meghalaya	7	2	2	0	0	5	5	7
Mizoram	9	0	0	0	0	9	9	9
Nagaland	6	1	1	0	0	5	5	6
Odisha	19	1	1	0	0	18	18	19
Puducherry	2	0	0	0	0	2	2	2
Punjab	4	2	2	0	0	2	2	4
Rajasthan	2	0	0	0	0	2	2	2
Sikkim	4	0	0	0	0	4	4	4
Tamil Nadu	6	4	4	0	0	2	2	6
Telangana**	8	1	1	2	2	5	5	8
Tripura	6	0	0	0	0	6	6	6
UP	12	4	4	0	0	8	8	12
Uttarakhand	9	3	3	1	1	5	5	9

West Bengal	17	1	1	1	1	15	15	17
Grand Total	351	45	45	16	16	290	290	351

Note:-

- * **MP State have submitted one combined action plan for river Kolar & River Kaliasot**
- ** **Telangana State submitted one action plan for river Manjeera & River Nakkavagu**

State-wise status of action plans received and the action plans approved by CPCB Task Team w.r.to Priority I & Priority II Polluted Rivers (as on 07.11.2019)

NAME OF THE STATE/UT	Total Identified Polluted River Stretches (PRS) Priority-I & Priority II	Identified PS Priority-II	Identified PRS Priority-II	No. of Action Plans Received	Action Plans Not Approved	Total Action Plans Approved
ASSAM	4	3	1	4	-	4
DAMAN, DIU AND DADRA NAGAR HAVELI	1	1	0	1	-	1
DELHI	1	1	0	1	1	0
GUJARAT	6	5	1	6	-	6
HARYANA	2	2	0	2	-	2
HIMACHAL PRADESH	2	1	1	2	-	2
JAMMU & KASHMIR	1	0	1	1	-	1
KERALA	1	1	0	1	-	1
MADHYA PRADESH	4	3	1	4	-	4
MAHARASHTRA	15	9	6	15	-	15
MANIPUR	1	0	1	1	-	1
MEGHALAYA	2	2	0	2	-	2
NAGALAND	1	1	0	1	-	1
ODISHA	1	1	0	1	-	1
PUNJAB	2	2	0	2	-	2
TAMIL NADU	4	4	0	4	-	4
TELANGANA	3	1	2	3	-	3
UTTAR PRADESH	4	4	0	4	-	4
UTTARAKHAND	4	3	1	4	-	4
WEST BENGAL	2	1	1	2	-	2
TOTAL	61	45	16	61	01	60

State-wise & River-wise recommendations of Task Team - Action Plans for Restoration of Identified Polluted River Stretches- as per Hon'ble NGT Orders dated 20.09.2018, 19.12.2018 & 08.04.2019 (Status as on 07.11.2019)

STATE	RIVER NAME	Status
ASSAM	BHARALU	Recommended subjected to conditions
	BORSOLA	Recommended subjected to conditions
	SILSAKO	Recommended subjected to conditions
	SORUSOLA	Recommended subjected to conditions
DAMAN, DIU AND DADRA NAGAR HAVELI	DAMANGANGA	Recommended subjected to conditions
DELHI	YAMUNA	Not Recommended
GUJARAT	AMLAKHADI	Recommended subjected to conditions
	BHADAR	Recommended subjected to conditions
	BHOGAVO	Recommended subjected to conditions
	KHARI	Recommended subjected to conditions
	SABARMATI	Recommended subjected to conditions
	VISHWAMITRI	Recommended subjected to conditions
HARYANA	GHAGGAR	Recommended subjected to conditions
	YAMUNA	Recommended subjected to conditions
HIMACHAL PRADESH	SUKHANA	Recommended subjected to conditions
	MARKANDA	Recommended subjected to conditions
JAMMU & KASHMIR	DEVIKA	Recommended subjected to conditions
KERALA	KARAMANA	Recommended subjected to conditions
MADHYA PRADESH	CHAMBAL	Recommended subjected to conditions
	KHAN	Recommended subjected to conditions
	KSHIPRA	Recommended subjected to conditions
	BETWA	Recommended subjected to conditions
MAHARASHTRA	GODAVARI	Recommended subjected to conditions
	KALU	Recommended subjected to conditions
	KUNDALIKA	Recommended subjected to conditions
	MITHI	Recommended subjected to conditions
	MORNA	Recommended subjected to conditions
	MULA	Recommended subjected to conditions
	MUTHA	Recommended subjected to conditions
	NI RA	Recommended subjected to conditions
	VEL	Recommended subjected to conditions
	BHIMA	Recommended subjected to conditions
	INDRAYANI	Recommended subjected to conditions
	MULA-MUTHA	Recommended subjected to conditions
	PAWANA	Recommended subjected to conditions
	WAINGANGA	Recommended subjected to conditions
	WARDHA	Recommended subjected to conditions
MANIPUR	NAMBUL	Recommended subjected to conditions
MEGHALAYA	UMKHRAH	Recommended subjected to conditions
	UMSHYRPI	Recommended subjected to conditions
NAGALAND	DHANSIRI	Recommended subjected to conditions
ODISHA	GANGUA	Recommended subjected to conditions
PUNJAB	GHAGGAR	Recommended subjected to conditions
	SUTLEJ	Recommended subjected to conditions
	CAUVERY	Recommended subjected to conditions

	SARABANGA	Recommended subjected to conditions
TAMIL NADU	THIRUMANIMUTHAR	Recommended subjected to conditions
	VAS I STA	Recommended subjected to conditions
TELANGANA	MUSI	Recommended subjected to conditions
	MANJEERA	Recommended subjected to conditions
	NAKKAVAGU	Recommended subjected to conditions
UTTAR PRADESH	HINDON	Recommended subjected to conditions
	KALINADI	Recommended subjected to conditions
	VARUNA	Recommended subjected to conditions
	YAMUNA	Recommended subjected to conditions
UTTARAKHAND	BHELA	Recommended subjected to conditions
	DHELA	Recommended subjected to conditions
	SUSWA	Recommended subjected to conditions
	KICHHA	Recommended subjected to conditions
WEST BENGAL	VINDHADHARI	Recommended subjected to conditions
	MAHANANDA	Recommended subjected to conditions

CPCB has reviewed action plans w.r.t. Priority I and Priority II polluted river stretches. **So far, 60 action plans out of 61 Priority I and Priority II polluted river stretches pertaining to 18 States & 1 UT have been approved by CPCB Task Team in 08 Task Team meetings conducted till date.** Action Plan of River Yamuna in Delhi Stretch is not approved by CPCB Task Team till Date. Status along with date of approval of Action plans for Priority — I & II polluted river stretches is given in Table below.

Task Team Meeting	Date of Meeting	Action Plans approved	
		STATE	No of Action
III	11 - 12.02.2019	GUJARAT	6
		HARYANA	2
		HIMACHAL PRADESH	2
		KERALA	
		MADHYA PRADESH	2
		PUNJAB	2
		TELANGANA	3
		WEST BENGAL	2
IV	28.03.2019	DD, DNH	1
		JAMMU & KASHMIR	1
		MADHYA PRADESH	2
		MAHARASHTRA	15
		ODISHA	1
V	24.04.2019	TAMIL NADU	4
VI	31 05.2019	UTTAR PRADESH	4
VII	16.07.2019	UTTARAKHAND	4
VIII	06.09.2019	ASSAM	4
		MANIPUR	1
		MEGHALAYA	2
		NAGALAND	1
Total Action Plans Approved			60

With respect to Priority — III to V polluted river stretches, action plans for **282 out of 290** polluted river stretches have been submitted to CPCB. Kerala (07) and Madhya Pradesh (01) have not

submitted Action Plans under these priorities. State- wise status is given in **Annexure I**.

A meeting is scheduled on 12.09.2019 in CPCB, inviting eleven SPCBs/PCCs for presentation to review the RRC approved action plans for polluted river stretches falling under Priority III to V classes. Only Priority III to V polluted river stretches exist in these States/ UTs.

Name of the State / UT	Total No. of Identified Polluted River stretches (PRS)	Priority I Identified Polluted River stretches		Priority II Identified Polluted River stretches		Priority – III to V Identified Polluted River stretches		Total Action Plans Received
		No. of P-I PRS	Action Plans received w.r.to P-I	No. of P-II PRS	Action Plans received w.r.to p-II P-1 / 0	No. of P-III to P-V	Action Plans received w.r.to P-III to P-V	
Andhra Pradesh	5	0	0	0	0	5	5	5
Assam	44	3	3	1	1	40	40	44
Bihar	6	0	0	0	0	6	6	6
Chhattisgarh	5	0	0	0	0	5	5	5
DD & DNH	1	1	1	0	0	0	0	1
Delhi	1	1	1	0	0	0	0	1
Goa	11	0	0	0	0	11	11	11
Gujarat	20	5	5	1	1	14	14	20
Haryana	2	2	2	0	0	0	0	2
Himachal Pradesh	7	1	1	1	1	5	5	7
i & K	9	0	0	1	1	8	8	9
Jharkhand	7	0	0	0	0	7	7	7
Karnataka	17	0	0	0	0	17	17	17
Kerala	21	1	1	0	0	20	13	14
Madhya Pradesh	22	3	3	1	1	18	17	21
Maharashtra	53	9	9	6	6	38	38	53
Manipur	9	0	0	1	1	8	8	9
Meghalaya	7	2	2	0	0	5	5	7
Mizoram	9	0	0	0	0	9	9	9
Nagaland	6	1	1	0	0	5	5	6
Odisha	19	1	1	0	0	18	18	19
Puducherry	2	0	0	0	0	2	2	2
Punjab	4	2	2	0	0	2	2	4
Rajasthan	2	0	0	0	0	2	2	2
Sikkim	4	0	0	0	0	4	4	4
Tamil Nadu	6	4	4	0	0	2	2	6
Telangana	8	1	1	2	2	5	5	8
Tripura	6	0	0	0	0	6	6	6
UP	12	4	4	0	0	8	8	12
Uttarakhand	9	3	3	1	1	5	5	9
West Bengal	17	1	1	1	1	15	15	17
Grand Total	351	45	45	16	16	290	282	343

xxx.....xxx.....xxx.....

45. It is observed that the report of the CPCB has focused only on BOD and FC. It has not taken other parameters for analysis such as pH, COD, DO and other recalcitrant toxic pollutants having tendency of bio magnification. Further, monitoring gaps in terms of number of stations have to be identified, upgraded and upscaled so to cover upstream and downstream locations of major discharges to the river. In this view of the matter, CPCB may also ascertain whether there are any other rivers falling in the category of polluted river stretches.

46. The report of CPCB shows the status of compliance. **As already noted, the action plans have been prepared with respect to 351 river stretches by the concerned States/UTs with regard to category P-I & P-II (the most polluted river stretches), the action plans have been duly recommended by CPCB with certain changes. The said action plans are reported to be complete with respect to necessary components for river rejuvenation including identification of drains, their interception, setting up of STPs, utilization of treated water, identification of flood plain zones, maintaining e-flow, etc. Let the same be executed by 31.03.2021 as already directed. No case is made out to extend the laid down timeline unconditionally. As noted earlier, situation of water pollution is grim in the country and there has been deterioration inspite of the Water Act which was enacted way back in 1974 which was intended to bring about any improvement. This Tribunal has repeatedly put all authorities to notice in the light of earlier orders of the Hon'ble Supreme Court on the subject. Directions were also issued for budgetary support as part of the action plans which has been done in indicative terms. There can be no plea of lack of funds on issue threatening the existence of human beings. We have thus no option except to be strict about the timelines already laid down. We are also of the view that adherence to the timelines must be monitored by the Chief Secretaries of all the States/UTs and should also be monitored at National level by the Secretary, Ministry of Jal Shakti with the assistance of NMCG and CPCB. For this 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 and may give its quarterly report to this Tribunal commencing from 01.04.2020. 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. 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. Monthly progress report may be furnished to Secretary, Ministry of Jal Shakti with a copy to CPCB. Steps for in situ remediation as an interim measure may be ensured as directed above as per laid down timeline. 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. As already mentioned, procedures for DPRs/tender process needs to be shortened and if found viable business model developed at central/state level. Wherever work is awarded to any contractor, performance guarantee must be taken in above terms.

CPCB may after scrutiny finalize the action plans relating to P-III and P-IV also 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.

10. In the last order dated 21.9.2020, it was observed and directed as follows:-

“

I.Original Application No. 673/2018

Review of proceedings before the Tribunal

12. As noted earlier, the issue for consideration in this matter is rejuvenation of 351 polluted river stretches causing threat to public health and the environment. The Tribunal has considered the matter on several occasions suo motu as well as on directions of the Hon'ble Supreme Court with regard to certain polluted river stretches, **including Ganga and Yamuna**. It is not necessary to refer to all such orders. We may only refer to the directions issued on 06.12.2019 and 29.06.2020 which are as follows.

13. Directions in order dated **06.12.2019**:

“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 at least 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.”*

(emphasis supplied)

14. *Directions in order dated **29.06.2020:***

“XII. Directions:

45. *We reiterate our directions in order dated 6.12.2019 in the present matter, reproduced in Para 38 above, read with those in order dated 21.5.2020 in OA 873/2017 and direct CPCB and Secretary, Jal Shakti to further monitor steps for enforcement of law meaningfully in accordance with the directions of the Hon’ble Supreme Court and this Tribunal. **The monitoring is expected with reference to ensuring that no pollution is discharged in water bodies and any violation by local bodies or private persons are dealt with as per mandate of law as laid down in orders of the Hon’ble Supreme Court and this Tribunal without any deviation from timelines. The higher authorities must record failures in ACRs as already directed and recover compensation as per laid down scale. Every State/UT in the first instance must ensure that at least one polluted river stretch in each category is restored so as to meet all water quality standards upto bathing level. This may serve as a model for restoring the remaining stretches.”***

Review of Compliance Status Reports

CPCB Report dated 15.09.2020

15. *Report of the CPCB filed on 15.09.2020 in pursuance of order dated 29.06.2020 in O.A. 673/2018 mentions the status of approval of action plans in a tabular form in Annexure -2 which is summed up as follows:-*

“

- All 61 action plans pertaining to Priority I and Priority II polluted river stretches submitted by 18 States & 2 UTs have been approved along with conditions by CPCB Task Team
- Out of 115 Action plans pertaining to P-III and P-IV polluted river stretches received from 24 States & 1 UT, 108 action plans pertaining to 22 States and 1 UT have been approved along with the conditions.
- Total 169 action plans submitted by 24 States & 3 UTs have been approved by CPCB Task Team.”

Annexure-2 is reproduced below:-

“State-wise Identified Polluted Rivers and the Status of Action Plans approved by CPCB in compliance to Hon'ble NGT Orders dated 20.09.2018, 19.12.2018, 08.04.2019, 6.12.2019 & 29.6.2020 in OA No. 673 of 2018 (as on 10.09.2020)

Name of the State/UT	Total No. of Identified polluted River stretches (PRS)	Priority I & II PRS approved		Priority III PRS		Priority IV PRS		Priority V PRS*	Total Action Plans approved by CPCB Task Team
		Priority I	Priority II	Total Number	CPCB Task Priority III approved	Total Number	Priority IV approved		
Andhra Pradesh	5	0	0			2	2	3	2
Assam	44	3	1	4	4	3	3	33	11
Bihar	6	0	0	1	1			5	1
Chhattisgarh	5	0	0			4**	0	1	0
DD & DNH	1	1	0					0	1
Delhi	1	1	0					0	1
Goa	11	0	0	1	1	2	2	8	3
Gujarat	20	5	1	2	2	6	6	6	14
Haryana	2	2	0					0	2
Himachal Pradesh	7	1	1	1	1			4	3
J & K	9	0	1	2	2	2	2	4	5
Jharkhand	7	0	0			3**	0	4	0
Karnataka	17	0	0	4	4	7	7	6	11
Kerala	21	1	0			5	5	15	6
Madhya Pradesh	22	3	1	1	1	3	3	14	8
Maharashtra	53	9	6	14	14	10	10	14	39
Manipur	9	0	1					8	1
Meghalaya	7	2	0			3	3	2	5
Mizoram	9	0	0	1	1	3	3	5	4
Nagaland	6	1	0	1	1	2	2	2	4
Odisha	19	1	0	3	3	2	2	13	6
Puducherry	2	0	0			1	1	1	1
Punjab	4	2	0			1	1	1	3
Rajasthan	2	0	0	1	1			1	1
Sikkim	4	0	0					4	0
Tamil Nadu	6	4	0			1	1	1	5
Telangana	8	1	2	2	2	2	2	1	
Tripura	6	0	0					6	
Uttar Pradesh	12	4	0	1	1	2	2	5	7
Uttarakhand	9	3	1	1	1	4	4	0	9
West Bengal	17	1	1	3	3	4	4	8	9
Grand Total	351	45	16	43	43	72	65	175	169

**Action plans pertaining to Priority V does not need approval by CPCB.*

*** Action plans under consideration, upon receipt of RRC approved revised action plans from the respective State.”*

16. The report further mentions that certain States sought omission of polluted river stretches from the list. In response, CPCB prepared a criteria that a stretch can be deleted from the list of polluted river stretches if water quality complies with the criteria for two years. The report also mentions that in terms of order dated 06.12.2019, Central Monitoring Committee (CMC) has been constituted under the Chairmanship of Secretary, MoJS to review the status of compliance of implementation of action plans with the Chief Secretaries of all States/UTs, with the assistance of the CPCB and the NMCG.

CMC Report dated 15.09.2020

17. Compliance status has been mentioned in the CMC report as follows:-

“Existing Sewage Infrastructure

*In respect of the existing sewage infrastructure, **53,396 MLD of sewage (from urban settlements) is generated in 31 States/ UTs and 29,556 MLD capacity of STPs exists (1212 nos.) which approximates to about 55% of sewage generation. Against the existing capacity, only 62% of the capacity is being utilized for treatment of municipal sewage** (except for Andhra Pradesh, Tripura and West Bengal who have not reported the figures of utilization of existing capacity). **Rest of the existing capacity remains unutilized because of various reasons, including lack of availability of conveyance of sewage to treatment plants, technology issues requiring up-gradation of plants, or dysfunctionality on various counts. This leaves a gap of 24,144 MLD in treatment capacity for which States are regularly being asked to provide their inputs with regards to their plans to fill the gap including that for financing the creation of infrastructure.** It is also important that operational STPs remain compliant to the STP outlet standards as per environmental norms. The data obtained from the States of Chhattisgarh, Daman, Diu and Dadra Nagar Haveli, Gujarat, Manipur, Odisha, Sikkim, Tripura, Uttarakhand and Uttar Pradesh shows that **out of total 235 operational STPs in these States, 162 STPs are compliant to the outlet standards and a large number of STPs remain non-compliant to the environmental norms.** Other States have failed to report compliance of existing STPs to STP outlet standards. The States have assured that the same will be*

provided to CMC. The details of sewage generation, existing sewage treatment capacity, its utilization and gap thereof is presented in **Table-1**.

Table-1: Details of Existing Sewage Infrastructure in the 31 States/UTs

No.	State	Sewage Generation (in MLD)	Existing STP (capacity in MLD and No.)	Capacity Utilization (In MLD)	Gap in Treatment at present (in MLD)
1	Andhra Pradesh	1384	515.45	-	868.55
2	Assam	703	0	0	703
3	Bihar	651.5	40 (2 STPs)	22 (55%)	611.5
4	Chhattisgarh	600	73.1 (3 STPs)	6 (8.2%)	526.9
5	Daman, Diu And Dadra Nagar Haveli	20.5	17.21 (2 STPs)	5.2 (30%)	3.29
6	Delhi	3273	2714 (35 STPs)	2455 (90%)	559
7	Goa	165	78.35 (9 STPs)	46.6 (59%)	86.65
8	Gujarat	3765	3378 (70 STPs)	2812 (83%)	387
9	Haryana	1454	1767	1466 (82%)	-
10	Himachal Pradesh	102.8	86.9	55.1 (63%)	15.9
11	Jammu & Kashmir	970	126.80 (11 STPs)	80.70 (63%)	843.2
12	Jharkhand	700	131 (19 STPs)	75 (57%)	569
13	Karnataka	3356.5	2561 (142 STPs)	1704 (66%)	795.5
14	Kerala	3759.28	124.135 (11 STPs)	81.325 (65%)	3634.935
15	Madhya Pradesh	2183.65	690.76 (25 STPs)	524.24 (75%)	1492.89
16	Maharashtra	9757	7746 (137 STPs)	4013 (51%)	2011
17	Manipur	114.054	27 (1 STP)	8 (29%)	87.05
18	Meghalaya	87.91	0	0	87.91
19	Mizoram	80	10 (1 STP)	0	70
20	Nagaland	44.3	25.4 (1 STP)	0	18.9
21	Odisha	439.49	91 (5 STPs)	70 (76%)	348.49
22	Puducherry	84	56	30 (52%)	28

23	Punjab	2111	1621.5 (115 STPs)	80%	456
24	Rajasthan	1712	966 (68 STPs)	43%	746
25	Sikkim	47.68	19.02 (6 STPs)	17 (89%)	28
26	Tamil Nadu	2070.855	1484.42 (56 STPs)	798.34 (53%)	586.435
27	Telangana	2453	920.1	810 (88%)	1532.9
28	Tripura	175	8 (1 STP)	-	167
29	Uttarakhand	329.33	355.13 (61 STPs)	203.9 (57%)	-
30	Uttar Pradesh	5500	3365.88 (105 STPs)	2566.55 (76%)	2134.11
31	West Bengal (as per CPCB Report 2018)	5303	557.64 (43 STPs)	-	4745.36
Total		53,396.849	29,556.795		24,144.47

In particular, poor capacity utilization of Rajasthan (43%), Manipur (29%), Daman Diu & Dadra Nagar Haveli (30%), Chhattisgarh (8%), Maharashtra (51%), Puducherry (53%), Tamil Nadu (53%) needs consideration and attention for which Chief Secretaries of the concerned States have been apprised through D.O. letters from Secretary, Department of Water Resources, River Development & Ganga Rejuvenation. The States of Assam and Meghalaya do not have any existing treatment capacity while Tripura & Manipur has only one STP each. The compliance of existing STPs in Telangana (88%), Madhya Pradesh (75%), Delhi (90%), Gujarat (83%), Haryana (82%), Odisha (76%), Punjab (80%), Sikkim (89%), UP (76%), remains good. This needs to be maintained and continuously improved. Utilization has not been reported by Andhra Pradesh, West Bengal, Tripura, for which these States have been reminded.

Most of States do not have online system of monitoring the functioning of STPs, both in respect of quantity of sewage being treated and whether the treatment conforms to the environmental norms for STP outlet standards. Directions are required to be given to States to not only ensure that created capacity is optimally utilized by carrying out condition assessment of existing STPs/ sewage infrastructure in a fixed time frame, say another 3 months, but also putting in plans to upgrade STPs requiring upgradation so as to make them

functional. In addition, it is also equally important that States must develop a modern technology based online monitoring system, preferably IoT enabled platform for monitoring the performance of sewage infrastructure, with flexibility of integrating STPs under implementation and planning alike and which are likely to be commissioned in future. Such a system will enable that health of sewage treatment facility is readily available, with minimum human interference in regard to data inflows into the system, at appropriate levels in the Government and State and Central regulators. An IoT enabled platform shall also be futuristic and will have common architecture, thus facilitating, horizontal integration of large number of STP plants (both existing and likely to come up in future) and uniform platform adaptable for all States and also at National level.

So far as monitoring of water quality of rivers by CPCB is concerned, **CPCB must continue to monitor all the parameters prescribed under »Primary Water Quality Criteria for Bathing Water« notified under Environment (Protection) Rules, 1986 (i.e. pH, DO, BOD, Faecal Coliform and Faecal Streptococci) as well as COD and other recalcitrant toxic pollutants having tendency for bio-magnification as prescribed under »Guidelines on Water Quality Monitoring - 2017« issued by MoEF&CC.** The monitoring will ensure that environmental standards are observed in respect of rivers and other water bodies.”

18. The report gives State-wise details of the projects which are ongoing, under tendering, awaiting sanction and where DPRs are yet to be prepared. Further mention has been made of the status of bio-remediation projects as follows:

“The status of in-situ bioremediation/ phyto-remediation in Polluted River Stretches being undertaken by the State was monitored. Most of the States have reported that they **do not have technical expertise as well as competency to take up in-situ bio-remediation/ phyto-remediation measures.** Further, it has been reported that due to lack of availability of vendors, appropriate agencies with proven capability to implement such works and non-availability of standard rates, the progress in this activity has been slow. **Accordingly, Andhra Pradesh, Assam, Gujarat, Kerala, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Odisha, Rajasthan, Sikkim, Tamil Nadu, Tripura are yet to take up any such measures on the drains in the polluted river stretches.** Other States have taken up measures on pilot basis only which they propose to evaluate based on the results obtained before works in other reaches are taken. Uttar

Pradesh, West Bengal have reported that works have been taken up in 42 drains and 10 drains respectively in their State.

Further, Hon'ble NGT's vide its order dated 05.3.2020 (hearing on 18.2.2020) in the matter OA No. 06 of 2012 Manoj Mishra & ors while considering the report of Yamuna Monitoring Committee on "Approach to in-situ bio-remediation/ phyto-remediation of sewage in drains of Delhi", has observed and directed that CPCB report on "Alternate technologies for management of WW drains" be revised and circulated to MoUD, MoJS, NMCG and Govt. of Delhi, UP, Haryana for formulation of Policy for alternate technologies for waste water drain management. The same has already been informed to the States for their guidance to enable them to take decisions in implementation.

State wise status of bio-remediation/ phyto-remediation projects is given below.

19. The status of Industrial Pollution Management has been mentioned as follows:-

8. Industrial Pollution Management in the State/ UTs:

"So far as measures for abatement of industrial pollution are concerned, the State-wise details about number of water polluting industries, industries having ETPs, quantity of effluent discharge, treatment capacity of ETPs and number of ETPs and CTPs is given in **Table-7**. It can be seen from the information provided by the States that only Delhi, Dadra and Nagar Haveli and Kerala have all the industries with functional ETPs. In respect of Andhra Pradesh, Kerala, Bihar, Jharkhand and Assam, data submitted by States has been observed to be inconsistent and needs to be further clarified by the States.

All the industries located in catchment of Polluted River Stretches in State of Gujarat, Delhi, Odisha, Maharashtra, Sikkim, Meghalaya, Jharkhand and Bihar have been provided with functional ETPs. The compliance status of these ETPs is being reviewed and will be taken up in subsequent meetings of CMC."

20. Finally State specific issues have been mentioned. The report also gives the status of Solid Waste Management, Ground Water Augmentation Afforestation, Floodplain and E-flow Management and Scrutiny of Action Plans for P-II and P-IV.

Observations and recommendations in the CMC report:

21. The observations and recommendations in the report are as follows:

*“States are regularly submitting Monthly Progress Reports, in the requisite formats, by the stipulated dates. However, **quality of information provided in MPR in respect of a few States is wanting and needs to be improved.** As MPRs are one of an important document which provides requisite status in respect of various activities being undertaken as per approved Action Plans, the quality of information is important for meetings of CMC and further reporting to Hon^{ble} NGT. MPR before being submitted should therefore, necessarily be studied by senior officers in States and so certified.*

- *Most of States have informed that the progress of ongoing works has been severely affected due to COVID-19 pandemic which has impacted issues related to mobilization of skilled and unskilled manpower as well as supply of materials besides site works. Site works often reportedly get affected due to lockdown kind of situations whenever the same is under enforcement. The project completion timelines, therefore, are getting impacted due to these factors also.*
- *States have failed to report specific reasons for delay in grounding the projects as well identification of officials responsible for the delays. The necessary reporting from the States is being taken up and will be followed up in future review meetings.*
- *States have reported about financing difficulties being faced by them on account of resource crunch due to COVID-19 situation. States, reportedly are trying to arrange funding for priority projects and will be apprising the status in subsequent meetings of the CMC. The process of sanctioning of projects, being dependent on funding, is getting affected due to pandemic situation.*
- **Considering financial limitations, States/ UTs may take up STP projects on Hybrid Annuity Model, which, as a business model, enables the Urban Local Body/ State Government to fund the development and operation of sewage treatment infrastructure taking into account the future flow of revenue.** *It will help ULBs to tap the external market funding for development & operation of sewage infrastructure, apart from quality treatment services. NMCG has prepared model tender documents for development of STPs through HAM and recently these documents have also been approved by NITI Aayog.*

- **One City- One Operator concepts offer integrating the rehabilitation and Operation & Maintenance of the existing treatment infrastructure along with development & operation of new STPs.** This concept can be integrated with HAM model, as is being done in many projects under Namami Gange.
- Government of India has also introduced **National Faecal Sludge & Septage Management (FSSM) Policy in 2017 to emphasize the importance of treating the faecal sludge from on-site sanitation system.** Some State Governments have also issued State level FSSM policies/ guidelines. Nearly 25 Faecal Sludge Treatment Plants (FSTPs) are operational and another 400 are in the offing in the country. Other States must consider adopting State level FSSM policies/ guidelines for regulating the handling, treatment and disposal of faecal sludge.
- Many of the States/ UTs have also been looking for alternatives beyond conventional STPs for treatment the sewage/ faecal sludge. States may consider implementation of FSTPs and/ or co-treatment of faecal sludge in existing STPs, or may judiciously adopt any other alternate treatment technology, in towns wherever feasible.
- Many States/ UTs are constructing or have proposed to develop STPs in Polluted River Stretches with capacity less than 2 MLD. States, in such situations, may consider to adopt installation of **decentralized modular STPs; which offer advantages in form of lesser time involved in commissioning of systems, less land footprints, easy operations; instead of conventional centralized STPs based on techno-commercial considerations.** This will also enable them to comply to NGT stipulated timelines.
- States have created assets for treatment of sewage and capacity of **STPs so created is not being optimally utilised due to many reasons, including lack of availability of conveyance of sewage to treatment plants, technology issues requiring up-gradation of plants, or dysfunctionality etc.** A large number of STPs remain non-compliant to STPs outlet norms. States must ensure optimum utilization of the existing treatment infrastructure and also ensure compliance of the plants with regard to the environment norms. For this purpose, States may carry condition assessment studies of existing STPs/ sewage infrastructure in a fixed time frame, say another 3 months so as to identify the reasons of sub-optimum utilization and dysfunctionality of existing STPs. This will help them in finalizing plans to upgrade STPs requiring upgradation so as to make them functional.

- States do not have an online monitoring system in place to monitor (both quantity and quality of treated water) the health of existing sewerage infrastructure. States must consider to develop an online monitoring system, preferably IoT enabled platform for monitoring the performance of sewage infrastructure, with flexibility of integrating STPs under implementation and planning alike and which are likely to be commissioned in future. Such a system will enable that health of sewage treatment facility is readily available, with minimum human interference in regard to data inflows into the system, at appropriate levels in the Government and State and Central regulators. An IoT enabled platform shall also be futuristic and will have common architecture, thus facilitating, horizontal integration of large number of STP plants (both existing and likely to come up in future) and uniform platform adaptable for all States and also at National level.
- **53 projects** with capacity of about **867.46 MLD** in Polluted River Stretches are expected to be completed by December 2020. The concerned States must ensure that monthly monitoring and regular watch on the progress of these projects is to be maintained, so that the completion timelines are strictly complied and projects commissioned in time.
- **41 projects** are likely to be completed during time window of January 2021-March 2021. Progress of these projects is also required to be continuously monitored at State level so that lag, if any, in adhering to the timelines is avoided.
- State of Maharashtra, Telangana & Gujarat have to ensure that decision on tenders already called by State are finalized and the pending land acquisition issues for many STPs are sorted out urgently.”

Consideration of CMC and OC reports

23. The CMC report states that it addressed communication to all the Chief Secretaries and explained Hybrid Annuity Model (**HAM**) based PPP projects, One City One Operator (**OCOO**) concept, as implemented for sewerage intervention projects under Namami Gange programme as well as Faecal Sludge and Septage Management (**FSSM**) concept. The business model for liquid waste management has in-built mitigation mechanism against time & cost overrun, improper design, sub-optimal operation and failure to meet the performance standards. As a business model, HAM enables the Urban Local Body/ State Government to fund the development and operation of sewage treatment infrastructure taking into account the future flow of revenue. States were also facilitated by holding a Webinar on “Mainstreaming Faecal Sludge & Septage Management in Ganga Basin”, which was attended by officials from almost all

*the States. The Webinar also included a session on experience of Odisha which has taken up FSSM extensively, besides initiatives taken by NMCG in these directions. States were urged to consider the implementation of FSTPs and/ or co-treatment of faecal sludge in existing STPs, in all towns wherever feasible, so that dumping of the faecal sludge in water bodies/ land and thereby polluting them, can be avoided. The States/UT Administrations were specifically requested to ensure that **at least one polluted river stretch in each category is restored to meet all water quality standards up to bathing level** as ordered by this Tribunal. This may serve as a “model” with a view to replicate the efforts for restoring the remaining stretches. **States have failed to report reasons for delay in grounding the projects as well identification of officials responsible for the delays.** The necessary reporting from the States is being taken up and will be followed up in future review meetings.*

Going Forward

24. We have duly considered the CPCB, CMC and OC reports as above and noted the gaps and recommendations. We accept the recommendations of the Committees already quoted above that the States should furnish quality information and comply with the directions of this Tribunal in terms of orders dated 06.12.2019 and 29.06.2020. The violation of mandate of 100% treatment of sewage may be visited with the assessment and recovery of compensation and violation of timelines for setting up of pollution control devices may also be likewise strictly enforced with the compensation regime in place. There is also need for fully utilizing and augmenting the existing infrastructure as already noted above.

25. The States/UTs may consider using HAM as a business model as well as OCOP concept, FSSM Policy, alternative models for treatment of sewage/faecal sludge, decentralized STPs and also strengthen the online monitoring system. We are also of the view that flood plain zones of all the rivers need to be mapped and demarcated and encroachments removed therefrom. The same be utilized for plantation, creation of bio-diversity parks and constructed wetlands or other recreational purposes, consistent with the environmental concern. We agree with the OC that river side mining needs to be regulated. To reduce the timelines for setting up of STPs, many States/UTs are consuming time in preparing DPRs whereas model DPRs can be prepared and used for shortening the timelines. Similarly, SOPs need to be prepared for the timeline to be taken in setting up of STPs as well as for maintenance and operation of existing STPs particularly those not meeting the norms. Number of monitoring stations also needs to be suitably increased. We are also of the view that the State RRCs

must function effectively and the Chief Secretaries must hold monthly meetings as it is found from the report of the OC for the State of UP that the Chief Secretaries may not be doing so. Huge failures of the States/UTs may show poor governance as far as environment is concerned which may need to be remedied. As found by the CMC, neither delay is explained nor accountability is fixed for the failure of the concerned officers which is not a happy situation.

26. While dealing with the control of pollution of River Ganga, the Tribunal noted that following action points for monitoring:

- i. **Setting up of STPs, Interception and Division (I&D) of drains and preventing untreated sewage and effluents**
- ii. **Use of treated water**
- iii. **Use of sludge manure**
- iv. **Status of septage management**
- v. **Compliance in relation to industries**
- vi. **Installation of STPs/treatment facilities in Hotels/Ashrams and Dharmshalas.**
- vii. **Water quality monitoring of river Ganga and its tributaries.**
- viii. **Maintenance of environmental flow in river Ganga.**
- ix. **Disposal of Bio-medical waste.**
- x. **Compliance of Solid Waste Management (SWM) Rules, 2016.**
- xi. **Preparation of maps and zoning of flood plains.**
- xii. **Mining activity under supervision of the concerned authorities.**
- xiii. **Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring.**

CMC/RRCs/ OC for UP may conduct further monitoring keeping in mind the above action points.”

V. Directions:

36. Accordingly, we issue following directions:

- i. *All the States/UTs may address gaps in generation and treatment of sewage/effluents **by ensuring setting up of requisite number of functional ETPs, CETPs and STPs**, as directed by the Hon’ble Supreme Court in (2017) 5 SCC 326.*
- ii. *The timeline for commissioning of all STPs fixed by the Hon’ble Supreme Court, i.e., 31.03.2018, has long passed. The Hon’ble Supreme Court directed that the State PCBs must initiate prosecution of the erring Secretaries to the Governments, which has also not happened. This Tribunal was directed to monitor compliance and in the course thereof, we direct that compensation may be recovered in the manner*

- already directed in earlier orders (See, **Paras 5 and 6** herein), which may be deposited with the CPCB for restoration of the environment.
- iii. The unutilized capacity of the existing STPs may be utilized expeditiously.
 - iv. The States/ UTs may ensure that the CETP, ETPs and STPs meet the laid down norms and remedial action be taken wherever norms are not met.
 - v. It must be ensured that no untreated sewage/ effluent is discharged into any water body. Prompt remedial action may be taken by the State PCBs/PCCs against non-compliant ETPs/CETPs by closing down or restricting the effluents generating activity, recovering compensation and taking other coercive measures following due process of law.
 - vi. Directions outlined in **Paras 24-26** herein may be implemented by the States/ UTs, and their compliance monitored by the Chief Secretaries at the State level, and the CMC at the National level.
 - vii. Wherever action plans have not yet been finalized in respect of polluted river stretches or polluted coastal stretches, the same may be completed within one month from today. The execution of action plans may be overseen in the manner already directed in OA 673/2018 by River Rejuvenation Committees (RCCs). In the coastal areas, the said Committees may be known as 'River/Coastal Rejuvenation Committees'. The action plans must have provision for budgetary support in the manner laid down by the Hon'ble Supreme Court or otherwise which aspect may also be monitored by the CMC.
 - viii. Directions outlined in **Para 29** herein may be implemented by the concerned coastal States/ UTs, and their compliance monitored by the Chief Secretaries at the State level, and the CMC at the National level. OA No. 829/2019 stands disposed of and further monitoring of the issue will henceforth be in OA 593/2017 and OA 673/2018.
 - ix. Directions outlined in **Para 34 and 35** herein may be implemented by the States/ UTs, and their compliance monitored by the Chief Secretaries at the State level, and the CMC at the National level. OA No. 148/2016 stands disposed of and further monitoring of the issue will henceforth be in OA 593/2017 and OA 673/2018.
 - x. CMC may consider development of an appropriate App to enable easy filing and redressal of grievances with regard to illegal discharge of sewage/ effluents.
 - xi. The monitoring by the CMC may have the target of reduction of pollution loads and improvement of water quality of rivers and coastal areas.
 - xii. The CMC may also monitor the setting up of the bio-diversity parks, constructed wetlands and other alternative measures to reduce pollution load.
 - xiii. The CMC may also monitor demarcation of flood plain zones.

- xiv. *The treated sewage water may be duly utilized for secondary purposes by preparing appropriate action plans and reports in this regard be filed with the CPCB periodically.*
- xv. **CMC may submit its consolidated update report incorporating all the above, before the next date. Each action point mentioned in Para 26 may be individually covered, and summarized in a tabular format.”**

CMC Report dated 12.02.2021

11. Accordingly, the Central Monitoring Committee has filed its report dated 12.02.2021 titled **‘3rd QUARTERLY REPORT OF THE CENTRAL MONITORING COMMITTEE (CMC) IN COMPLIANCE OF THE ORDER DATED 21.09.2020’**. The report refers to the correspondence with the States for preventing and controlling pollution in rivers/ water bodies/ lakes and ensuring that no untreated effluent/ sewage (beyond the prescribed standards) is allowed to be discharged from the ETPs/ CETPs/ STPs. Further reference has been made to the webinar held on 06.11.2020 to discuss approaches and models for waste management. Reference has also been made to discussion with the Niti Aayog to discuss business models to be adopted in Fecal Sludge and Septage Management (FSSM). Webinar held on 19.01.2021 for implementation of FSSM in cities and towns of Ganga basin has also been referred to. The report further mentions the meetings held by the CMC to monitor the progress on 30th September, 2020, 9th November, 2020 and 5th January, 2021 apart from other meetings with the Senior level Officials of the States/UTs to discuss States specific issues. It is further mentioned that the implementation of projects is being monitored in States which is reviewed at Central level. Progress reports were obtained in respect of action plans of States/UTs to prevent pollution of rivers/water bodies and to take action against the violators. **The CMC also sought information about coastal pollution**

from 13 States/UTs. Further, grievance module for addressing the issues of sewage/ effluent has been developed and made online on NMCG website, the States/ UTs have been directed to regularly monitor and update the status. Report also deals with use of treated water for secondary purposes.

12. The report thereafter gives the status as follows:

“Existing Sewage Infrastructure

48,004 MLD of sewage (from urban settlements) is being generated in 31 States/ UTs and 30,001 MLD capacity of STPs (1249 nos.) is existing which approximates to about 62% of sewage generation. Against the existing capacity, only 56% of the capacity is being utilized for treatment of municipal sewage. This leaves a gap of 17,027 MLD in treatment capacity. The details of sewage generation, existing sewage treatment capacity, its utilization and gap thereof is presented in Table-1.

Table-1: Details of Existing Sewage Infrastructure in the 31 States/ UTs

No.	State	Sewage Generation (in MLD)	Existing STP (capacity in MLD and No.)	Capacity Utilization (In MLD)	Gap in Treatment at present (in MLD)
1	Andhra Pradesh	1463.20	515.85 (43 STPs)	473.77 (91%)	947.35
2	Assam	435.53	0	0	435.53
3	Bihar	651.5	230 (6 STPs)	100 (44%)	421.5
4	Chhattisgarh	600	73.1 (3 STPs)	6 (8%)	526.9
5	Daman, Diu And Dadra Nagar Haveli	21.2	17.21 (2 STPs)	6.1 (35%)	3.9
6	Delhi	3273	2715 (35 STPs)	2432 (90%)	558
7	Goa	112.53	78.35 (9 STPs)	29 (37%)	34.18
8	Gujarat	4003	3485 (73 STPs)	2739 (78%)	518
9	Haryana	1267	1892 (155 STPs)	1189 (62%)	-
10	Himachal Pradesh	163.5	120.5 (65 STPs)	76.8 (64%)	43

11	Jammu & Kashmir	523	139 (15 STPs)	82.9 (60%)	383.08
12	Jharkhand	452	108 (14 STPs)	83%	343.8
13	Karnataka	3356.5	2242 (125 STPs)	1513.5 (67%)	1114
14	Kerala	317	124.15 (13 STPs)	91.12 (73%)	192
15	Madhya Pradesh	2183.65	618.23 (23 STPs)	472.6 (76%)	1565.4
16	Maharashtra	9758	7747 (142 STPs)	4207 (54%)	2011
17	Manipur	115	27 (1 STP)	9 (33%)	88
18	Meghalaya	75	1.85 (8 STPs)	1.82 (98%)	73
19	Mizoram	68	10 (1 STP)	0	58
20	Nagaland	44.3	25.4 (1 STP)	0	18.9
21	Odisha	367	91 (5 STPs)	70 (76%)	276
22	Puducherry	88	56 (5 STPs)	35 (62%)	32
23	Punjab	2111	1628.5 (116 STP)	80%	482.5
24	Rajasthan	1551	999 (80 STPs)	694.5 (69%)	552
25	Sikkim	47.68	19.5 (7 STPs)	60%	28
26	Tamil Nadu	3673.3	1616 (66 STPs)	919 (56%)	1320
27	Telangana	2613	888 (31 STPs)	735.8 (82%)	1724.45
28	Tripura	82.5	8 (1 STP)	3 (37%)	74.5
29	Uttarakhand	329.3	379 (63 STPs)	232.9 (61%)	-
30	Uttar Pradesh	5500	3370 (106 STPs)	2630.6 (78%)	2130
31	West Bengal	2758	776.32 (47 STPs) + 910 MLD addl treatment through EKW	289.89 (37%)	1071.68
Total		48,003.69	30,000.96 (1261 STPs)	55.9%	17,026.58

*State reported that 910 MLD of sewage is being treated by East Kolkata wetlands by natural process.”

In particular, poor capacity utilization of Chhattisgarh (8%), Manipur (33%), Daman Diu & Dadra Nagar Haveli (35%), Goa (37%), West Bengal (37%), Maharashtra (54%) and Tamil Nadu (56%) needs

consideration and attention for which Chief Secretaries of the concerned States have been apprised during the monthly review meetings as well as through D.O. letters from Secretary, Department of Water Resources, River Development & Ganga Rejuvenation. As many of the STPs are under-utilized due to pending house sewer connections, States have been requested to expedite the remaining works. The State of Assam does not have any existing treatment capacity while Tripura & Manipur has only one STP each. STPs at Nagaland and Mizoram are yet to be made operational. The compliance of existing STPs in Andhra Pradesh (90%), Delhi (90%), Telangana (82%), Punjab (80%) Gujarat (78%), Uttar Pradesh (78%), Madhya Pradesh (76%), Haryana (62%) and Odisha (76%) remains good. This needs to be maintained and continuously improved.

Many of the States such as Haryana, Uttarakhand, Uttar Pradesh, Delhi, Madhya Pradesh, West Bengal, Tamil Nadu, Karnataka are installing online monitoring systems for capturing the real time data of the existing STPs. In November 2020, Madhya Pradesh has developed an "Env Alert app" and the same has been placed on Google play store and a WhatsApp group "M.R STP Cap. Utilization" has also been framed for day-to-day monitoring of STPs by the senior officials of the State. As reported by the State, this has led to improvement in the utilization capacities of the existing STPs as well as regular monitoring of projects under construction. Other States have been requested to adopt such measures for monitoring the performance of the already developed sewerage infrastructure.

Further, many States such as Meghalaya, Mizoram, Nagaland, Tripura are opting for alternate sewage treatment such as Faecal Sludge Treatment Plants, bio-digester/ bio-remediation/ phyto-remediation over the conventional treatment technologies for treatment of sewage/ septage in their States. Details of the same are provided in **para 7 and 8**.

Water Quality in Polluted River Stretches

The water quality data presented by the States during period since January 2020 up to December 2020 has been analyzed and the same has been summarized in **Table-2**.

It is seen from the above table that following river polluted stretches have now been reporting BoD levels which are conforming to bathing standard."

13. The details of on-going projects, projects under tendering, projects awaiting sanction of DPRs and at proposal stage are mentioned in Table-3,4,5 and 6 as follows:-

"Table 3: Details of on-going projects

No.	State	Completion By			
		January 2021- March 2021	April 2021- December 2021	January 2022- June 2022	Beyond June 2022
1	Andhra Pradesh	2 STPs of 7 MLD	29 STPs of 328.4 MLD	1 STP of 123 MLD	15 MLD STP
2	Bihar	12 projects of 355.5 MLD. Revised timeline to be provided			
3	Chhattisgarh	-	6 STPs of 238 MLD	-	-
4	Daman, Diu And Dadra Nagar Haveli	-	-	-	-
5	Delhi	-	1 STP of 318 MLD (new)	-	STPs of 950.8 MLD
6	Goa		5 STPs of 35.5 MLD including sewer networks		3 STPs of 43 MLD – work not started due to issues by locals.
7	Gujarat	23 STPs of 426.72 MLD	44 STPs of 571.68 MLD	4 STPs of 116.6 MLD	10 STPs of 125.4 MLD
8	Haryana	15 STPs of 59.45 MLD	19 STPs of 168.75 MLD	2 STPs of 45 MLD	2 STPs of 180 MLD
9	Himachal Pradesh	5 STPs of 26 MLD	10 STPs of 7.9 MLD	6 STPs of 6.1 MLD	5 STPs of 8.26 MLD
10	Jammu & Kashmir	2 STPs of 61.2 MLD	4 STPs of 17.6 MLD	4 STPs of 13.21 MLD	-
11	Jharkhand	-	3 STPs of 89 MLD	-	-
12	Karnataka	21 STPs of 427.17 MLD	9 STPs of 197.3 MLD	21 STPs of 115.67 MLD	4 STPs of 16.07 MLD
13	Kerala	STP/ETP/FSTP of 0.331 MLD	STP of 0.01 MLD		
14	Madhya Pradesh	15 STPs of 212 MLD	2 STPs of 22.25 MLD	19 STPs of 212.5 MLD	
15	Maharashtra	10 STPs of 141.5 MLD	5 STPs of 110.26 MLD	2 STPs of 13 MLD	-
16	Manipur	-	-	2 STPs of 17 MLD	-
17	Meghalaya	115 KLD Septage Treatment Plant			
18	Mizoram	Sewer	-	-	-
19	Nagaland		sewer connections in	-	-
20	Odisha	2 STPs of 56 MLD	48 MLD STP	-	-

22	Punjab	6 STPs of 27.5 MLD	12 STPs of 49.2 MLD	4 STPs of 67.5 MLD	8 STPs of 109 MLD
23	Rajasthan	29 STPs of 126 MLD	15 STPs of 113.5 MLD	4 STPs of 59.5 MLD	12 STPs of 141 MLD
24	Sikkim	2 STPs of 3 MLD	-	-	3.25 MLD STP
25	Tamil Nadu	18 STPs of 244 MLD	8 STPs of 203.46 MLD	6 STPs of 450.53 MLD	16.71 MLD STP
26	Telangana	2 STPs of 16.45 MLD	12 STPs of 73.96 MLD	3 STPs of 120 MLD	-
27	Tripura	-	-	8 MLD STP	-
28	Uttarakhand	3 STPs of 8.9 MLD	3 STPs of 23.7 MLD	1 STP of 28 MLD	
29	Uttar Pradesh	6 STPs of 122.01 MLD	21 STPs of 523.55 MLD	7 STPs of 161.5 MLD	3 STPs of 80 MLD
30	West Bengal	1 STP of 24 MLD	4 STPs of 47.75 MLD	6 STPs of 271.5 MLD	-
	Total (except Bihar)	163 STPs of 1989.211 MLD	214 STPs of 3187.77 MLD	93 STPs of 1828.61 MLD	1688.49 MLD

Table 4: Projects under Tendering and works to be awarded

No.	State	STPs in Tendering
1	Andhra Pradesh	6 STPs of 52.4 MLD
2	Bihar	7 projects of 149.5 MLD
3	Chhattisgarh	5 STPs of 40.5 MLD
4	Daman, Diu And Dadra Nagar Haveli	1 STP of 7 MLD
5	Gujarat	59 STPs of 445 MLD
6	Himachal Pradesh	8 STPs of 33.31 MLD
7	Jharkhand	15 MLD STP - Sanctioned
8	Karnataka	14 STP, 1 UGD for STP, 144 MLD 15 STP, 57.366 MLD (work order given)
9	Kerala	Projects for treatment of 55.8 MLD effluent
10	Madhya Pradesh	STPs of 53.4 MLD
11	Puducherry	2 STPs of 6 MLD
12	Punjab	43 STPs of 388 MLD
13	Telangana	17 STPs of 376.5 MLD

14	Uttar Pradesh	24 STPs of 568.1
15	West Bengal	9 STPs of 122.36 MLD
	Total	Projects of 2514.236 MLD

Table 5: Projects awaiting sanctioning of the DPR

No.	State	STPs awaiting sanctioning of DPR
1	Assam	2 STPs of 4 MLD
2	Bihar	4 projects
3	Chhattisgarh	1 STP of 35 MLD
4	Delhi	14 STPs in Najafgarh zone (of which 7 STPs)
5	Himachal Pradesh	2 STPs of 4 MLD
6	Jammu & Kashmir	STPs of 59.9 MLD
7	Jharkhand	STPs of 184 MLD
8	Karnataka	29 STP of 134.846 MLD
9	Kerala	Treatment Plants of 0.71 MLD
10	Manipur	STP of 49 MLD
11	Telangana	31 STPs of 1098.17 MLD
12	Sikkim	0.72 MLD STP
13	Uttarakhand	STPs of 67 MLD

Table 6: Projects in Proposal stage (DPR to be prepared)

No.	State	STPs in proposal stage
1	Andhra Pradesh	STPs of 1215 MLD in proposal stage
2	Assam	17 STPs of 163 MLD
3	Bihar	20 Projects of which 5 DPR prepared
4	Daman, Diu And Dadra Nagar Haveli	1 STP of 16 MLD
5	Delhi	42 decentralized STPs and Mori Gate STP

6	Gujarat	19 STPs of 472.3 MLD
7	Haryana	8 STPs of 64 MLD (for future)
8	Himachal Pradesh	22 STPs of 32 MLD
9	Jammu & Kashmir	STPs of 47.9 MLD
10	Jharkhand	STP of 43 MLD
11	Karnataka	23 STP of 72.136 MLD;3 FSSM, 4.5 cum
12	Kerala	STP/ETP/FSTP of 2.776 MLD
13	Madhya Pradesh	1 scheme at DPR Stage
14	Maharashtra	58 STPs of 3569.82 MLD - Proposed
15	Meghalaya	STP of 0.105 MLD
16	Punjab	53 STPs of 183.5 MLD
17	Sikkim	6 STPs of 10.61 MLD
18	Tamil Nadu	DPRs prepared and are being prepared on cluster basis
19	Telangana	13 STPs of 99.85 MLD
20	Uttarakhand	STPs of 39.25 MLD
21	West Bengal	12 STPs of 228.89 MLD

14. Status of bio-remediation/Phytoremediation has been given as follows:-

“Table-7: Status of bio-remediation/ Phytoremediation projects

No.	State	Action Taken
1	Andhra Pradesh	No information provided in the MPR.

2	Assam	GMDA has taken up scheme for treatment of polluted water of Borsola Beel through Bioremediation. RFP document for 'Treatment of Polluted Water of Borsola Beel through Bio-remediation' will be floated after approval of RFP document. GMDA has taken up a scheme for de-siltation and cleaning of Borsola Beel and the physical progress of the work as on 05.11.2020 is 100%. Govt. of has accorded Administrative approval for the scheme treatment of polluted water of Sarusola Beel and notice inviting RFP will be floated shortly. Tender Notice has been floated for the scheme 'Cleaning of Sarusola Beel' in compliance with Hon'ble NGT order amounting to Rs. 47.61 Lakh. GMDA has taken up a scheme on Bioremediation measures for Silsako Beel. Govt. has accorded Administrative approval amounting to Rs. 921.00 Lakh (Rupees Nine Hundred Twenty One Lakh) for the scheme. Finalization of draft RFP document is under process. GMDA has taken up cleaning activities in Silsako Water body through removal of water – hyacinths and floating garbage along with de-siltation of the water body with the help of machineries.
3	Bihar	Bio-mining/bioremediation work has been initiated at Bairiya, Patna and Muzaffarpur for disposal of legacy waste. UD&HD, GoB has issued Work Order dated-24.09.2020 to the successful bidder for In-situ treatment through bio-remediation of drains joining Ganga and other polluted rivers for 89 drains. Work has been started in all 89 drains.
4	Chhattisgarh	All the households in polluted river stretches have on-site sanitation systems, either twin pits or septic tanks. The State has implemented phytorid treatment in all ULBs.
5	Daman Diu & Dadra Nagar Haveli	Phyto-remediation and Bioremediation proposal for the 13 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. Another drain near Kabra Industrial Estate, Kachigam, Daman is proposed for in-situ treatment.
6	Delhi	Integrated Drain Management Cell (IDMC) has been formed for remediation and management of all drains in Delhi. Drain owing agencies have submitted their action plan and started its implementation. The waste water in Kushak Nala running through NDMC areas is under bio-remediation and the water quality parameters are being monitored. Delhi Cantonment Board has started implementation of bio-remediation plan w.e.f 11.06.2020.
7	Goa	Conventional method of septic-tank / soak-pit is adopted by individual housing / complexes, wherever underground sewer network did not exist. In villages or hinterland-areas (i.e. pocket settlement areas), stand alone soak-pit / septic-tanks system ensures effective treatment of domestic-sewage.

8	Gujarat	State has implied in-situ treatment towards legacy waste management (Pirana dumping site). Pilot project for in-situ remediation at Ankleshwar and Kheda municipalities are under implementation and after positive reviews, the same shall be replicated in 7 municipalities.
9	Haryana	ULB Department has started bio/phyto remediation works in the drains in Municipal Corporation, Yamuna Nagar – Jagadhri, as a pilot project, which will be replicated at other places. Municipal Corporation of Sonapat has also invited tenders for the bio/phyto remediation of drains. Similarly, Municipal Corporations of Gurugram and Faridabad are in the process of preparing the proposals for bio/phyto remediation. Municipal Corporation of Panipat has already floated the tenders for the process in their jurisdiction. GMDA has also initiated a pilot project as an interim treatment for untreated discharge of Leg I via geo-synthetic dewatering tubes in consultation with CPCB. PHED has undertaken the in-situ phyto/bio remediation in its new STPs at Indri and Beri.
10	Himachal Pradesh	In-situ Phytoremediation technique is being applied in nallahs for treatment of water. The work of in-situ remediation in Priority-I (Sukhna Nallah) has been started and civil work and plantation work is completed and construction of polishing tank is under progress. The tender work in-situ remediation in Jattan Wala Nallah (catchment of Priority-II river stretch) has been awarded and work is in progress.
11	Jammu & Kashmir	Tenders for in-situ bio-remediation of drains floated, work yet to commence.
12	Jharkhand	Preparation of DPR to adopt in-situ remediation at drains at identified ULBs viz. Chas, Ranchi, Mango and Aditypur, involving CSIR-NEERI and tendering is under process from competent authority from approx. 120 MLD of waste water will be treated.
13	Karnataka	Drains contributing to the pollution of the 17 Polluted River Stretches have been identified. Status of bioremediation or any other insitu remediation not provided.
14	Kerala	In situ primary treatment were proposed for the river stretches Bharathapuzha and Pamba in the action plans.
15	Madhya Pradesh	In-situ bio-remediation for Nagda and Mandideep town has been initiated as pilot project to be adopted a model for replication in other towns of the State.
16	Maharashtra	Demonstration project has been started by MPCB for in-situ treatment of wastewater at Kotwali village drain on Vashisthi River to explore the possibilities and viability of the interim measures.
17	Manipur	DPR submitted to NRCD for in-situ treatment through Bio-remediation of 16.75 MLD.

18	Meghalaya	PMC of Smart City has prepared the feasibility report for Nallah in-situ treatment for the drain falling within the ADB and has been approved and accepted report by RRC for Umkhrach & Umshyrpi. Preparation of DPR for the bio-remediation of remaining drains has been communicated to the PMC for finalization of terms & conditions. DPR has been completed and for remaining rivers and the Water Resources Department is seeking fund for implementing the same.
19	Mizoram	For the treatment of sewage, in-situ remediation such as onsite grey-water management systems in rural areas and setting up of improved septic tanks and Bio-digesters for black water management in the catchment areas of the polluted rivers are in process.
20	Nagaland	Phytoremediation and Faecal Sludge and Septage Management Plants are proposed in all the ULBs. DPR to be completed by November 2020. Bioremediation is adopted for treatment of legacy waste along 1 km buffer stretch of river Dhansiri
21	Odisha	H & UD Department has identified Drains contributing to river pollution.
22	Puducherry	All the drains reaches the rivers Sankaraparani and Arasalar were identified and in-situ remediation of providing grills gratings and bar screen are provided to all the 172 drains.
23	Punjab	The work for in-situ remediation of the Sirhind Choe (near Bhadson, District Patiala), with the demonstration of Constructing Wet Land Technology has been completed. The performance of the technology is under evaluation and will be replicated in rest of the drains in depending upon its success. In-situ remediation of Bhulana drain carried out by Punjab Pollution Control Board with installing bioremediation, phyto-remediation enhanced through Nano Bubble Technology on Pilot basis and is under evaluation. WSP based STP at Bhulath has been upgraded by adding Nano Bubble Technology. The performance of the technology is under evaluation and will be replicated in rest of the drains in depending upon its success. The work on piloting low cost ecofriendly on 500 KLDSTP for Banur, based on modified constructed wetland approach, is near completion
24	Rajasthan	The State has implemented bioremediation treatment for legacy waste, for which tenders have been invited. Drain identified for contribution in River Chambal in Kota Region.
25	Sikkim	No tangible information is provided
26	Tamil Nadu	No details have been provided. The State has proposed for incinerator installation to process plastic waste.

27	Telangana	HMWSSB has entrusted for preparation of DPRs for In-situ remediation for 5 drains leading to lakes to NEERI, Hyderabad. NEERI has submitted DPR for Kokapet drain of 1.0 MLD Capacity. It is under implementation stage by NEERI. For balance 4 drains, DPRs are received from NEERI which are under sanction stage. In-Situ remediation is proposed only in priority I&II and in priority III to V stretches it is not feasible as Flat terrain is not available, Steep slope gradient leading to high velocity and Flow of greater than 5 MLD
28	Tripura	As reported in the MPRs, the State has directed all ULBs to adopt in-situ bioremediation and phytoremediation of sewage in drains. 210 drains and land identified. Tender for Bio remediation of 5 drains as pilot basis in Agartala has been completed.
29	Uttar Pradesh	Bio-remediation is being done in 42 drains of Prayagraj.
30	Uttarakhand	DPR for treatment of 19 drains by bioremediation approved and is under tendering.
31	West Bengal	Work started as pilot project for drains for Ganga & Churni river stretches.

15. The report gives the details of **alternate technology adopted or proposed to be adopted by the States/ UTs for treatment of sewage through the Septage Treatment Plants taking lesser time in commissioning compared to the conventional STPs** as follows:-

“Faecal Sludge Treatment Plants

States are taking up projects for treatment of sewage through Septage Treatment Plants, which takes up lesser time in construction as compared to conventional STPs or are implementing co-treatment facilities in the existing STPs. Chhattisgarh has reported that 100% septage management scheme has been achieved in all the cities under polluted river stretches. Maharashtra has installed 15 FSTPs with total capacity of 290 KLD along polluted river stretches. Similarly, Odisha is implementing Septage Management System in a phased manner in all its ULBs, 10 FSTPs in 10 ULBs of 440 KLD have been commissioned, 82 Nos. in 82 ULBs of 1367 KLD are under construction. Tamil Nadu also proposes to establish 49 FSTPs, of which 5 FSTPs have been completed and co-treatment facility at 38 STPs have been facilitated. In Telangana, co-treatment of septage from the Septic Tanks of individual and community septic tanks in the existing 6 STPs have been completed and about 26 million liters of septage has been treated so far at these cotreatment plants, thereby preventing the pollution of lakes to that extent. 2 FSTPs have been completed in Uttar Pradesh.

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a. Decentralized/ modular STPs

*Decentralized modular STPs are assets that can be created for sewage management of smaller capacity. **These tailored systems, being pre-fabricated and involves minimal on-site civil construction and hydro-electro-mechanical installations, are easy to install, take significantly less time in commissioning (only few months) and easy to operate being compact systems.** Accordingly, they are suited in situations where sewage generation is say less than 2 MLD, water quality profile permits tailoring the modular STP system specific to the requirements of site water quality and time available for commissioning the system is less. Many of States can therefore adopt such systems in situations instead of conventional STPs (which take much longer time, not less than 24 months, for construction) based on evaluation of techno-commercial merits. Many States/ UTs are constructing or have proposed to develop STPs in Polluted River Stretches with capacity less than 2 MLD.*

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16. The details of Industrial Pollution Management is mentioned as follows:-

“Table-8: Statement on Industries and Treatment Capacity established in States/ UTs

State	Stretch	No. of Industries(Water Polluting)	Current Effluent Discharge (MLD)	No. of Industries having ETPs	Treatment Capacity of ETPs (MLD)	CETPs (Nos. and Capacity in MLD)
Gujarat	State	12815	NA	12700	NA	Existing CETPs : 34 of 755.259 MLD, Proposed/Under construction: 16 of 263.35 MLD, Under expansion: 3, Capacity: 45.5 MLD
Tamil Nadu	State	11445	2835.7	11445	NA	Existing-36 of 87.350 MLD capacity. Proposed- 10 (41MLD) 1497 units connected to CETP.
	PRS	1770	452.696	1770	NA	Existing - NA Proposed- 10 CETPs (41MLD)
Haryana	PRS	3729	126	3729	-	Existing- 19 CETPs of 190.1 MLD capacity. Proposed- 11 CETPs 141.5 MLD capacity Under Construction: 1 CETP of 6 MLD

Karnataka	State	3503	1339	3287	4523	Existing - 10 CETPs of 5.875 MLD installed capacity; Operational Capacity = 3.445 KLD (59%); 733 units connected Under construction = 2 (in Bidar and Yadgir), Expression of Interest issued = 1
Delhi	UT	1516	36	1516 (100%)	-	Existing - 13 CETPs of capacity 212.3MLD of which 2 are complying, 11 non complying. All CETPs have OLMS installed. Upgradation of CETPs has been proposed.
Goa	State	NIL				
Odisha	State	1031	886	1030	886	NIL
Tripura	PRS	179	0.0144	18 ETPs- Installed	-	1 CETP of 500 KLD capacity installed
Maharashtra	State	16597	2100	16597	NA	Existing CETPs: 26 nos. (244.85 MLD) Under Construction-2CETPs, Proposed: 2 CETP at Nashik and Kolhapur

Himachal Pradesh	State	2773	45.67	955	35.1	Existing: 25 MLD CETP at Baddi. (468 units connected) Proposed: 2 MLD at Poanta Sahib Under Construction: 5 MLD at Kala Amb
Jammu & Kashmir	State	450	17	239	-	2 CETPs of 1.05 MLD functional, 1 CETP under trial, 10 CETP under construction and 10 CETP proposed
Uttarakhand	State	830	145	830	175	Existing-3 (13.2MLD) Proposed- 3 CETPs of 18 MLD
State	Stretch	No. of Industries(Water Polluting)	Current Effluent Discharge (MLD)	No. of Industries having ETPs	Treatment Capacity of ETPs (MLD)	CETPs (Nos. and Capacity in MLD)
Uttar Pradesh	State	1648	850.5	1404	NA	Existing – 7 (58.60 MLD) (NC-01/07 operational) Under Construction – 01No. (20 MLD)/ 3 Nos. of 26.65 MLD Sanctioned – 2 Nos. of (6.65 MLD)

Rajasthan	State	1199	-	1167	3173.61	16 CETPs (14 Operational, 01 under construction and 01 closed) Capacity - 159.88MLD
Assam	State	2641	-	2134	-	-
Sikkim	State	63	1.926	63	3.385	NIL
Meghalaya	State	260	3.5	254	-	-
DDDNH	UT/PR S	262	6.54	262	11.39	NIL
Nagaland	State	5	102 KLD	3	102 KLD	2 Units of 30KLD is under process
Manipur	State	Non-polluting industries	-	-	-	5 industrial units are connected to 1 non-functional CETP of 400 KLD
Mizoram	State	56	0.0438	56	0.099	NIL

Punjab	State	4055	402	1760	398	Existing – 4 CETPs of 20.535 MLD. Under Construction – 3 CETPs: 50 MLD -91% work completed & 40 MLD at Ludhiana-completed , 0.15 MLD at Jalandhar- status quo against court orders, hearing date on 15.02.2021
Madhya Pradesh	State	1186	25100	1186	28000	Existing: 3 CETPs of 9.1 MLD
Jharkhand	State	190	-	187	-	Existing : 2 Nos. of 25.05 KLD Under Construction: 3.5 MLD at Ranchi, Tupadana Industrial Cluster.
Bihar	State	219	NA	212	-	Existing : NA Under Construction/ Proposed: There are 52 industrial areas under control of BIADA, 5 Industrial Areas were identified in first Phase for construction of CETPs – Fathua, Hajipur-Vaisali-Bela, Barai, Bhagalpur, Patliputra. DPR for all Industrial area except for Patliputra was finalized and in first three calls for Bid submission no bidder responded.

West Bengal	State	454	1360.60	454(400 SPIs & 54 GPIs)	1360.60	Existing: 20 MLD CETP, Under Construction: 4 module of 20 MLD
Kerala	State	1401	156.3	5166	-	Existing- 8 CETPs of 12.4 MLD. 64 units connected.
Telangana	State	2178	603	1519	593.85	Existing- 4 Nos. of 7 MLD capacity operational. Under Construction - 1 CETP of 480 KLD
Andhra Pradesh	State	1069	4494.33	1069	-	Existing-7 CETP of (31 MLD) total capacity having 330 units as members
Puducherry	UT	96	4.75	95	4.75	NIL

VI. Status of Solid Waste Management, Ground Water Augmentation, Afforestation, Floodplain and E-flow Management

State-wise status of solid waste management, hazardous and plastic waste management, ground water management, good irrigation practices adopted by farmers, installation of rain water harvesting, protection and management of Floodplain Zones and maintenance of minimum E-flow in the river stretches as per the Action Plan and MPR submitted by the States is placed at Annexure- V. States of Andhra Pradesh, Goa, Haryana, Jammu & Kashmir, Maharashtra, Karnataka, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal have major gap in solid waste treatment facilities and have taken up projects for establishment of processing facilities, which are at various stages of implementation. These States need to ensure timely completion of the projects and ensure optimum utilization of their infrastructures. The status and progress will continue to be monitored in subsequent meetings of Central Monitoring Committee.

VII. Scrutiny of Action Plans for P-II and P-IV:

As reported by CPCB, all the Action Plans for Polluted river stretches in Priority I-IV have been approved with conditions.

VIII. Model River Stretch identified by the State

As directed by NGT, States have identified Model River to be taken up for rejuvenation in the first phase. States of Andhra Pradesh, Chhattisgarh, Jammu & Kashmir, Kerala, Mizoram, Rajasthan, Telangana and Uttar Pradesh are yet to identify Model River to be rejuvenated, the model of which can be replicated in rejuvenation of other river stretches. The identification and implementation of various strategies for rejuvenation of model river stretch assumes particular significance as it can translate as best ground to test the efficacy of various interventions so that such approach and models can be taken for implementation in other reaches. The experience gained out of such implementation will also help in wider dissemination of good and successful practices amongst the States. Accordingly, the State of Andhra Pradesh, Chhattisgarh, Jammu & Kashmir, Kerala, Mizoram, Rajasthan, Telangana and Uttar Pradesh may complete identification of Model River for rejuvenation and direct the concerned State officials to implement various interventions in coordinated manner as per Action Plan for rejuvenation of the model river.

Details as reported in the MPRs are in Table-9 as below.

Table-9: Status of Model Rivers Identified by State

No.	State	Model River Identified
1	Andhra Pradesh	-
2	Assam	Digboi River
3	Bihar	Harbaura River
4	Chhattisgarh	-
5	Daman, Diu And Dadra Nagar Haveli	Damanganga
6	Delhi	Yamuna
7	Goa	Sal River
8	Gujarat	Sabarmati River
9	Haryana	Both Yamuna & Ghaggar
10	Himachal Pradesh	Beas River
11	Jammu & Kashmir	-
12	Jharkhand	Swarnrekha River
13	Karnataka	Tungabhadra River
14	Kerala	-
15	Madhya Pradesh	Khan River
16	Maharashtra	Chandrabhaga River
17	Manipur	Nambul River
18	Meghalaya	Nonbah River
19	Mizoram	-
20	Nagaland	Chathe River
21	Odisha	Kathajodi river
22	Puducherry	Sankarabarani River
23	Punjab	Beas River
24	Rajasthan	-
25	Sikkim	Maney Khol River
26	Tamil Nadu	Bhavani River
27	Telangana	-

28	Tripura	Haora River
29	Uttarakhand	Ganga River
30	Uttar Pradesh	-
31	West Bengal	Karola River

IX. Status of Preparation/Submission of Action Plan for Coastal Pollution

Subsequent to the Hon^{ble} NGT order dated 21.09.2020, CPCB has issued a reminder vide letter dated 10.12.2020 to all the concerned coastal States/ UTs (except Andhra Pradesh) to submit the Action Taken Report and Time Bound Comprehensive Action Plan to CPCB for control of coastal/ marine pollution within the jurisdiction of the State/UT. Also, reminder was issued to Andhra Pradesh State to submit the Action Taken Report for ensuring compliance to directions dated 31.08.2020 issued under section 18(1)(b) of Water (Prevention & Control of Pollution) Act, 1974 by CPCB. Till 28.01.2021, Andhra Pradesh and Kerala State have submitted Time Bound Comprehensive Action Plan whereas Goa and Kerala State have submitted only the Action Taken Report. Remaining coastal States/ UTs viz Lakshwadeep, Daman, Diu & Nagar Haveli, Andaman & Nicobar, West Bengal, Tamil Nadu, Maharashtra, Karnataka, Gujarat, Odisha and Puducherry have yet not submitted the requisite information. Status of submission of Action Plan by States is as given Table-10 below.

Table-10: Status of Submission of Action Plans for Coastal Pollution by States

No.	State	Status
1	Andhra Pradesh	Action Plan Submitted to CPCB and under consideration of CPCB
2	Daman, Diu & Dadra Nagar	-
3	Goa	-
4	Gujarat	-
5	Karnataka	-
6	Kerala	Action Plan Submitted to CPCB and under consideration of CPCB
7	Maharashtra	-

8	Odisha	-
9	Puducherry	-
10	Tamil Nadu	-
11	West Bengal	-
12	Andaman & Nicobar	-
13	Lakshadweep	-

X. Development of Grievance portal

*As per directions of Hon^{ble} NGT, it was directed that CMC may consider development of an appropriate App to enable easy filing and redressal of grievances with regard to illegal discharge of sewage/ effluents. **Accordingly, NMCG has developed an online module on its website for submission of grievances and redressal of grievances with regards to illegal discharge of sewage/ effluents. The url of portal is <https://nmcg.nic.in/ngtgrievance.aspx> and has been operational with effect from January 2021.** Chief Secretaries of all the 31 States/UTs have been directed to regularly monitor and to address the issues within a stipulated time period. The status report in this regard shall be incorporated from next submission onwards.*

XI. Reutilization of Treated water

*Acknowledging the importance of **safe reuse of treated waste water (SRTW) in India as well as prioritizing the same in planning and management due to rapid urbanisation and increased wastewater generation and also with an aim towards increased water security, the action plan for Reuse of Treated Waste Water has been undertaken at national level in Ministry of Jal Shakti.** The introduction of the concept of SRTW into water resource strategies and policies could provide additional resources for multiple uses and water security for fast growing cities, industry, agriculture and the environment. So far, India has no national policy regarding SRTW, except for a few State policies viz., Gujarat, Maharashtra, Tamil Nadu and Haryana. Accordingly, National Mission for Clean Ganga Ministry of Jal Shakti in collaboration with the Indo-German „Support to Ganga Rejuvenation“ project (GIZ-SGR) and the India-EU Water Partnership (IEWP) has initiated formulation of National Policy on Safe Reuse of Treated Water (SRTW). The policy development is based on a comprehensive consultation process by engaging relevant*

stakeholders under a dedicated steering group. The stakeholders involved included MoEF&CC, MoHUA, industries, ULBs and representations from pioneering States (Maharashtra, Gujarat, Haryana, UP). **The policy development process is supported by European and national experts bringing in best international practice.** Based on extensive consultations during various Consultation meetings, 1st Draft Working document has been prepared. Further consultation for finalisation of National Policy is underway.

State-wise details of re-utilization of treated water as reported by the State is provided in Table-11 below.

Table-11: Status of Re-utilisation of Treated Water by States

State	Status
Andhra Pradesh	321.81 MLD of treated wastewater is being reused.
Assam	Being done by P&RD Department for rural areas. No further details provided.
Bihar	Treated sewage water of STP having capacity 100 MLD or above will be used by Water Resource Department and less than 100 MLD will be used by Minor Water Resource Department for agriculture purposes.
Chhattisgarh	Treated waste water will be utilized after the completion of construction of STPs.
DDDNH	Treated water is used daily for road washing, horticulture, soil compaction, irrigation etc.
Delhi	90 MGD is being used for various purposes e.g. horticulture, irrigation, DTC depot etc.
Goa	Part utilization has been proposed for (i) release of STP-treated water at Colva into Sal-river so as to maintain the flow, (ii) flushing of St. Inez creek, (iii) social forestry, (iv) private plantation, (v) dust-suppression measures etc.
Gujarat	Gujarat Government has framed Policy for Reuse of Treated Waste Water (TWW) wherein targets have been set for use of 70% of the treated wastewater by 2025 and 100% of treated wastewater by 2030. 643 MLD of treated waste water is used by MC and Municipalities.
Haryana	State has prepared a draft policy for reuse of treated waste water and an action plan for reuse of treated sewage and as per the plan, approx. 80% of treated sewage will be reutilized by 2024-2025. Treated waste water will be used for the farming purpose.
Himachal Pradesh	JSV is providing facility for bulk water user at all the STPs to enable drawing the effluent for reuse.

Jammu and Kashmir	Reuse of Treated Water through Pumping Plant with Rising Main to Railway Station Katra for cleaning and washing purpose, Horticulture purpose at Air force station, at Army Unit for cleaning and washing purpose have been proposed.
Jharkhand	Water will be used for irrigation, fish farming, landscaping, cooling water for power plants and oil refineries, toilet flushing, public parks, dust control, artificial lakes, construction etc.
Karnataka	Quantity of treated water reused in Bengaluru = 427.5 MLD; other than Bengaluru = 106.65 MLD. It is to be used for recharge of lakes, use in industrial establishments, by horticulture departments, used in gardening etc.
Kerala	Utilization of the treated effluent for irrigation, gardening, industries, construction and recharge are being explored.
Madhya Pradesh	At present 84.96 MLD of treated water is being used or irrigation/gardening purpose (including STP of 35 MLD, Bhopal under AMRUT scheme)
Maharashtra	The Infrastructure Projects are mandated by MPCB to recycle 60% of treated sewage for secondary use by providing dual pipeline for different class of users like Thermal Power Plants, Industrial Units, Construction activities, non-potable municipal uses, Agriculture-Irrigation, etc. depending on its availability.
Manipur	No information provided.
Meghalaya	Stand-alone ETPs are operational in 260 number of hotels/guesthouse/health care centers /Industries and treated wastewater are reuse for gardening/cleaning purpose.
Mizoram	Action Plan for sewage treatment including recycle and reuse of treated waste water was submitted to the State Govt.
Nagaland	Treated water is to be used for agricultural farms, sprinkling the road construction sites, flushing/cleaning of the sewage drains
Orissa	806 MLD treated industrial wastewater are being recycled/ reused in the process or being utilized for plantation/ irrigation purposes. Bulk users have been identified for utilization of treated water for the STPs under commissioning.
Puducherry	15.3 MLD treated wastewater is been in use for Industrial usage, Silk cotton trees, Coconut Plantation, Construction activities, Watering the road side plantation
Punjab	The Government of Punjab has Notified "The State Treated Waste Water Policy 2017" to promote recycling and reuse of treated sewerage for non-potable applications. Till date, 47 number projects have been completed by Department of Soil & Water Conservation, Punjab for using 243.3 MLD treated wastewater of STPs. These projects have been implemented by laying underground pipeline system for irrigation water conveyance covering an area of 7652 hectares. The Department further proposes to utilize 1238.8 MLD of treated wastewater from 164 existing, under progress and proposed/new STPs for irrigation purposes for an agricultural area of 37,683 hectares. Others relevant Departments are also exploring various options to promote utilization of the treated wastewater of STPs for non-potable use such as domestic use, construction activities, industrial processes, urban landscaping & green belts, etc.

Rajasthan	No information provided.		
Sikkim	Treated effluent is to be utilized in cooling towers, irrigation of green belt, evaporation or flushing purposes.		
Tamil Nadu	Tamil Nadu Government has notified Promotion of Use of Treated Waste Water policy during December 2019 to maximize the collection & treatment of sewage generated and reuse of treated waste water on a sustainable basis, thereby reducing dependency on fresh water resources. At present Memorandum of Understanding (MoU) has been executed between the ULB and the user agency for the re-use of secondary treated effluent water (STEW). 80.5 MLD of treated wastewater is being reused for cooling purpose, Agricultural use to farmers association, MRF Industrial use, to maintain the TDS level of Tanners for Agro- forestry etc.		
	Some of details are given in Table-11.1 below.		
	S. No	Name of the ULB	Quantity (in MLD)
	1	Nagapattinam	2.00
	2	Dindugul	5.00
	3	Tirunelveli	24.00
	4	Perambalur	3.00
	5	Ramanathapuram	3.00
	6	Coimbatore	15.00
	7	Pollachi	11.50
	8	Chinnamannur	3.00
	9	Karur	7.00
	10	Arakkonam	7.00
	<p>As per the Policy, following is proposed.</p> <ul style="list-style-type: none"> • The treated wastewater is to be utilized for eco-parking, greenery development and avenue plantation and the remaining will be disposed into the river after meeting the standards. • Industries having ZLD system are reusing the treated wastewater in the process. • Domestic grey water has been recharged into the ground through Individual soak pit constructed at individual households and filtered grey water from community soak pits are being utilized for agricultural purpose in Rural areas. 		

Telangana	Govt. of Telangana has released a policy for reuse of the treated water. 56 MLD has been reused.
Tripura	AMC is using treated waste water from the Barjala (Near Lankamura) STP for watering of gardens & open space in Agartala city, road watering in dry seasons, irrigation of agricultural fields etc.
Uttar Pradesh	No information provided.
Uttarakhand	Treated water of 95 MLD capacity at Jagjeetpur is used for irrigation through canal system.
West Bengal	<i>Treated Wastewater Re-use Policy of Urban West Bengal</i> has been notified by Urban Development & Municipal Affairs Department of Government of West Bengal in June 2020. Department has identified Kalyani Town as a model for reuse of the treated water generated at Kalyani STP under KMDA. DPR is under preparation.

17. The report concludes with the observations and recommendations as follows:-

XII. Observations and Recommendations

Besides State specific issues highlighted under para-V of this report, following observations and recommendations are made.

- *States are regularly submitting Monthly Progress Reports, in the requisite formats, by the stipulated dates. However, information provided in MPR on water quality aspects in respect of a few States may need to be regularly provided base on the data being collected by State Pollution Control Boards. As MPRs are one of an important document which provides requisite status in respect of various activities being undertaken as per approved Action Plans, the quality of information is important for meetings of CMC and further reporting to Hon^{ble} NGT. MPR before being submitted should therefore, necessarily be studied by senior officers in States and so certified.*
- *Most of States have informed during monthly meetings of CMC that the progress of ongoing works continues to be impacted due to COVID-19 pandemic on account of labour mobilization issues, financial resource availability besides site works. The project completion timelines, therefore, are getting impacted due to these factors also*
- *The compliance of existing STPs in Andhra Pradesh (90%), Delhi (90%), Telangana (82%), Punjab (80%) Gujarat (78%), Uttar Pradesh (78%), Madhya Pradesh (76%), Haryana (62%) and Odisha (76%) remains good. This needs to be maintained and continuously improved.*
- *Many of the States such as Haryana, Uttarakhand, Uttar Pradesh, Delhi, Madhya Pradesh, West Bengal, Tamil Nadu, Karnataka are installing online monitoring systems for capturing the real time data of the existing STPs. In November 2020, Madhya Pradesh has developed an "Env Alert app" and the same has been placed on Google play store and a WhatsApp group "M.R STP Cap. Utilization" has also been*

framed for day-to-day monitoring of STPs by the senior officials of the State. As reported by the State, this has led to improvement in the utilization capacities of the existing STPs as well as regular monitoring of projects under construction. Other States may consider adopting such measures for monitoring the performance of the already developed sewerage infrastructure.

- The river polluted stretches reporting BoD levels conforming to bathing standard have been given in para-3. The efforts need to be continued to ensure that these stretches which reportedly fall under cleaner category shall continue to remain clean and should not slip back to polluted stretches. Efforts made by State in this directions need to continue and propagated amongst other States through the framework of Central Monitoring Committee.
- Similarly, river stretches having BoD levels which are slightly higher than limit of 3m/l and accordingly fall under Priority-V are low hanging fruits which can be easily transformed into clean stretches by concerted efforts and less investments. Focus of the States may remain on these stretches which can provided primary treatments to control the pollution levels.
- During the period w.e.f August to December 2020, States except Rajasthan have reported that 59 sewerage projects (STPs) have been completed and are under commissioning adding a total capacity of 1116.885 MLD. These sewerage infrastructure plants are under commissioning. Rajasthan has reported that 15 STPs of 45.5 MLD have been completed and made operational in the State in 2020 during January to December 2020.
- **STPs of around 8859 MLD treatment capacity are under-construction in the on-going projects in the States/ UTs. States of Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Uttarakhand, Uttar Pradesh and West Bengal will be able to complete 163 projects with capacity of about 1989.211 MLD in the States/ UTs by March 2021. The progress of these projects have to be regularly monitored using appropriate progress monitoring mechanism (eg., creation of Whatsapp group) similar to one established by Madhya Pradesh so that lag in completion of timeline is avoided.**
- Among on-going projects, **States may have to review the project timelines in detail so as to assess if any further reduction in completion timelines schedule in respect of projects scheduled for completion during the period beyond April 2021 as indicated in par – 5 of this report is possible.**
- **There are 242 projects under tendering in Andhra Pradesh, Bihar, Chhattisgarh, DDDNH, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Maharashtra, Puducherry, Punjab, Uttar Pradesh and West Bengal, while a large no. of projects are awaiting sanction of the DPR or DPR is yet to be prepared. States have reported about financing difficulties being faced**

by them on account of resource crunch due to COVID-19 situation. States, reportedly are trying to arrange funding for priority projects and will be apprising the status in subsequent meetings of the CMC. The process of sanctioning of projects, being dependent on funding, is getting affected due to this.

- Observations continued from 2nd Quarterly Report of Central Monitoring Committee:
 - Considering financial limitations, **States/ UTs have been advised to take up STP projects on Hybrid Annuity Model, which, as a business model, enables the Urban Local Body/ State Government to fund the development and operation of sewage treatment infrastructure taking into account the future flow of revenue. It will help ULBs to tap the external market funding for development & operation of sewage infrastructure, apart from quality treatment services. NMCG has prepared model tender documents for development of STPs through HAM and recently these documents have also been approved by NITI Aayog. The documents have been made available to States as per their requests also.**
 - “One City- One Operator” concepts offer integrating the rehabilitation and Operation & Maintenance of the existing treatment infrastructure along with development & operation of new STPs. This concept can be integrated with HAM model, as is being done in many projects under Namami Gange.
 - Government of India has also introduced **National Faecal Sludge & Septage Management (FSSM) Policy in 2017 to emphasize the importance of treating the faecal sludge from on-site sanitation system. Some State Governments have also issued State level FSSM policies/ guidelines.** More than 30 Faecal Sludge Treatment Plants (FSTPs) are operational and another 400 are in the offing in the country. Other States must consider adopting State level FSSM policies/ guidelines for regulating the handling, treatment and disposal of faecal sludge.
 - Many of the States/ UTs have also been looking for alternatives beyond conventional STPs for treatment the sewage/ faecal sludge. States may consider implementation of FSTPs and/or co-treatment of faecal sludge in existing STPs, or may judiciously adopt any other alternate treatment technology, in towns wherever feasible.
 - Many States/ UTs are constructing or have proposed to develop STPs in Polluted River Stretches with capacity less than 2 MLD. States, in such situations, may consider to adopt **installation of decentralized modular STPs; which offer advantages in form of lesser time involved in commissioning of systems, less land footprints, easy operations; instead of conventional centralized STPs based on techno-commercial considerations.**
 - States have created assets for treatment of sewage and capacity of **STPs so created is not being optimally utilised due to many reasons, including lack of availability of**

conveyance of sewage to treatment plants, technology issues requiring up-gradation of plants, or dysfunctionality etc. A large number of STPs remain non-compliant to STPs outlet norms. States must ensure optimum utilization of the existing treatment infrastructure and also ensure compliance of the plants with regard to the environment norms. For this purpose, States may carry condition assessment studies of existing STPs/ sewage infrastructure in a fixed time frame, say another 3 months so as to identify the reasons of suboptimum utilization and dysfunctionality of existing STPs. This will help them in finalizing plans to upgrade STPs requiring upgradation so as to make them functional.

- **Most of the States do not have an online monitoring system in place to monitor (both quantity and quality of treated water) the health of existing sewerage infrastructure.** States must consider to develop an online monitoring system, preferably IoT enabled platform for monitoring the performance of sewage infrastructure, with flexibility of integrating STPs under implementation and planning alike and which are likely to be commissioned in future. Such a system will enable that health of sewage treatment facility is readily available, with minimum human interference in regard to data inflows into the system, at appropriate levels in the Government and State and Central regulators. An IoT enabled platform shall also be futuristic and will have common architecture, thus facilitating, horizontal integration of large number of STP plants (both existing and likely to come up in future) and uniform platform adaptable for all States and also at National level.
 - **There is need to have a separate paradigm in urban planning for river cities.** As the urban system is key to impact the health of rivers and urbanization is likely to grow in future, this needs to be given due importance and urban river management plans need to be developed. Mainstreaming river and water body health into Master Plan is suggested to have long term perspective and enable legal support at municipal level for several of these activities.”

Compliance Status with regard to directions of this Tribunal dated 21.9.2020 in OA 829/2019 (coastal pollution) and OA 148/2016 (use of treated sewage for secondary purposes)

18. It may be noted that the Tribunal has considered overlapping issues in above matters as follows:

- **O.A. 829/2019:** issue of coastal pollution on account of discharge of untreated effluents/sewage. This matter was

disposed of on 21.09.2020 with the following operative directions:-

*“29. While the CPCB report mentions the directions issued to 13 Coastal State PCBs/PCCs but compliance of such directions needs to be monitored. We have dealt with OA Nos. 593/2017 and 673/2018, dealing with the setting up of ETPs/STPs/CETPs and preventing discharge of untreated effluents/sewage into the rivers hereinabove. **The subject of coastal pollution needs to be dealt with in the same manner as polluted river stretches by preparing action plans of each States/UTs which may also be monitored by the Central Monitoring Committee (CMC) simultaneously with the 351 polluted river stretches and the said subject may also be covered in the next report of the CMC. As already mentioned, the CMC is to be headed by the Secretary, Ministry of Jal Shakti and assisted by the CPCB and NMCG and at the States/UTs level, the Chief Secretaries have to monitor the compliance status and give reports to and interact with the CMC.***

OA No. 829/2019 stands disposed of and further monitoring of the issue will henceforth be in OA 593/2017 and OA 673/2018.”

- **O.A. 148/2016:** management of sewage treated water is involved. This matter was also disposed of on 21.09.2020 with the following operative directions:-

“34. In view of the above reports finding a huge gap in utilisation of sewage treated water, further action needs to be taken by all the States/UTs to ensure updating and enforcement of the action plans for 100% utilization of the treated water for secondary purposes.

*35. Since the above issue is interrelated to the issue of operation of STPs, it will be appropriate that **this aspect is also now monitored by the CMC headed by the Secretary, Ministry of Jal Shakti and assisted by the CPCB and NMCG. Ministry of Urban Development may also nominate an officer of not below the rank of Joint Secretary in the said Committee.** OA No. 148/2016 need not be kept pending separately which stands disposed of as the subject will be henceforth considered in OA 593/2017 and OA 673/2018.”*

19. Accordingly, the CMC has in its report dealt with the issue of coastal pollution and reutilization of treated water in Para IX and XI already quoted above.

Separate order in respect of some polluted rivers for further monitoring by the concerned Executive authorities

20. Apart from the said matter, the Tribunal is considering/has considered the remedial action for control of pollution of certain rivers separately, under Supreme Court directions, or otherwise²³. Further reference to the orders in the said matters will be made later. After monitoring the remedial action, the Tribunal has directed the Chief Secretaries of the concerned States to take over further monitoring as will be shown from paras 32 to 35. **Consistently with the said approach, this course of action needs to be followed for monitoring prevention of discharge of waste in rivers and water bodies as well as preventing pollution and rejuvenating the polluted river stretches.**

Reports from some States/Oversight Committee for UP

21. Though some States have also filed their individual reports, it is not necessary to refer to the same as they are covered in the above report of CMC. However, report of an Oversight Committee constituted by this

²³ These include (not an exhaustive list):

- M.C. Mehta V. UOI **O.A. No. 200/2014** (pollution of **Ganga**), see also 2017 NGTR (3) PB 1
- Manoj Mishra V. UOI, **O.A. No. 06/2012** (pollution of **Yamuna**)
- Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case) **O.A. No. 138/2016** (TNHRC) (pollution of river **Ghaggar**)
- Mahendra Pandey V. UOI & Ors. **O.A. No. 58/2017** (river **Ramganga**, a tributary of river Ganga)
- Sobha Singh & Ors. V. State of Punjab & Ors. O.A. 916/2018, and **O.A. No. 101/2014** (rivers **Sutlej and Beas**)
- Amresh Singh V. UOI & Ors. **O.A. No. 295/2016, Execution Application No. 32/2016** (rivers **Chenab and Tawi**)
- Nityanand Mishra V. State of M.P. & Ors. **O.A. No. 456/2018** (river **Son**)
- Doaba Paryavaran Samiti V. State of U.P. & Ors. **O.A. No. 231/2014** (river **Hindon**)
- Arvind Pundalik Mhatre V. MoEF&CC & Ors. **O.A. No. 125/2018** (river **Kasardi**)
- Sudarsan Das V. State of West Bengal & Ors. **O.A. No. 173/2018** (river **Subarnarekha**)
Meera Shukla V. Municipal Corporation, Gorakhpur & Ors. **O.A. No. 116/2014** (rivers **Ami, Tapti, Rohani and Ramgarh lake**)
- O.A. 426/2018, Mohammed Nayeem Pasha & Anr. v. The State of Telangana & Ors. (river Musi)
- O.A. 50/2018, Nav Yuva Sanghatan & Ors. v. The Secretary, Narmada, Water Resources, Water Supply & Kalpsar Department & Ors. (river Tapi).

Tribunal for State of UP headed by Justice SVS Rathore, former Judge of Allahabad High Court at Lucknow have also filed two separate reports - in O.A. No. 593/2017 and O.A. No. 673/2018.

22. The report in O.A. No. 593/2017 filed on 13.02.2021 gives the status of compliance of the STPs, ETPs, CETPs, use of treated water and concludes with the following recommendations:-

“Recommendations:

In view of the above we recommend as follows:

1. *Recovery position of EC is not good. Strict steps should be taken to accelerate the process of EC recovery.*
2. *Action plans for reuse of treated water have not been finalized yet. They may be prepared expeditiously and implemented with strict timelines.*
3. *There are many non-operational STPs under rehabilitation. The process may be expedited. It is also suggested that wherever old STPs are under operation on UASB technology, they may be upgraded to latest technology like SBR technology.*
4. *Steps have been taken to address gaps in generation and treatment of sewage/effluents by setting up functional ETPs, CETPs and STPs in the state. However city wise evaluation of requirements of STPs/ETPs/CETPs has not been done so far*
5. *The capacity utilisation of existing STPs may be improved by identifying the bottlenecks and plugging them in each case.*
6. *The operation and maintenance of STPs/ETPs/CETPs and their respective distribution system should be improved for optimal results. The working of operators under One City One Operator Scheme needs to be continuously evaluated and this evaluation may be linked with their payment and renewal system.”*

23. The report in O.A. No. 673/2018 filed on 12.02.2021 concludes with the following recommendations:-

“RECOMMENDATIONS BY THE OVERSIGHT COMMITTEE

1. *Out of total 339 drains in 12 polluted river stretches, 257 are untapped till date. Untreated sewage is flowing into the rivers and no interim measure has been taken to prevent this. Plan details along with timelines and corresponding physical and financial progress regarding*

tapping of these 257 drains be filed by the Govt before NGT within a month.

- 2. Out of total 5500 MLD sewage generated in the State of these 12 polluted river stretches, only 2630 MLD is treated in operational 100 STPs. There exist a gap of 2870 MLD. Currently, 38 STPs with capacity of 887.06 MLD are under construction while 24 STPs with capacity of 568.10 MLD are proposed. The progress in construction and project implementation appears to be slow. The State Govt should file the physical and financial progress of STP capacity augmentation before NGT along with definite timelines within a month. Vide order dated 22.08.2019 it was stated that with regard to sewerage works/STP under construction, after 01.07.2020, direction for payment of environmental compensation of Rs. 10 lakhs per STP per month to CPCB will apply. Accordingly, UPPCB/CPCB shall calculate EC and send notices to defaulters in the next 15 days. It shall also explain why notices have not been issued in this regard so far.*
- 3. Progress of in situ remediation as an interim measure appears to be not satisfactory. In the meeting held by Oversight Committee on 5.2.2021 no information could be furnished by the concerned authorities which suggests that no action has been taken in this regard. CPCB had given notice for EC for inaction by authorities for ensuring bio/phytoremediation for Rs 18 Crore which has also been not deposited. CPCB must submit report regarding how much EC has been realized out of total imposed EC of Rs 18 crore on 120 drains for non-compliance of this order for the period 1.11.2019 to 31.1.2020. Further, the proposed timelines for in situ remediation along with details of project approval and financial approvals for these 257 untapped drains be filed by the Govt before NGT within a month.*
- 4. It has been observed that e-flow is being maintained in River Ganga while study was in progress with reference to other perennial rivers. The report of the study was expected to be received by Dec, 2020 from IIT, Delhi. However, till date no report has been received by the Department. It is recommended that Irrigation Dept. must pursue the matter and ensure post study action.*
- 5. Monitoring of Grossly Polluting Industries needs to be stepped up. UPPCB should issue notices to all defaulters and also realize the EC imposed earlier. GPIs in all polluted river stretches be connected to Central Control Room at Lucknow through OCEMS. This shall ensure accountability in the pollution reporting of the GPIs.*
- 6. The State government has not yet deposited the Performance Guarantee of Rs.15 crore as mandated by*

NGT. Chief Secretary, UP must ensure compliance in this matter.

- 7. The Irrigation Department should coordinate with Forest Department of the State to identify vacant areas /flood planes on the banks of these river stretches which may be developed as Green Belts. An action plan regarding this may be submitted by Irrigation Department to Department of Forest, Uttar Pradesh within two months.*
- 8. The work of floodplain demarcation is still under progress. It is suggested that pillars be fixed in all the stretches and notification be done within six months.*
- 9. The residents of different districts were contended to see the clean water of all the rivers during the lockdown period. In view of this, the Committee suggests conducting mass awareness campaigns and media-based water consciousness campaigns that make people sensitive towards the environment as well as show that they are an integral part of the solution.*
- 10. The Committee recommends Mining Dept., UP to submit a detailed report about status of illegal sand mining in all the 12 polluted stretches in the State. Information regarding enforcement and action taken by the Dept. to control illegal sand mining must be elaborated.*
- 11. The sewage treatment capacity of Lucknow needs to be augmented for improving the water quality of river Gomti. The present treatment capacity is 438 MLD against requirement of 784 MLD. The gap of 346 MLD is proposed to be filled up in 3 Phase-160 MLD in Phase1, 102 MLD in Phase2 and 85 MLD in Phase3. So far Phase 2 comprising of Bijnor STP (80 MLD) and Ghaila STP (22MLD) is pending for sanction with NMCG. DPR for Phase3 (Bharwara 85 MLD) is under preparation. The State Govt should immediately get these STPs sanctioned and ensure that work commences as per timelines prescribed by NGT.*
- 12. In the interim, NGT had directed that in situ remediation measures be taken up to check the discharge of untreated water in the river. Unfortunately, despite two pilots having been taken in the past, no in situ remediation has been initiated. CPCB/SPCB may impose and realize EC as directed by NGT on this count.*
- 13. There are many flaws in Waste Management Processing Plant in Lucknow managed by M/s Eco Green. During the inspection visits it was found that waste processing plant at Shiveri was non-operational. No 'waste to energy' work had been started in the treatment unit. SPCB must issue show cause notice within a fortnight to Nagar Nigam and impose EC for violations of Environmental norms with liberty to the Nagar Nigam to realize it from*

the Operator along with such penal action as they deem fit.”

Consideration of the Reports and further directions:

24. We have given careful consideration to the data furnished by way of above reports and found that the progress achieved is insubstantial. We note discrepancy in the data in the current report compared to the data in the last report dated 15.09.2020. In the last report, the data of sewage generation was mentioned to be 53,396.84 MLD while in the current report it is mentioned as 48,000 MLD. Explanation in the report is that the earlier information was incomplete and the current report gives the correct figure.

It is seen that huge gap in generation and treatment of sewage continues. Capacity is said to be only 62% but the entire capacity is not utilised. Utilised capacity is only 44% as per data furnished by the CPCB in OA 95/2018, *Aryavart Foundation v. M/s Vapi Green Enviro Ltd. & Ors*, to be referred later. As per last report, 1831 industries were working without any ETP in violation of law. 1123 ETPs were non functional. 62 CETPs and 530 STPs were non-compliant. Several projects are still at tender/DPR stage with no interim remediation arrangement. This statistic relates to the urban areas of the entire country, including the towns on the banks of rivers in question. No statistics have been given about the gap in generation and treatment of the sewage in rural areas. While the report mentions that the National FSSM Policy has been introduced in 2017 and some States have also issued their State Level Policies, the FSTPs operational are said to be only about 30 and in the offing about 400 which are hardly sufficient to address the huge gap. Credible database needs to be compiled in this regard and comprehensive action plan prepared to ensure that there is no gap in the waste generation and treatment. Execution of the

action plan has to be planned having in mind the requirements of the urban and rural areas separately. The policy must include utilization of biosolids for using as composting need to be duly ensured. The observations and recommendations in the report on issues not expressly dealt with need to be duly followed.

To address the huge gap in generation and treatment of waste, requisite number of treatment plants need to be in place at the earliest, including modular STPs wherever necessary. The plants already set up need to be functional and compliant. The ongoing projects have to be completed within the stipulated timelines. Pending such treatment interim measures for phyto/bio-remediation needs to be taken to ensure compliance of the provisions of the Water Act prohibiting discharge of any contaminant in water bodies.

Thus, huge water pollution is taking place as per official data with no effective adverse action against polluters, though it is crime under the law of land in the same way as homicide and assault. Pollution is resulting in deaths and diseases but with no punishment and no protection to the victims posing serious threat to rule of law requiring protection of innocent and punishment of guilty by the State. Emergent and stringent measures are necessary for discharge of Constitutional duties by the States concerned otherwise it is tolerating and ignoring lawlessness. Repeated directions to shorten tendering/DPR procedures have remained uncomplied as also fixing accountability of officers responsible for the situation.

25. Thus, further action is required in mission-mode at all levels to discharge constitutional obligation of providing pollution free environment and also to protect public health. Scarce sources of drinking water and

irrigation are required to be maintained free from contamination. This is basic constitutional obligation of the authorities under the Constitution being linked to 'Right to Life'. Without this being done in a meaningful manner, there can be no sustainable development. **There is need for stringent enforcement by way of adverse measures, including recovery of compensation for continuing violation and adverse entries in the record of defaulting officers. Accountability for those who are entrusted the responsibility to comply with these directions must be fixed on the principle of good governance to enforce rule of law to protect rights of citizens.**

26. We find that the river water quality has been analyzed without taking into account one of the major components of river pollution i.e. fecal coliform. **The river water quality is declared 'fit for bathing' only with reference to BOD, without concern of the fecal coliform, which does not represent true picture and such course is thus against the law.** This may be duly remedied. **There is need for compiling an annual progress report in terms of improvement of water quality by reducing pollution load. The progress should be evaluated depending on extent of reduction of pollution load, in comparison to the earlier period. Such annual progress report must be put in public domain and appropriate action taken for inadequate progress after finding out the persons responsible for such failure and other causes, if any.** Adequate number of monitoring stations need to be installed in a timebound manner for the purpose of monitoring water quality.

27. One major step for monitoring is compiling data in transparent manner. The Tribunal has already directed, vide order dated 05.02.2021 in OA 95/2018, *Aryavart Foundation v. M/s Vapi Enviro Ltd. & Ors.*, that

National/State/District Environment Data Grids be established which will go a great way in compiling data and monitoring compliance. **There is also need to take further steps for enhancing the utilization of treated waste water. The gap in generation of treated water and its utilization needs to be addressed expeditiously and monitored in terms of quantity and quality.**

28. There is further need to re-engineer the administrative processes adopted and giving of the contracts, as earlier mentioned. **The time consuming DPRs and approval processes in the administration needs to be avoided and speedy action taken based on model DPRs and laid down standards.** It is a matter of regret that, as per official statistics, 56% of total generated sewage remains untreated and finds its way into the water bodies which is a crime under the law of the land for the last 47 years. This remains a constant threat to contamination of potable water. **Similar is the position with regard to the water pollution from other sources, including industries and dumping of solid and other waste.**

29. **Demarcation and protection of 'flood plain zones' keeping them free from encroachment is another challenge which needs to be tackled on war-footing by designating responsible and accountable officers to ensure that in the interregnum till requisite water treatment equipment are set up. Interim steps for sewage treatment need to be taken to reduce the pollution load.**

Need for improved Monitoring Mechanism in the light of Notification dated 07.10.2016 issued by the Ministry of Water Resources, River Development, and Ganga Rejuvenation

30. The Ministry of Water Resources, River Development, and Ganga Rejuvenation has issued Notification dated 07.10.2016 in respect of

management of River Ganga under the Environment (Protection) Act, 1986 called **“River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016”** (the Ganga Order) constituting authorities at National, State and District Levels called ‘National Ganga Council’, ‘Empowered Task Force on River Ganga’, ‘State Ganga Rejuvenation, Protection and Management Committee’ and ‘District Ganga Committees’. Further, ‘National Mission for Clean Ganga’ (NMCG) has been constituted. The object of the said notification is to **abate pollution and rejuvenate river Ganga, maintain e-flow, restrict activities on the river banks and other allied issues.** Steps to be taken are exhaustively laid down, apart from providing safety audit and conferring statutory authority to issue directions on related matters, including in respect of tributaries of River Ganga. The National Ganga Council is headed by the Hon’ble Prime Minister and the ‘Empowered Task Force’ is headed by the Jal Shakti Minister. The ‘State Ganga Committees’ are headed by the Chief Secretaries of the States. The ‘District Ganga Committees’ are headed by the District Magistrates. The NMCG is headed by its Director General with representatives of Central Ministries and State Governments. There is also a provision for setting up monitoring centers. Powers of the NMCG include issuance of directions to State Ganga Committees and District Ganga Committees or Local Authorities for rejuvenation of River Ganga and connected issues. It can frame a policy and direct its implementation. The Ganga safety audit is to be conducted by the National Ganga Council. It is to publish an annual report. The functioning of District Ganga Committees can be overseen by the NMCG either directly or through the State Ganga Committees. Every District Ganga Committees is also to prepare plan for protection of River Ganga and its tributaries and their

river beds and District Ganga Committees also to prepare its own budget and give monthly and annual reports.

31. **As noted earlier, protecting the rivers from pollution is a National necessity. Pollution of rivers has resulted in worst water crisis in the country.** This requires control of domestic and industrial pollution, utilization of treated sewage for secondary purposes to prevent use of potable water for such purposes, protecting the catchment areas, regulating activities in flood plains zones, maintaining e-flow which includes conserving the ground water. All these steps are duly mentioned in the Notification dated 07.10.2016 as necessary for control of pollution and rejuvenation of Ganga. This Tribunal in its earlier orders, including orders dated **20.09.2018, 19.12.2018, 08.04.2019, 06.12.2019 29.06.2020 and 21.09.2020, dealt with preparation and execution of action plans for all the 351 polluted river stretches almost on same pattern.** The compensation regime has been laid down not only for delay in finalizing action plans but also **for delay in commencing and completing the projects** on the pattern of regime applicable to Ganga. Similarly, in connected matter (OA 593/2017) relating to setting up of requisite numbers of ETP, CETP and STPs (including modular STPs wherever necessary) as per mandate of law under the Water Act and the judgment of the Hon'ble Supreme Court in *Paryavaran Suraksha*, supra, also compensation regime has been laid down and compliance of direction of the Hon'ble Supreme Court for rigid implementation mechanism for ensuring compliance by 31.03.2018 has been overseen, as mentioned earlier. Finally, this aspect of monitoring for setting up of all requisite ETPs, CETPs and STPs **(including modular STPs wherever necessary)** within the timelines and for also taking other steps for control of pollution and rejuvenation of 351 polluted river stretches was left to the CMC to be

headed by the Secretary, Ministry of Jal Shakti along with the NMCG and CPCB. At the State levels, directions have been issued for constituting River Rejuvenation Committee for preparation and execution of the action plans to be overseen by the Chief Secretaries of all the States by constituting 'environment cells' directly under them. The status reports given by the CMC constituted by this Tribunal have already been quoted above.

32. As mentioned earlier, apart from larger issues of control of pollution and rejuvenation of 351 river stretches, the Tribunal separately dealt with control and rejuvenation of some rivers separately including **Yamuna, Hindon, Ganga and Satluj**. River Yamuna which is tributary of Ganga was earlier subject matter of consideration before the Hon'ble Supreme Court and later the monitoring was entrusted to this Tribunal. The Tribunal gave detailed directions dated 13.01.2015 and 07.12.2017. The Tribunal also constituted an independent Monitoring Committee. **The said matter was finally disposed of on 27.01.2021 wherein the status of compliance under each head of action plan was duly mentioned.** It was further noted that clear roadmap already stands laid out and further success depended on the matter being taken seriously by the Administrative Authorities. **Accordingly, the Chief Secretaries were directed to take over the monitoring** as follows:

*“23. Accordingly, we direct that in terms of directions of the Hon'ble Supreme Court and earlier orders of this Tribunal, henceforth **the Chief Secretary, NCT of Delhi, in coordination with other authorities (such as, Additional Chief Secretary Urban Development, DDA, IDMC, DPCC, DJB) and the Chief Secretaries of Haryana and UP may personally monitor the progress, by evolving effective administrative mechanism to handle grim situation caused by years of neglect.** Causes of failure of existing mechanism and remedial measures required be addressed in the light of reports of the Committee. This needs to be further overseen at National level by the Central Monitoring Committee,*

headed by Secretary Jalshakti, which also includes NMCG and CPCB, in terms of earlier orders of this Tribunal. To give effect to the orders of the Hon'ble Supreme Court, the Tribunal has already directed constitution of River Rejuvenation Committees (RRCs) in all the States/UTs by order passed in OA No. 673 of 2018 in Re: News item published in "The Hindu" authored by Shri Jacob Koshy titled "More river stretches are now critically polluted : CPCB, to be headed by the Environment Secretaries of States/UTs, to prepare and execute action plans for restoration of the polluted river stretches, under the oversight of the Chief Secretaries of the States/UTs. Such action plans are already in place. **The RRCs of Delhi, Haryana and UP may accordingly monitor execution of the action plans with proper inter-departmental coordination, to remedy the polluted stretches of river Yamuna in their respective jurisdiction, subject to oversight of the Chief Secretaries on quarterly basis, who may thereafter give their quarterly reports to the Central Monitoring Committee (CMC) headed by the Secretary, Jal Shakti in terms of order dated 21.09.2020 in O.A. No. 673/2018, supra.**"

33. In dealing with the river Satluj, vide order dated 22.01.2021 in O.A. No. 916/2018, *Sobha Singh & Ors. v. State of Punjab & Ors.*, the Tribunal also constituted a Monitoring Committee which oversaw preparation and execution of action plan. **The Tribunal finally concluded that once the roadmap was clear the ownership must be taken over by the Chief Secretary, Punjab.** The direction is as follows:-

"17. Accordingly, as already directed earlier, the ownership of the issue may now be taken over by the Chief Secretary, Punjab who may, having regard to seriousness of the issue, affecting health and environment, personally monitor progress of compliance atleast once in a month and also evolve an appropriate administrative mechanism to handle the grim situation. We may also note that the RRCs headed by Environment Secretaries in all the States/UTs have already been directed to monitor execution of action plans for the polluted river stretches on continuous basis. The RRC Punjab may also accordingly monitor execution of action plans for Sutlej and Beas rivers in continuation of 5th report of the Monitoring Committee, referred to above, subject to overall oversight of the Chief Secretary. The Chief Secretary while reviewing the status of various issues may focus on timely completion of the ongoing works. Quarterly reports be sent by the Chief Secretary to the CMC in terms of the order dated 21.09.2020 in OA 673/2018 which deals with the subject of restoration of 351 polluted river stretches, including the rivers in question."

34. Similar course was adopted for river Hindon, vide final order dated 02.02.2021 in O.A. No. 231/2014, *Doaba Paryavaran Samiti v. State of U.P & Ors.*, as follows:-

“14. Accordingly, as already directed earlier, the ownership of the issue may now be taken over by the Chief Secretary, UP, who may, having regard to seriousness of the issue, affecting health and environment, personally monitor progress of compliance atleast once in a month and also evolve an appropriate administrative mechanism to handle the grim situation. We may also note that the RRCs headed by Environment Secretaries in all the States/UTs have already been directed to monitor execution of action plans for the polluted river stretches on continuous basis. The RRC UP may also accordingly monitor execution of action plans for Hindon, subject to overall oversight of the Chief Secretary. The Chief Secretary while reviewing the status of various issues may focus on timely completion of the ongoing works. Quarterly reports be sent by the Chief Secretary to the CMC in terms of the order dated 21.09.2020 in OA 673/2018 which deals with the subject of restoration of 351 polluted river stretches, including the rivers in question.”

35. While dealing with the issue of control of pollution and rejuvenation of river Ganga, vide order dated 08.02.2021 in O.A. No. 200/2014, *M.C. Mehta v. Union of India & Ors.*, the Tribunal issued following **direction on the subject of recovery of compensation after specified date for failure to take steps within the prescribed timelines:-**

“14. At the cost of repetition, it may be mentioned that inspite of the fact that Water (Prevention and Control of Pollution) Act, 1974 was enacted 47 years back, to give effect to the decision in Stockholm Conference in the year 1972, the water pollution remains rampant. Though water pollution is a serious criminal offence under the law of the land, the authorities have failed to take stringent action against the violators. In a way the major violators remain State-authorities, who are constitutionally under obligation to ensure treatment of sewage before the same is discharged into the rivers and drains connected thereto which is not fully happening. The effect of water pollution on health and food safety is well known. Water is scarce and large population remains deprived of access to drinking water but still steps to prevent pollution of sources of drinking water are inadequate. The Hon’ble Supreme Court in its judgment in

Paryavaran Suraksha vs. Union of India & Ors., (2017) 5 SCC 326 discussed the problem in detail and fixed a firm deadline of 31.03.2018 by which all necessary CETPs/STPs/ETPs should be in place failing which coercive action, including prosecution of State authorities was mandated. **The States continue to violate the directions of the Hon'ble Supreme Court and give their own convenient deadlines which are thereafter further relaxed at will. This can hardly be held to be conducive to the environmental rule of law. The sewage treatment is less than 50% (the sewage generation from the urban population of the country is reported to be about 70000 MLD and treatment capacity about 27000 MLD)**²⁴ which is a matter of serious concern. The Tribunal has issued repeated directions. Till it is remedied, the goal of sustainable development is far cry.

15. The environmental law principles, which this Tribunal is mandated to apply under sections 20 and 15 of the NGT Act, 2010, are – ‘sustainable development’, ‘precautionary’ and ‘polluter pays’. These principles, accepted in Stockhome conference, have been held to be part of right to life under article 21 of the Constitution in *Vellore Citizens' Welfare Forum v. Union of India*, (1996) 5 SCC 647. In *Hanuman Laxman*, (2019) 15 SCC 401, (paras 142-156), significance of environmental rule of law has been highlighted to achieve sustainable development goals for prosperity, health and well being. **This requires filling of gap between law and enforcement.** In *T.N. Godavarman Thirumulpad v. Union of India*, (2002) 10 SCC 606, at page 621, it was observed that the State has to

“forge in its policy to maintain ecological balance and hygienic environment. Article 21 protects right to life as a fundamental right. Enjoyment of life and its attainment including the right to life with human dignity encompasses within its ambit, the protection and preservation of environment, ecological balance free from pollution of air and water, sanitation without which life cannot be enjoyed. Any contra acts or actions would cause environmental pollution. Therefore, **hygienic environment is an integral facet of right to healthy life and it would be impossible to live with human dignity without a humane and healthy environment.** Environmental protection, therefore, has now become a matter of grave concern for human existence. Promoting environmental protection implies maintenance of the environment as a whole comprising the man-made and the natural environment. Therefore, there is constitutional imperative on the Central Government, State Governments and bodies like municipalities, not only to ensure and safeguard proper environment but also an imperative duty to take adequate measures to promote, protect and improve the man-made environment and natural environment.”

²⁴ As per report of the CPCB dated 30.09.2020 quoted in the order of this Tribunal dated 05.02.2021 in OA 95/2018, *Aryavart Foundation v. M/s Vapi Green Enviro Ltd. & Ors.*

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19. In view of above, control of pollution of river Ganga needs to be taken seriously at all levels in Uttarakhand, UP, Bihar, Jharkhand and West Bengal. In absence thereof, the desired result of rejuvenation of river Ganga which is dream of every Indian will remain unfulfilled. **As observed earlier, the Hon'ble Supreme Court has monitored the subject for 34 years (1985-2014) and finally transferred the matter to this Tribunal in the year 2014. Though certain steps have been taken, the tables and compliance summary filed by NMCG quoted above show that with respect to various projects, the matter is still at the tender/DPRs stage and progress in completing the ongoing projects in a timely manner remains a challenge, inspite of availability of funds, supported by the Government of India initiatives.**

20. xxxxxx.....xxx.....

21. While removing already raised constructions from the floodplain zones may be dealt with separately, there is need to atleast identify and take protective measures. All remedial measures have already been outlined in the earlier orders of this Tribunal and need not be repeated. As earlier observed, the desirable situation is that not a drop of pollution is discharged into the river Ganga, but in any case, **every next report must show decreasing trend of pollution load which needs to be quantified by the NMCG in a tabular form giving the extent of pollution load on a particular date and reduction achieved in terms of gap after steps for treatment.** Stopping pollution is as much necessary as stopping any other heinous crimes of homicides and assaults as pollution is acknowledged cause of deaths and diseases and deprivation of access to drinking water.

22. xxxxxx.....xxx.....

23. **With regard to the recovery of laid down compensation, it is made clear that the compensation must be faithfully paid by the concerned States by way of deposit to the CPCB which can thereafter be spent for restoration in the same State, as per action plan prepared for the purpose by the State and approved by the NMCG, after due evaluation on the pattern of orders earlier passed by this Tribunal²⁵. NMCG may monitor compliance. Control of pollution of river Ganga will be incomplete without controlling pollution of all the tributaries and drains connected thereto.**

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27. Further progress reports may be furnished by the concerned five States to the NMCG on or before 30.06.2021

²⁵ Vide order dated 22.01.2021 in OA 916/2018, Sobha Singh v. State of Punjab & Ors.

showing status as on 15.6.2021. NMCG may give its consolidated progress report with its recommendations to this Tribunal by 15.07.2021 by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF, with liberty to the States to file their response to such report. The NMCG report may inter alia specify reduction in pollution load, if any achieved during the interregnum, and if not, suggest further measures to achieve such reduction.”

36. The Tribunal, vide order dated 05.02.2021 in O.A. No. 95/2018, *Aryavart Foundation v. M/s Vapi Green Enviro Ltd. & Ors.* dealt with pollution of River Daman Ganga in Gujrat on account of inadequately functional CETP at Vapi. While considering the said issue, **the Tribunal obtained an audit-report on functioning of monitoring mechanism by State PCBs and found that the State PCBs were not as effective as required under the law.** They lacked manpower as well as the equipment. **Till revamping of the State PCBs takes place, it is difficult to expect effective monitoring from them to comply with the direction of the Hon’ble Supreme Court in *Paryavaran Suraksha*, supra for effective measures against polluters. The Tribunal also directed considering setting up of environment data grids.** Relevant observations from the said order are:-

*“10. We have given due consideration to the report, which shows startling state of affairs tested on the touchstone of ‘Sustainable Development’ principle, accepted in Stockholm conference and which has been held to be part of right to life under article 21 of the Constitution in *Vellore Citizens’ Welfare Forum v. Union of India*, (1996) 5 SCC 647.*

11. Some of the significant observations include failure to fill up key positions, to acquire necessary equipment, to arrange continuous training, to prepare State Environment policy, to specify industries-siting criteria, making inventory of grossly polluting industries, not specifying standards of inlet to the CETPs and hazardous waste, inaction against identified polluters, taking steps for bridging gaps in law and enforcement with regard to liquid and solid waste (of different kinds), including non-functional and noncompliant ETSPs, STPs and CETPs, inadequate monitoring of environmental compliance in Class II towns and coastal areas, failure to compile and

analyse data and filing annual reports, inefficiency shown by inaction against serious violations of environmental norms. Needless to say that such sorry state of affairs is reflection of poor governance, making environmental rule of law far from reality.

12. *The environmental law principles, which this Tribunal is mandated to apply under sections 20 and 15 of the NGT Act, 2010, are – ‘sustainable development’, ‘precautionary’ and ‘polluter pays’. In Hanuman Laxman, (2019) 15 SCC 401, (paras 142-156), significance of environmental rule of law has been highlighted to achieve sustainable development goals for prosperity, health and well being. **This requires filling of gap between law and enforcement.** In T.N. Godavarman Thirumulpad v. Union of India, (2002) 10 SCC 606, at page 621, it was observed that the State has to*

*“forge in its policy to maintain ecological balance and hygienic environment. Article 21 protects right to life as a fundamental right. Enjoyment of life and its attainment including the right to life with human dignity encompasses within its ambit, the protection and preservation of environment, ecological balance free from pollution of air and water, sanitation without which life cannot be enjoyed. Any contra acts or actions would cause environmental pollution. Therefore, **hygienic environment is an integral facet of right to healthy life and it would be impossible to live with human dignity without a humane and healthy environment.** Environmental protection, therefore, has now become a matter of grave concern for human existence. Promoting environmental protection implies maintenance of the environment as a whole comprising the man-made and the natural environment. Therefore, there is constitutional imperative on the Central Government, State Governments and bodies like municipalities, not only to ensure and safeguard proper environment but also an imperative duty to take adequate measures to promote, protect and improve the man-made environment and natural environment.”*

13. *In A.P. Pollution Control Board v. Prof. M.V. Nayudu, (1999) 2 SCC 718, at page 732, it was observed “**Good governance is an accepted principle of international and domestic laws.It includes the need for the State to take the necessary “legislative, administrative and other actions” to implement the duty of prevention of environmental harm...**”. In Techi Taga Tara, supra, the Hon’ble Supreme Court referred to several Committees on **need for revamping the regulatory bodies by appointing persons of outstanding ability and high reputation to the State PCBs and equipping them with laboratories and other equipment for performing statutory functions.** Apart from the Tribunal being approached under sections 14 and 15 by aggrieved parties, pointing out degradation of environment and inaction of the statutory regulators, the*

Hon'ble Supreme Court has required this Tribunal to monitor compliance of such statutory obligations for protecting environment. This is not possible unless the statutory regulators are effective. Significant issues so referred by the Hon'ble Supreme Court include a) liquid waste management, (2017) 5 SCC 326, Paryavaran Suraksha vs. Union of India & Ors. wherein it was directed that requisite STPs, ETPs, CETPs must be set up by 31.3.2018, failing which coercive measures may be taken against concerned authorities, to enforce statutory mandate of the Water (Prevention and Control of Pollution) Act enacted in 1974, prohibiting any water pollution, making it a criminal offence. b) compliance of solid waste management rules. Vide order dated 2.9.2014 in WP 888/1996, Almitra H. Patel Vs. Union of India & Ors. on the file of the Supreme Court, the issue has been referred to this Tribunal for monitoring compliance of Solid Waste Management Rules. c) In (2015) 12 SCC 764, MC Mehta v. UOI, issue of rejuvenation of Ganga stands referred to this Tribunal. d) Vide order dated 24.7.2017 in WP 725/1994, 'And quite flows Yamuna', rejuvenation of Yamuna stands referred to this Tribunal. It is not necessary to refer to several other orders. Finding that statutory regulators were not effective and serious damage was continuing, the Tribunal has appointed independent monitoring Committees²⁶ on several issues.

In substance, monitoring of the enacted environmental laws including the Water Act, Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 and Rules framed thereunder needs to be reviewed and made effective in the interest of protection of environment and public health. This is not possible unless the regulatory bodies are duly manned and equipped and function efficiently. The report shows that it is not happening and there are huge gaps. With such gaps, it is only a dream to expect clean environment – fresh water or fresh air. Irreversible degradation of environment is bound to result in avoidable deaths and diseases and loss of scarce and good quality water, air and soil and biodiversity.

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²⁶ To monitor compliances with regard to:

- (i) River Ghaggar in OA No. 138/2016 (TNHRC), Stench Grips Mansa's Sacred Ghaggar River
- (ii) River Sutlej in OA 916/2018, Sobha Singh v. State of Punjab & Ors.
- (iii) River Yamuna in OA 06/2012, Manoj Mishra v. UOI & Ors.
- (iv) River Musi in OA 426/2018, Mohammed Nayeem Pasha & Anr. v. State of Telangana & Ors.
- (v) River Ganga in OA 200/2014, M.C. Mehta v. Union of India & Ors.
- (vi) River Jojari in OA 329/2015, Gram Panchayat Araba v. State of Rajasthan & Ors.
- (vii) CETP in Talaja District in OA 125/2018, Arvind Pundalik Mhatre v. Ministry of Environment, Forest and Climate Change & Ors.
- (viii) District Environment Plan in OA 360/2018 Shree Nath Sharma v. Union of India & Ors.
- (ix) 'Rat Hole' coal mining in OA 110(THC)/2012, Threat to Life Arising Out of Coal Mining in South Garo Hills District v. State of Meghalaya & Ors.
- (x) Solid waste management rules in OA 606/2018, Compliance of Municipal Solid Waste Management Rules, 2016 and other environmental issues.

17. As earlier observed, damage to environment is directly linked to the public health and neglecting compliance of environmental norms results in deaths and injuries. Violation of environmental norms needs to be taken as seriously as preventing crimes of homicides and assaults. It is more serious as the victims may be wide spread and unidentified. The consequences may even affect future generations. The compliance status is directly linked to effectiveness of monitoring which requires that the key office bearers of statutory regulators and oversight bodies are qualified, competent and reputed and exclusively dedicated to such work, instead of devoting part time, while simultaneously holding other positions. In this regard, the Tribunal has made observations vide order dated 02.02.2021 in OA 231/2014, *Doaba Paryavaran Samiti v. State of U.P & Ors*, finding that the Member Secretary of the PCB in UP was only devoting part-time, while holding several other positions. Adequate and well-equipped laboratories and effective machinery for implementation of "Polluter Pays" principle for assessment and collection of compensation is another important aspect of environmental governance.

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20. **Further, for improving monitoring and planning, authentic data needs to be compiled at all levels. Initiative will have to be taken consistent with Digital India initiatives by the MoEF/MoJS/MoUD/CPCB and based on such policy decisions, the Environment departments of all States/UTs will have to compile data in their respective jurisdiction, preferably Districtwise. On that basis District Environment Data Grid (DEDG), State Environment Data Grid (SEDG) and National Environment Data Grid (NEDG) can be set up and continuously updated. The Grid can be connected to online monitoring systems. Comprehensive Environment Pollution Index (CEPI) is being prepared limited to the Industrial Area but the Grid can cover larger areas and aspects and can be source of research and planning. It can also facilitate monitoring of and be in sync with other government initiatives such as National Mission for Clean Ganga, Swachh Bharat and Jalshakti Abhiyan etc. Based on such data, it may also be easier to study 'carrying capacity' of different areas to plan siting policy for various activities.**

22. **xxxxxx.....xxx.....**

(i) to (vii). **xxxxxx.....xxx.....**

(viii) Consistent with Digital India initiatives, MoEF&CC/MoJS/CPCB may consider setting up and periodically updating National Environment Data Grid (NEDG) linked to the State Environment Data Grids (SEDGs) DEDGs and further linked to available portals

like online air/water quality, Sameer and other monitoring stations to facilitate analysis, research and planning on the subject. It may be further interlinked to initiatives like NMCG/Swachh Bharat/Jal Jeevan Mission.”

Conclusion

37. **In view of the above, we are of opinion that the monitoring by the Tribunal cannot be unending and must now be taken over by the concerned authorities. The roadmap stands laid out. Action plans have been prepared for remediation of all the 351 identified polluted river stretches. Gaps have been identified for ETPs/CETPs/STPs (including modular STPs wherever necessary). Timelines are clear. Sources of funding are clear in the Supreme Court order. HAM model is also available as per Govt. of India Policy mentioned in the report of the CMC. Alternative conventional methods of bio/phytoremediation are also available as mentioned in the report of the CMC. Existing treatment capacity is not fully utilised. New projects, already ongoing or those yet to commence need to be expedited. Consequences for delay in terms of compensation and administrative measures have been clearly mentioned. The river rejuvenation committees in the States/UTs, as per directions of the Chief Secretaries may perform their obligations accordingly which may be monitored by the Central Monitoring Committee, headed by Secretary, Jal Shakti, as directed earlier.**

38. We find that the monitoring mechanism introduced as per directions of this Tribunal in the form of RRCs at the States level and CMC at the Central level is to an extent identical to the monitoring mechanism laid down under the River Ganga Rejuvenation, Protection and Management Authorities Notification 2016. **However, mechanism under the 2016 notification being statutory and exhaustive, it will be better that the**

same is adopted for all the river stretches as issues involved are common. The Empowered Task Force on river Ganga headed by Union Minister of Jal Shakti may exercise all powers and discharge all functions in relation to all the polluted river stretches in the same manner as the functions entrusted to it under the River Ganga 2016 order for control of pollution and rejuvenation of polluted river stretches. This is necessary so that the Nation/Central Monitoring Mechanism can be effective, in view of continuing failure of statutory mechanism under the Water Act for preventing pollution of water, resulting in pollution of almost all the rivers and water bodies in the country, posing serious threat to availability of potable water for drinking purposes as well as for safety of food chain. Hardly any accountability has been fixed for such serious failures. **It will be open to the MoJS to issue any further appropriate statutory order to give effect to the above directions under the EP Act. The National/Central Mechanism may enforce the earlier directions of this Tribunal for collecting compensation for the failure to commence or complete the projects for setting up of sewage treatment equipments or taking steps for interim remediation measures. This is necessary for accountability for the failure to obey the law. The compensation so assessed may be deposited in a separate account to be used for rejuvenation of the polluted river stretches in the same manner as directed in the case of Ganga quoted above. As directed vide order dated 19.12.2018 in OA 673/2018, responsibility to pay compensation on behalf of the States/UTs will be of the Chief Secretaries. As per scheme of the NGT Act, every order of NGT is executable as a decree of Civil Court²⁷.**

²⁷ Section 25 of the NGT Act, 2010 read with Section 51 of the CPC providing for mode of execution which include civil imprisonment.

Further, failure to comply order of the NGT is an offence punishable with imprisonment upto three years or fine upto Rs. 10 crores with additional fine for continuing offence after conviction.²⁸ If the offence is by a Government Department, Head of the Department is deemed to be guilty.²⁹ Cognizance of the offence can be taken by a Court on a complaint of Central Government or any other person who has given notice to the Central Government or its authorized representative. The complaint can be filed before a Court of Magistrate of first class. It is, thus, necessary in view of continuing violation of NGT order, requiring payment of compensation to reiterate the direction of responsibility for payment of compensation, to be of the Chief Secretaries and in default, their liability to be proceeded against for coercive measures for execution or by way of prosecution as per NGT Act, 2010.

39. Our directions are summed up as follows:

- (i) In the light of observations in Para 38 above, MoJS may devise an appropriate mechanism for more effective monitoring of steps for control of pollution and rejuvenation of all polluted river stretches in the country. The said mechanism may be called “National River Rejuvenation Mechanism” (NRRM) or given any other suitable name. NRRM may also consider the observations with regard to setting up of National/State/District Environment Data Grid at appropriate levels as an effective monitoring strategy.
- (ii) Chief Secretaries of all States/UTs and PCBs/PCCs must work in mission mode for strict compliance of timelines for

²⁸ Section 26

²⁹ Section 28

commencing new projects, completing ongoing projects and adopting interim phyto/bio-remediation measures, failing which compensation in terms of earlier orders be deposited with the MoJS, to be utilised in the respective States as per action plan to be approved by the NRRM. Other steps in terms of action plans for abatement of pollution and rejuvenation of rivers, including preventing discharge or dumping of liquid and solid waste, maintaining eflow, protecting floodplains, using treated sewage for secondary purposes, developing biodiversity parks, protecting water bodies, regulating ground water extraction, water conservation, maintaining water quality etc. be taken effectively. The process of rejuvenation of rivers need not be confined to only 351 stretches but may be applicable to all small, medium and big polluted rivers, including those dried up.

- (iii) The Chief Secretaries of all States/UTs may personally monitor progress at least once every month and the NRRM every quarter.
- (iv) Directions of this Tribunal in earlier order, the last being dated 21.9.2020 are reiterated.
- (v) The NRRM and the Chief Secretaries of all the States/UTs may take into account the observations in Paras 24 to 38 above.
- (vi) In view of discussion in para 38 above, it is made clear that accountability for failure to comply with the direction for payment of compensation will be of the concerned Chief Secretaries under Sections 25, 26, 28 and 30 of the NGT Act, 2010. The MoJS or any other aggrieved person will be free to take remedies by way of initiating prosecution or execution.

The applications are disposed of in above terms.

A copy of this order be forwarded to Secretary, MoJS, MoEF&CC, GoI, CPCB, Chief Secretaries and State PCBs/PCCs of all States/UTs by e-mail for compliance.

Adarsh Kumar Goel, CP

S.K. Singh, JM

Dr. Nagin Nanda, EM

February 22, 2021
Original Application No. 593/2017
(W.P.(Civil) No. 375/2012)
& Original Application No. 673/2018
SN



Water Quality Index of Identified Polluted River Stretches in Meghalaya for April 2021

ANNEXURE R/11

Station Code	Water Quality Criteria Location Name	pH 6.5-8.5	DO >4.0mg/l	BOD <3.0mg/l	FC <2500 MPN/100ml	TC <5000 MPN/100ml	FS <500 MPN/100ml	Water Quality Status
3364	Umshyrpi near Law College	7.1	0.7	35.0	24000	84000	3400	Not Satisfactory
3365	Umshyrpi at Umshyrpi Bridge	7.4	3.2	21.0	7900	15000	1300	Not Satisfactory
3359	Umkhrah at Demthring	7.4	1.2	30.0	15000	41000	2700	Not Satisfactory
3360	Umkhrah at Umkaliar	7.6	4.5	12.5	9400	23000	2200	Not Satisfactory
3361	Umkhrah near Slaughter house	7.4	0.5	40.0	31000	94000	3900	Not Satisfactory
3362	Umkhrah at Mawpdang Mawlai	7.1	1.3	28.0	23000	70000	3300	Not Satisfactory
1422	Umtrew at Byrnihat	7.1	7.0	2.5	230	2200	46	Satisfactory
3367	Nongbah at Nongstoin	6.9	7.1	2.4	390	1500	48	Satisfactory
1631	Myntdu at Jowai	7.2	7.3	2.4	410	1300	35	Satisfactory
3375	Lunar river (Tributary of Lukha river) at Myndihati	2.9	6.8	2.7	BDL	BDL	BDL	Not Satisfactory
1428	Kyrhuhkhla	3.4	7.0	2.5	BDL	BDL	BDL	Not Satisfactory

Bio-Monitoring of Identified Polluted River Stretches in Meghalaya April 2021

Station Code	Water Quality Criteria Location Name	Saprobic Score	Diversity Index
3364	Umshyrpi near Law College	2.0	0.30

Station Code	Water Quality Criteria Location Name	Saprobic Score	Diversity Index
3365	Umshyrpi at Umshyrpi Bridge	2.2	0.36
3359	Umkhrah at Demthring	2.0	0.26
3360	Umkhrah at Umkaliar	2.5	0.28
3361	Umkhrah near Slaughter house	1.9	0.22
3362	Umkhrah at Mawpdang Mawlai	1.9	0.24
1422	Umtrew at Byrnihat	4.6	0.50
3367	Nongbah at Nongstoin	5.6	0.58
1631	Myntdu at Jowai	6.6	0.60
3375	Lunar river (Tributary of Lukha river) at Myndihati	5.1	0.41
1428	Kyrhuhkhla	4.4	0.43

[Archive](#)

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA
ORIGINAL JURISDICTION
M.A. No. _____ of 2021**

IN

ORIGINAL APPLICATION NO.172 (EZ) of 2016

IN THE MATTER OF:

Sajay Laloo

...Applicant

Versus

State of Meghalaya & Ors.

...Respondents

**APPLICATION FOR EXEMPTION FROM FILING ATTESTED AND
NOTARIZED AFFIDAVIT ON BEHALF OF RESPONDENT NO.1**

To Hon'ble Chairman and

Companion members of this Hon'ble Tribunal

The humble application

MOST RESPECTFULLY SHOWETH:

1. The instant application is being filed seeking exemption from filing an attested and notarized affidavit by the Respondent No.1 is pursuance of directions issued by this Hon'ble Tribunal, Eastern Zone Bench on 06.07.2021 in the captioned case.
2. That the content of the accompanying additional affidavit of Respondent No.1 is not being repeated herein for sake of brevity and the same may please be treated as part and parcel of the present affidavit.

3. That there was a local law and order problem and public agitation in the city of Shillong on 15th August 2021 and resultantly complete curfew has been imposed in Shillong and nearby areas with effect from 15th August 2021 till 17th August 2021. In view there of the deponent herein was not able to get the company affidavit attested and notarised by a public notary or oath commissioner. A copy of notification imposing curfew dated 15.08.2021 is annexed herewith as **ANNEXURE A/1**.
4. That it is most respectfully submitted that the deponent undertakes to file and attested and duly notarised affidavit as in when situation permits and as and when directed by this honourable Tribunal.
5. That the present application seeking exemption from filing duly attested and notarised affidavit on behalf of respondent number 1 is being preferred bona-fide on the aforesaid grounds and in the interest of justice.

P R A Y E R S

In view of the facts and circumstances stated above it is most respectfully prayed that this Hon'ble Court may be pleased to:

- (a) Exempt the Applicant from filing of duly attested and notarized additional affidavit on behalf of Respondent No.1- State of Meghalaya in the captioned case; and

- (b) Exempt the Applicant from filing affidavit in support of the present exemption application; and/or
- (c) Pass any other or further orders as this Hon'ble Court may deem fit and proper in the interest of justice.

AND FOR THIS ACT OF KINDNESS YOUR APPLICANT SHALL
EVER PRAY

Drawn and filed by:

Dated 16.08.2021

New Delhi

[Durga Dutt]

Advocate for Respondent No.1

State of Meghalaya

ANNEXURE A/1.
677

GOVERNMENT OF MEGHALAYA
OFFICE OF THE DISTRICT MAGISTRATE : : EAST KHASI HILLS
DISTRICT
::: SHILLONG :::

372

ORDER UNDER SECTION 144 Cr. P.C.

Whereas, information is received that there have been incidents of stone-pelting, arson and theft, and a serious breakdown of law & order in parts of Shillong City,

Whereas, there is every likelihood of further breach of peace which may lead to incidents causing loss of life and property,

And whereas, there is likelihood that the breach of peace may spread to other parts of the city and district,

Now, therefore, I Isawanda Laloo, IAS, District Magistrate, East Khasi Hills District, Shillong in exercise of the powers conferred upon me under section 144 Cr. P.C. do hereby promulgate TOTAL CURFEW from 8:00 P.M. of 15th August 2021 in **Shillong Agglomeration**.

AREAS TO BE UNDER CURFEW:-

1. Whole of Municipal Area
2. Whole of Cantonment Area
3. All areas under Mawlai Block including Census Towns
4. All areas under Mawpat Block including Census Towns
5. Areas Under Myllem Block from Umshyrpi Bridge upto 7th Mile, Upper Shillong.
6. Madantring, Mawblei, Laitkor, Nongkseh, Umlyngka, Lawsohtun, Mawdiangdiang, Diengiong, Siejiong.

During the period of curfew, the following will be prohibited:--

1. Any public movement.
2. Offices, shops and establishments, and all educational institutions will remain closed.
3. No kind of gathering, public meeting or rally may be held.

Exemptions only for medical emergencies, Covid-19 and hospital duty are applicable as per existing orders.

In view of the urgency of the matter this order has been made exparte and will remain in force till 5:00 AM of 17th August 2021 or till further orders.

Given under my hand and seal this the 15th day of August, 2021.

Sd/-
Isawanda Laloo, IAS,
District Magistrate,
East Khasi Hills District,
Shillong.

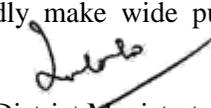
Memo. No. C&S.19/CF/2021/1-A

Dated Shillong, the 15th August 2021

Copy to :-

1. The Chief Secretary to the Govt. of Meghalaya, Shillong.
2. The Additional Chief Secretary to the Govt. of Meghalaya, Home (Police) Department, Shillong.
3. The Additional Chief Secretary to the Govt. of Meghalaya, Political Department, Shillong.
4. The Commissioner of Division for East/West/South West Khasi Hills/East/West Jaintia Hills & Ri Bhoi District, Meghalaya, Shillong.
5. The Director, Information & Public Relation, Meghalaya for favour of giving wide publicity through Fixed Loud Speakers.
6. The Superintendent of Police, East Khasi Hills District, Shillong for information and necessary action.
7. The Station Director, All India Radio, Shillong for announcement in the news bulletin in English & Khasi.
8. The Rangbah Shnong of concerned localities with a request to kindly make wide publicity through P.A. System.




District Magistrate,
East Khasi Hills District,
Shillong.

**BEFORE THE NATIONAL GREEN TRIBUNAL, EASTERN ZONE BENCH,
KOLKATA**

ORIGINAL APPLICATION NO. 172/2016/EZ

Sanjay Laloo ...Applicant
Versus
State of Meghalaya & Ors. ...Respondents

VAKALATNAMA

I, Manjunatha C., S/o Channabasappa T. the Secretary to the Government of Meghalaya, Department of Forest and Environment, having office at Secretariat, Shillong, 793001 do hereby appoint and retain **DURGA DUTT, ADVOCATE, OFFICE AT: 811, Vijaya Building, Barakhamba Road, Connaught Place, New Delhi-110001, Mob. No.-9811723914** hereinafter called Advocate to be my/our Advocates for RESPONDENT NO. 1- STATE OF MEGHALAYA in the above noted case and further authorize them:

To act appear and plead in the above noted case in this Court or in any other Court in which the same be tried/ heard and also in the Appellate Courts.

To sign, file verify and present pleadings, replications, Appeals, cross-objections, or petitions for execution or review revision restoration withdrawal, compromise applications or other petitions replies, objections or affidavits or other documents as may be deemed necessary of proper for the prosecution of said case in all its stage.

To file and take back documents.

To withdraw, or compromise the said case or submit to arbitration any differences or disputes that may arise touching or in any manner relating to the said case.

To take out execution proceedings.

To deposit draw and receive money cheques and grant receipts thereof and to do all other acts and things which may be necessary to be done for the progress and in the course to prosecutions of the said case.

To appoint instruct any other Legal practitioner authorizing him to exercise the power and authorities hereby conferred upon the Advocate whenever he may think fit to do so and sign the power of attorney on my/our behalf.

And I/We the undersigned do hereby agree to ratify and confirm act as if done by the Advocate or their substitutes in the matter as my/our own acts, as if done by me/us to intents and purposes.

And I/We undertake that I/We or my/our duly authorized agents would appear in Court all hearings will confirm the Advocates for appearance when case is called.

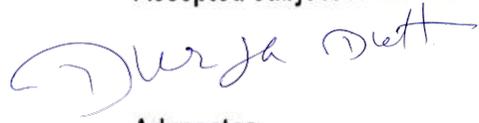
And I/We the undersigned do hereby agree not to hold the Advocate of their substitute responsible to the result of the said case, consequences for his absence from the court when the said case is, called up for the hearing or any negligence of the said Advocates or his substitute.

And I/We the undersigned do hereby agree that in the event of the whole or any part to the fee agreed by me/us the Advocates remaining unpaid they will be entitled to retain the file/documents etc. and will also not be bound to appear and conduct the case till the fee/balance fee is paid.

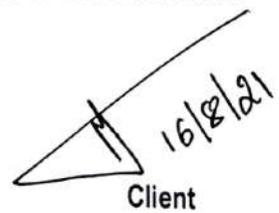
And I/We the undersigned do hereby agree that I/We shall not claim any compensation, nor the Advocate/s shall be liable for any compensation if he/she fails to appear in the court or fails to conduct or withdraws from the case due to non-payment of fee as per settlement or for reason of any request/ call given by Bar Association/s or Council/s.

IN WITNESS WHEREOF I/We do hereunto set my/our hand to these presents the contents of which have been understood by me this 16th day of August, 2021

Accepted subject to the terms of fees.



Advocates


Client