

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
(SOUTHERN ZONE) CHENNAI

ORIGINAL APPLICATION NO. 111 OF 2020

IN THE MATTER OF

Tribunal on its own motion, a SUO MOTO

... APPLICANT(S)

VERSUS

The Principal Secretary to Government,
Public Works Department, Chennai & Ors.

...RESPONDENTS

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Place: Bengaluru
Date: 11-07-2022


11/7/2022

DEPONENT



J. Chandra Babu
REGIONAL DIRECTOR
CENTRAL POLLUTION CONTROL BOARD
REGIONAL DIRECTORATE - BENGALURU
(MIN. OF ENV, FOREST & CC, GOVT OF INDIA)
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**PROGRESS REPORT (TRIMONTHLY) ON
“FROTHING OF CHEMICAL FOAM IN RIVER
THENPENNAI”**

**Submitted in Compliance to
Directions of the Hon’ble National Green Tribunal (SZ),
Chennai
(in the matter of O. A. No. 111/2020)**



July, 2022

**CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment, Forest and Climate Change, Govt. of India)**

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1. BACKGROUND

In the matter of O.A No. 111 of 2020 regarding “Frothing of Chemical Foam in the River Thenpennai”, Hon’ble National Green Tribunal, Southern Zone, Chennai vide its order dated 20.07.2020 constituted a Joint Committee comprising of Representatives of District Collectorate, Krishnagiri, Tamilnadu State Pollution Control Board, District Collectorate, Bangalore (Urban), Superintending Engineer of PWD & WRDO and Senior Official, CPCB, RD, Bangalore. The joint committee investigated the matter in light of the directions of Hon’ble NGT in O.A No. 125/2017 and Hon’ble Supreme Court in O.S No. 02 of 2015. The causes and sources of pollution have been assessed by the joint committee based on the samples collected from 12 locations in River Thenpennai. It has been ascertained that, the water quality of River Thenpennai falls under the Category E (Irrigation, Industrial Cooling, Controlled Waste Disposal) of the Designated Best Use Criteria stipulated by CPCB. Therefore, an Action Plan (Long term and short term with timelines) for restoring the quality of River Thenpennai has been devised by the joint committee for compliance by the concerned departments in Government of Karnataka. The joint committee submitted its final report on ‘Frothing of Chemical Foam in River Thenpennai’ in November, 2020. Considering the Joint Committee Report, Hon’ble NGT in the Order dated 28.06.2021 disposed of the application with directions which is reproduced below:-

“ ...ii) The concerned Departments mentioned in the Joint Committee report are directed to implement the directions issued by the Joint Committee, so as to resolve the issue permanently within a time frame provided by them.

... iv) The Central Pollution Control Board, Regional Office, Bangalore as well as Regional Office Chennai are also directed to monitor the implementation of the recommendations made by the Joint Committee and if there is any violation or non-implementation of the directions, then they are also directed to issue necessary direction to the defaulting Department to comply with the same and on their failure, take appropriate action against them in accordance with law.

v) The Chief Secretary, State of Karnataka is directed to review the action taken by the respective department and if there is any gap found, then issue necessary direction to the concerned departments for implementing the directions within their State and if any support is required from the Government level then provide both technical as well as financial support in this regard.

vii) The Chief Secretary, State of Karnataka, Chief Secretary, State of Tamil Nadu, Central Pollution Control Board, Regional Office, Bangalore and Chennai and respective Chairman of the Pollution Control Boards are directed to file periodical progress report to this Tribunal, once in three months along with the water quality analysis so as ascertain the improvement caused on account of the implementation of the recommendations ...”

In compliance to the aforesaid Hon’ble NGT Order dated 28.06.2021, CPCB, Regional Directorate, Bengaluru prepared two Joint Progress Reports (Trimonthly) along with Regional Directorate, Chennai and submitted in September 2021 and January, 2022. Hon’ble NGT vide Order dated 17.02.2022 accepted CPCB progress reports and directed that Pollution Control Board as well as the other official respondents, who are expected to carry out necessary actions on the basis of the recommendations made by the joint committee including BBMP, PWD, Karnataka Pollution Control Board, are hereby directed to submit their respective compliance report on or before 23.03.2022.

Accordingly, it was informed that KSPCB and TNPCB filed their respective compliance reports before Hon’ble NGT in March, 2022. Subsequently, Hon’ble NGT heard the matter on 27.05.2022, wherein the following was recorded :-

“ ... 7. Though it was mentioned that certain annexure were produced, no such annexure is seen produced. They had only given the water quality and the action taken for recovery of compensation against the violators. Through, the learned counsel appearing for State of Karnataka submitted that certain steps have been taken for installing real time monitor of the water quality before it crosses the State boundary, no such report is seen filed. Even on the last hearing date, we directed the Chief Secretary and the Principal secretary for Environment, State of Karnataka to file the report otherwise they will have to face the consequences as contemplated under Section 25, 26 & 28 of National Green Tribunal Act, 2010.”

9. The Central Pollution Control Board is also expected to file a report regarding the implementation of the directions issued on the basis of the Joint Committee report to be carried out by the State of Karnataka and if not, what is the nature of action taken by them as it is seen from the report that the water coming from the reservoir is mixed with contaminated water before it reaches the boundary of Tamil Nadu and in order to monitor the water quality at the boundary before it is being released as suggested by the committee, we directed the State of Karnataka to provide a real time monitoring system to ensure the water quality before it is being discharged and crossing the boundary of the State, so that the menace that has been raised can be remedied.

11. *The Chief Secretary, State of Karnataka, the Principal Secretary for Environment and also the Central Pollution Control Board to file a report to this Tribunal on or before 13.07.2022 by e-filing in the form of searchable PDF/OCR Supportable PDF and not in the form of Image PDF along with necessary hardcopies to be produced as per rules.”*

A copy of the Hon’ble NGT Orders dated 17.02.2022 and 27.05.2022 are appended as **Annexure I**.

2. Initiatives of CPCB

Subsequent to the Hon’ble NGT Order dated 17.02.2022, CPCB issued directions under section 18(1) (b) of The Water (Prevention and Control of Pollution) Act, 1974, for necessary compliance by KSPCB.

Further, in compliance to the Hon’ble NGT Orders dated 17.02.2022 and 27.05.2022, CPCB, Regional Directorate, Bengaluru conducted follow-up meetings on 28.02.2022, 09.05.2022 and 24.06.2022 through video conferencing with the concerned departments of Government of Karnataka. CPCB informed the concerned departments that the recommendations of the joint committee in the report to be complied as per Hon’ble NGT directions. A copy of email communications and letters addressed to concerned Departments of Government of Karnataka along with minutes of the meetings are appended as **Annexure II & III** respectively.

Upon detailed deliberation, the following points were discussed in the meeting for necessary compliance by the concerned departments:

- i. BDA, BBMP, Lake Department and Minor Irrigation, Department of Karnataka neither attended the meeting nor responded or provided desired information to CPCB on time.
- ii. KSPCB to provide Action taken report on the aforesaid actions taken along with point-wise reply in compliance to the Directions dated 22.03.2022 issued under Section 5 of Environment (Protection) Act, 1974 by CPCB.
- iii. BWSSB to provide Action Taken Report on the above activities undertaken along with the details of STPs in K&C and Hebbal valley, BWSSB STP upgradation projects be provided with justification. Further, gap in treatment of sewage generated in Bengaluru be assessed along with

proposed STP projects in the K&C and Hebbal Valley be provided by 30/06/2022.

- iv. The review of performance assessment of STPs based on the Final Report on BWSSB STP upgradation project jointly by KSPCB & BWSSB for calculation of Environmental Compensation (EC) on the defaulters.
- v. Information related to control of other pollution sources including discharge from Automobile Service stations, Dobhi Ghats in Bengaluru along river Thenpennai and a policy for reuse of treated water be provided by KSPCB and BWSSB.
- vi. ATR of BDA, BBMP & Lake department in Compliance to Hon'ble NGT directions dated 27/05/2022 in O.A No. 111/2020 to be submitted.

The status of compliance provided by individual departments of Government of Karnataka are compiled and provided as table below under **Section 3**.

3. STATUS OF COMPLIANCE AND PROGRESS MADE

The Joint Committee Action Plan in its Report submitted before Hon'ble NGT in November 2020 comprises of 17 action points which includes (i) Estimation of flow of water in River Thenpennai; (ii) Study of Performance evaluation of Sewage Treatment Plants in Bangalore by engaging a CSIR institute; (iii) Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of wastewater management and discharge mode; (iv) Rejuvenation of lakes to remediate the pollution caused in River Thenpennai; (v) Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification; (vi) Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli; (vii) Regular Water Quality Monitoring at important locations.

In view of non-compliances observed with respect to the above action points, CPCB directions dated 22.03.2022 under section 18(1) (b) of the Water (Prevention and Control of Pollution) Act, 1974 were issued to KSPCB for necessary compliance. The pointwise reply to CPCB directions and ATR provided by KSPCB is enclosed as **Annexure IV**.

Also, the point-wise compliance status of the recommendations made in the Joint Committee Report, 2020 as provided by the concerned departments of Government of Karnataka is provided in the table below:

S. No	Recommendations of the Joint Committee	Agency Responsible for ensuring compliance	Compliance Status as on July 2022	Remarks
I.	<p>With respect to flow measurements of major tanks, storm water drains and major confluence points on River Thenpennai, the same has not been carried out completely by BWSSB and Minor Irrigation. BWSSB and Minor Irrigation has informed the joint committee that flow measurements of tanks/lakes, storm water drains and major confluence points are not covered under the purview of their departments. Therefore, the joint committee requests Government of Karnataka to entrust the role and responsibilities to</p>	BWSSB	(a) Adverting to the flow measurements of major tanks, storm water drains and major confluence points in River Thenpennai, it is to inform that the flow measurements of tanks/lakes, storm water drains and major confluence points at two locations chosen from Joint Committee: 1. Thirumala Shettihalli Koraluru, Bengaluru & 2. Harohalli Bridge is not covered under the purview of departments (BBMP limits and 110 village limits). Therefore, it is requested to entrust the role and responsibilities to the concerned department(s) and the duties for the same, may be earmarked by the Government of Karnataka.	<p>The flow of River Thenpennai can be measured from the upstream confluence points of major lakes (Bellandur and Varthur). Further, the flow of River Thenpennai be measured at the Online Monitoring Station installed at Mugalur.</p> <p>Final Action Taken Report is yet to be submitted by BWSSB.</p>
		KSPCB	<p>(b) KSPCB is coordinating with BWSSB & Lake Conservation and Development Authority, BBMP for compliance with regard to flow measurement and monitoring water quality in order to maintain or restore water quality in lakes and tanks associated with river Pinakini (Thenpennai).</p> <p>(c) Directions under Section 33 (A) of the</p>	<p>Action Taken Report on the directions issued by KSPCB yet to be submitted by BBMP and BWSSB respectively.</p>

	<p>the concerned department(s) and the duties for the same may be earmarked by the Government of Karnataka.</p> <p><i>(BWSSB, Lakes Department, BBMP and KSPCB)</i></p>		<p>Water (Prevention and Control of Pollution) Act, 1974, read with Rule 34 (4) of Karnataka State Board for the Prevention and Control of Water Pollution (Procedure for Transaction of Business) and the Water (Prevention and Control of Pollution) Rules, 1976 were issued to BWSSB vide letter No. 886 dated 10.05.2022 and to BBMP vide letter No. 887 dated 10.05.2022. Copy of ATR submitted by KSPCB is enclosed as Annexure IV.</p>	
		Minor Irrigation	<p>(d) Regarding flow measurements, it was informed that all the tanks in Bangalore Urban district are in the control of BBMP. Also it was mentioned that minor irrigation department has not installed any flow measuring devices for any minor irrigation tanks.</p> <p>(e) At present, 190 tanks in Kolar (126) and Chikkaballapur (64) have been filled with about 12.01 TMC of treated wastewater from BWSSB STPs.</p> <p>(f) Storm water drains and main river course is not in the jurisdiction of minor irrigation department.</p>	-
II.	<p>With regard to Study of Performance evaluation of Sewage Treatment Plants in Bangalore, BWSSB may expedite the study awarded to IISC, Bangalore. The outcome of the study and the final report be shared with KSPCB for review before assessment of</p>	BWSSB	<p>(a) Final Report: Revision (BWSSB STP upgradation Project) prepared by IISC and finalized by BWSSB.</p> <p>(b) 17 STPs namely, K & C Valley, Bellandur Amani Kere, Horamavu Agara, Nagasandra phase-2, Chikkabanavara, Doddabele, Rajacanal P-I, Rajacanal P-II, Mailasandra phase-I, Kempabudhi, Kadugodi, Halasuru, Yelemallappa Chettikere, Mallathahalli, Kaubeesanahalli, Nagasandra P-I, K R Puram P-I were covered in the study.</p> <p>(c) Process modifications for both the marginally performing and poorly performing STPs based on simultaneous nitrification and denitrification principle have been recommended by the IISC team as a</p>	<p>The outcome and recommendations of the final report (IISC) yet to be reviewed by Karnataka SPCB for technical inputs and improvement for implementation of the same. Based on the performance evaluation of STPs, KSPCB is yet to levy Environment</p>

	<p>Environmental Compensation in case of non-compliances. The final report and outcome of the study has to be made online in public domain.</p> <p><i>(BWSSB and KSPCB)</i></p>		<p>short-term measure. Also, the IISc team has recommended long-term measures to ensure compliance of discharge effluents from all these STPs.</p> <p>(d) Maintenance of chlorine contact tanks is an issue across all STPs, and it is decreasing the quality of effluent. Effective chlorination and dichlorination cycles for each of the STPs should be implemented.</p> <p>(e) Continuous monitoring for the 17 STPs is necessary to ensure long-term compliance with NGT standards.</p> <p>(f) BWSSB adopted the short term measures at STPs and as per the Hon'ble NGT directions, BWSSB have taken up upgradation of 248 MLD STP at K&C valley B Nagasandra and the work order is issued to M/s SUEZ India Pvt. Ltd. The firm has started work and is in Design Phase. Further, new 150 MLD STP is commissioned on 31.03.2021 and the plant is running to its full capacity.</p> <p>(g) Further, there are probabilities of deteriorating results of the effluent parameters, in case the influent parameters are above parity or equivalent to the design requirement & also due to ageing of the plant. Thus, IISc have recommended that it is realistically feasible to propose upgradation of STPs with BNR Removal System as long-term measure and also to upgrade Electro-mechanical equipment accordingly.</p> <p>(h) A detailed project report for twenty (20) STPs upgradation under BWSSB amounting Rs. 1411 Cr has been prepared and submitted to Government of Karnataka for funding and in process vide UDD/96/MNI/202. After obtaining clearance for funds from GoK, further necessary action will be taken from BWSSB to invite tenders.</p>	<p>Compensation on the defaulting STPs.</p> <p>Time bound action plans for meeting the standards in case of those defaulting STPs is yet to be prepared jointly by KSPCB and BWSSB.</p> <p>The final report and the outcome of BWSSB are yet to be made online.</p>
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			<p>(i) Detailed Project Report for STPs upgradation under BWSSB has been prepared and submitted to Government of Karnataka for funding and in process vide UDD/96/MNI/2020. After obtaining clearance for funds from GOK, further necessary action will be taken from BWSSB to invite tenders.</p> <p>(j) Further, the final report and outcome of the IISc study has been submitted to Competent Authority vide ref No. BWSSB/ESH/SH2/AE/1508/2021-22 dated 14/02/2022 and it is requested to forward the same to KSPCB and also requested to make online in the public domain through BWSSB website as per the recommendations in the joint committee report in the matter of OA 111 of 2020.</p>	
		KSPCB	<p>(k) KSPCB constituted a Committee involving the representatives of the Organizations viz., KSPCB, BWSSB and IISc for calculating Environmental Compensation in respect of defaulting BWSSB STPs as per the Report of the Joint Committee submitted during November 2020. Copy of the Office Memorandum dated 25.04.2022 is enclosed as Annexure IV.</p>	The final report and the outcome of BWSSB are yet to be made online.
III.	With regard to completion of sewerage network for the villages in Koramangla & Challaghatta and Hebbal Valleys (of 110 villages identified by BBMP) for tapping the sewage generated, and strengthening of	BWSSB	<p>(a) As per the details furnished the work titled "Design, Engineering, Construction and Commissioning of Sewage Treatment Plants and Intermediate Sewage Pumping Stations with Operation & Maintenance thereof for Seven Years [Works A] and Procurement and Construction of Main Sewers including Manholes in Bytrayanapura Zone (Hebbal Catchment) [Works - B]" under JICA Loan ID - P266" awarded to M/s Passavant Energy & Environment India Pvt Ltd & M/s Passavant Energy & Environment GMBH (JV) Unit, Gurgaon, Haryana was to commence on</p>	To be complied.

	<p>STP conveyance system to improve sewage getting completely tapped and treated, BWSSB shall ensure no sewage is discharged into River Thenpennai through continuous monitoring on a regular basis and taking stringent actions on the defaulters.</p> <p><i>(BWSSB and BBMP)</i></p>		<p>07.07.2021. The work is expected to be completed by 06.01.2024. The Operation & Maintenance of the Sewage Treatment Plants (STPs) and Intermediate Sewage Pumping Stations will commence on 08.01.2024 and complete by 07.01.2031.</p> <p>(b) Further, to arrest any sewage entering from the Core areas and for maintenance of sewer lines, sufficient buffer space to be provided on both sides of Storm water drain/River streams from BBMP in order to avoid sewage flowing in the Storm water drains through Core areas.</p>	
		BBMP	<p>(c) BBMP informed that, with regard to sewerage networking, it is being managed exclusively by BWSSB. Copy of ATR submitted by BBMP is appended as Annexure VI.</p>	-
IV.	<p>With respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions, the joint committee could not identify the departments in Karnataka responsible for maintaining/restoring the water quality in</p>	KSPCB	<p>(a) KSPCB is monitoring the water quality of 79 lakes located in Dakshina Pinakini River Catchment area. The different lake water quality carried out from 01.04.2021 to 31.01.2022 is enclosed as a part of Annexure IV which conforms to Class D category.</p> <p>(b) KSPCB is monitoring the water quality of Dakshina Pinakini River near Mugalur bridge which is conforming to D/E category of Primary Water Quality Criteria as per the water quality analysis carried out from 01.04.2021 to 31.01.2022.</p>	<p>The authority comprising of members viz., Forest, Ecology and Environment Department, Finance Department, Urban Development Department, Minor Irrigation Department, Animal Husbandry or Fisheries Department, Revenue Department,</p>

	<p>lakes/tanks. BWSSB, BBMP, BDA and Minor Irrigation have informed the joint committee that monitoring and restoration of water quality of tanks/lakes are not covered under their purview. Therefore, it is submitted that the concerned department in Karnataka be identified by Government of Karnataka and ensure compliance accordingly.</p> <p><i>(KSPCB, Minor Irrigation, Lakes Department, BWSSB Bangalore Water Supply and Sewerage Board (BWSSB), Bangalore Development Authority (BDA), Bruhat Bangalore Mahanagara Palike (BBMP)).</i></p>			<p>Karnataka State Pollution Control Board, Bengaluru, Bangalore Water Supply and Sewerage Board, Bengaluru, Bangalore Development Authority, Bengaluru, Bruhat Bangalore Mahanagara Palike, Bengaluru are duly responsible for the functions stipulated under the Karnataka Lake Conservation and Development Authority Act, 2014 for improving and monitoring water quality, conserving lake ecology on need basis and to protect them against domestic and industrial pollution.</p>
		TNPCB	(c) The water quality of River Thenpennai is being monitored on monthly basis at interstate border i.e., at Chokkarasanapalli Village and the report of analysis for the period from September 2017 to May 2022 is enclosed. Copy of ATR submitted by TNPCB is enclosed as <i>Annexure V</i> .	Monitoring Water Quality on a continual basis by TNPCB.

		Minor Irrigation	(d) Water quality analysis of river does not come under the scope of Minor irrigation department and also there is no separate section for analyzing water quality.	Water Quality being monitored by KSPCB.
		BWSSB, Lakes Department, BBMP, BDA	<p>(e) Water quality analysis reports are yet to be submitted by the concerned departments.</p> <p>(f) BWSSB informed that the treated water is being pumped to 65 tanks of Chikkaballapur and surrounding areas through Minor Irrigation and the treated water is also being tested from Minor Irrigation through NABL Accredited Lab before pumping the treated water to filling up of lakes.</p> <p>(g) Also, BWSSB informed that, Water Quality of outlet of the Sewage Treatment Plants (STPs) in Hebbal Valley are being monitoring on regular basis through in-house laboratories and through labs of NABL Accredited from KSPCB. Further, the effluents has been tested from IISc during the performance study of STPs under Hebbal Valley, which reveals, that the parameters of the treated outlet is complying with the limits notified in General Standards for discharge of Environmental Pollutants.</p> <p>(h) BBMP informed that, State Government has transferred 202 lakes to BBMP for development and maintenance. Out of which, 19 lakes are DISUSED lakes that have lost the lake character. In the remaining 183 lakes, 89 lakes have been developed comprehensively by diverting the sewage inflow and maintaining the water quality, 39 lakes are being under development from CM's Nagarothana grants. Once these lakes were rejuvenated comprehensively the water qualities will be maintained without inflow of sewage into the lakebed. The remaining 27 lakes will be taken in the coming financial year based on the priority and availability of funds.</p>	<p>Action Taken Report with regard to Water Quality of STPs is yet to be submitted by BWSSB.</p> <p>To be complied.</p>

			Copy of ATR submitted by BBMP is appended as <i>Annexure VI</i> .	
V.	<p>With respect to Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of wastewater management and discharge mode, KSPCB and TNPCB may continue to do such random inspections regularly to curb the pollution caused to River Thenpennai and ensure no illegal activities are carried out thereof.</p> <p>Regarding random verifications of industries discharging effluents into the storm water drains, KSPCB informed the committee that they would continue to inspect a minimum of 60 industries to ensure that the industries do not discharge the</p>	KSPCB	<p>(a) The jurisdictional offices of KSPCB having Thenpennai River Catchment area have inspected 10 Red Category and 07 Orange category industries. 08 number of effluent samples have been collected, out of which 03 are non-conforming and notices were issued to such organizations by the concerned jurisdictional Regional Offices.</p> <p>(b) Besides, industries located at the catchment area of KC valley, Hebbal valley, Hosakote, Kolar and Chikkaballapur are periodical inspected by respective ROs. The industries are located in the catchment areas are periodically inspected by the Regional Officers and the defaulters industries are dealt in accordance with law.</p> <p>(c) KSPCB has issued closure directions to 72 nos. of defaulting industries during 2018 -2022. Out of which 29 No's of closure directions were revoked after compliance.</p> <p>(d) KSPCB has filed cases against 16 defaulting Apartments.</p> <p>(e) KSPCB has engaged 12 Marshals with Emergency Response Vehicles to identify illegal discharges. 4 Nos. of vehicles have been purchased for this purpose.</p>	The monitoring and verification of industries is required to be carried out on a continual basis and action to be taken against defaulting units.
		TNPCB	(f) TNPCB informed that the industries located in the area covered under the investigation in Thenpennaiyar River Basin are being closely monitored by TNPCB to ensure Zero Liquid Discharge. Copy of ATR submitted by TNPCB is enclosed as <i>Annexure V</i> .	The monitoring and verification of industries is required to be carried out on a continual basis and action to be taken against defaulting units.

	<p>effluent into the storm water drain. On identifying such instances, action will be initiated under section 33A of Water Act.</p> <p>(KSPCB and TNPCB)</p>			
VI.	<p>With regard to Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification, EC has to be imposed on any defaulters or violators causing pollution into the River Thenpennai by KSPCB and TNPCB for the year 2021-22.</p> <p>(KSPCB and TNPCB)</p>	KSPCB	<p>(a) KSPCB has imposed EC of Rs. 288.8 Cr on 496 Nos' Apartment/Commercial establishment and Rs. 1.85 Cr was collected.</p> <p>(b) A Joint Committee has been constituted by KSPCB on 25.04.2022 for calculating Environmental Compensation in case of BWSSB defaulting STPs.</p> <p>(c) Further, KSPCB has issued memo to ROs in this regard vide letter no. 1895 dated 14.06.2022. As a result, Rs. 48.072 Cr EC has been levied on various BWSSB STPs. Copy of ATR submitted by KSPCB is appended as <i>Annexure IV</i>.</p>	To be complied.
		TNPCB	<p>(d) TNPCB informed that no violating / defaulting industries are identified.</p>	-
VII.	<p>With regard to Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli, Block</p>	TNPCB	<p>(a) TNPCB has provided the same status of the Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli and informed that the same is under progress. Additional time requested by the local body due to COVID pandemic situation.</p> <p>(b) In view of above, TNPCB had issued</p>	To be complied.

	<p>Development Officer (monitored by TNPCB) may ensure the completion of the activities related to sewage and solid waste management as per timelines.</p> <p><i>(TNPCB)</i></p>		<p>direction to the BDO Hosur Panchayat Union, Hosur, Krishnagiri District vide Proc No. T1/TNPCBd/LAW/LAIINGT/F.13038/2021/1 dated 03.02.2022 to comply with the provisions of the Solid Waste Management Rules, 2016.</p> <p>(c) Also, TNPCB also issued direction to the Executive Engineer, WRO, PWD, Upper Pennaiyar Basin Division, Dharmapuri vide Proc No. T1/TNPCBd/LAW/LAIINGT/F.13038/2021/1 dated 04.02.2022 to ensure that no solid wastes are permitted to be dump on either sides of River Stretches.</p> <p>(d) The local body of Hosur panchayat Union has constructed the micro compost centre to process segregated biodegradable municipal solid wastes.</p> <p>(e) The non-biodegradable wastes are burnt through the solid waste disposal incinerator.</p> <p>(f) Under Central Government Scheme of National Urban Mission Project, a plastic shredding unit is proposed at a cost of Rs. 20 lakhs to handle the plastic wastes and the shredded plastic wastes will be used for road laying works.</p> <p>(g) With regard to sewage management, Construction of Horizontal filter bed work has been commenced and will be completed.</p> <p>Copy of ATR of TNPCB is enclosed as Annexure V.</p>	
VIII.	<p>With regard to action point on monitoring trend of water quality and its</p>	KSPCB	<p>Online water quality monitoring station near Mugular Bridge to measure the water quality parameters of River South Pinakini has already been installed on 19.03.2022. The work related to displaying water</p>	<p>The online monitoring data of the station installed at Mugalur to be</p>

<p>improvement at major confluence points for the year 2021-22 on a monthly basis, water quality of major confluence points have to be monitored on a regular basis by KSPCB and TNPCB to ensure pollution is under check.</p> <p>KSPCB has proposed to install online monitoring to monitor the key parameters at the river Thenpennai at the State border before it leaves Karnataka.</p> <p>These results will be synced with the Integrated Command Control Centre of KSPCB and made available online in the public domain.</p> <p>Periodically the result will be monitored and the graph will be plotted. This would help the KSPCB and CPCB to assess</p>		<p>quality data acquired, on the websites of CPCB, TNPCB & KSPCB in public domain is under progress. Copy of ATR by KSPCB is enclosed as <i>Annexure IV</i>.</p>	<p>linked to SPCBs (TNPCB/KSPCB) and CPCB servers, at the earliest possible.</p>
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<p>water quality and initiate action whenever there are violations.</p> <p>Feasibility for installation of Continuous Online Water Quality Monitoring Station be worked out at the inter-state river boundary by KSPCB in Karnataka to ensure that improved quality of water reaches Tamil Nadu.</p> <p>After the waste water is treated by the primary STP's situated in the area under the jurisdiction of Bruhat Bengaluru Mahanagar Palike (BBMP), the water flows along various villages situated on the down stream before entering Tamil Nadu. Therefore, it is opined that, a separate STP could be installed at a suitable</p>			
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	<p>location in Karnataka border, wherein waste water treated by the primary STP's will be treated once again before it flows to Tamil Nadu.</p> <p>(KSPCB)</p>			
IX.	<p>BBMP has not provided status of compliance and action taken report with respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions.</p> <p>(Lakes Dept, BBMP)</p>	<p>Lakes Department, BBMP</p>	<p>(a) Lakes Department, BBMP has not provided status of compliance and action taken report with respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions.</p> <p>(b) However, BMP informed that, water quality monitoring and analysis is being exclusively managed by KSPCB. Hence the required information is to be collected from the concerned department. Copy of ATR submitted by BBMP is appended as <i>Annexure VI</i>.</p>	-
X.	<p>With respect to construction of wetlands by Bangalore Development Authority (BDA), the activity needs to be completed within the stipulated timelines and the outcomes are to be provided to the</p>	<p>BDA</p>	<p>(a) The status of development of construction of wetlands provided by Bangalore Development Authority (BDA) was submitted earlier to Hon'ble NGT in the Joint Progress Report (Trimonthly), September 2021. It has been informed that the desilting work in Bellandur and Varthur lakes are underway and will be completed.</p> <p>(b) However, Compliance status report vide No. BDA/Com/EM/T-139/2022-23 dated 05/07/2022, as received by CPCB, RD, Bengaluru on 07/07/2022 is</p>	To be complied.

	Joint Committee. (BDA)		attached as <i>Annexure VII.</i>	
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4. CONCLUDING REMARKS

Upon reviewing the progress made on the recommendations of the Joint Committee Report, it is observed that, with regard to flow measurements of the major confluence points in the upstream and downstream of the river catchment area, flow measurements of major tanks, storm water drains and maintenance of Water Quality of the water flowing into River Thenpennai to be pristine and testing its characteristics in the respective jurisdictions, no constructive efforts have been made by the concerned departments of Government of Karnataka, except for progress made w.r.t installation of Continuous Online Water Quality Monitoring Station at the inter-state river boundary by KSPCB in Karnataka. KSPCB has installed continuous online water quality monitoring system at the border of Karnataka and Tamil Nadu near Mugalur bridge for monitoring of water flowing in River Thenpennai. However, the work related to displaying water quality data acquired in public domain, on the websites of CPCB, TNPCB & KSPCB is under progress.

The Chief Secretary, Government of Karnataka is required to take lead and hold responsibility and also direct to ensure compliance by the concerned departments as per the provisions of the Karnataka Lake Conservation and Development Authority Act, 2014 which stipulates function of the authority under Section 5.

With regard to performance evaluation of STPs in Bengaluru, BWSSB submitted Final Report: BWSSB STP upgradation project and informed that Detailed Project Report for Twenty (20) STPs upgradation under BWSSB amounting to Rs 1411.00 Crore has been prepared and submitted to Government of Karnataka for funding and is in process. Understanding the need for implementation of recommendations for Continuous monitoring of STPs to ensure long term compliance of NGT standards, a time bound action plan for meeting the standards in case of those defaulting STPs be prepared by BWSSB. The outcome and recommendations of the final report (IISc) are yet to be reviewed by Karnataka SPCB for technical inputs and improvement for implementation of the same. A Joint Committee has been constituted by KSPCB

for calculating Environmental Compensation in respect of defaulting BWSSB STPs. Based on the performance evaluation of STPs, KSPCB is yet to levy Environment Compensation on the defaulting STPs. The final report and outcome of the IISc study are yet to be placed on public domain on KSPCB and BWSSB website.

Water quality analysis result of Mugalur, Karnataka provided by Karnataka SPCB, which is important to ascertain the water quality at the exit point of Inter State Border in Karnataka reveal that there is no much improvement of water quality in terms of dissolved oxygen. Further, water quality analysis of River Thenpennai at the interstate location Sokkarasanapalli in Tamilnadu was provided by TNPCB. In sokkarasanapalli, Tamilnadu the water quality analysis results (as on May 2022) reveal that the water quality falls under Class E as per Designated Best Use Criteria. Upon reviewing the reports of analysis of water quality of River Thenpennai, the water quality analysis results (as on May 2022) reveal that the water quality falls under Class E as per Designated Best Use Criteria.

As regard to Solid Waste Management, Regional Officer, Krishnagiri TNPCB apprised that the local body of Hosur Panchayat Union has constructed the micro compost centre to process segregated biodegradable municipal solid wastes. The non-biodegradable wastes are incinerated through the solid waste disposal incinerator. Under Central Government Scheme of National Urban Mission Project, a plastic shredding unit is proposed at a cost of Rs. 20 lakhs to handle the plastic wastes and the shredded plastic wastes will be used for road laying works. With regard to sewage treatment, construction of Horizontal filter bed work has been commenced and expected to be completed shortly.

It is humbly submitted that compliance on the above points may be ensured in a time bound manner by all the concerned departments in Government of Karnataka including Karnataka State Pollution Control Board (KSPCB), Bengaluru Development Authority (BDA), Lakes Department, BBMP and BWSSB under the able guidance of the Chief Secretary, Government of Karnataka.

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Item No.30:

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

Original Application No. 111 of 2020 (SZ)

(Through Video Conference)

IN THE MATTER OF:

Tribunal on its own motion
Suo Motu based on the news
Item in Tamil Newspaper
Dinamalar Chennai Edition
Dt.13.07.2020, “Frothing of
Chemical Foam in the River Thenpennai”



with

The Principal Secretary to
Government,
Public Works Department,
Chennai & Ors.

...Respondent(s)

Date of hearing: 17.02.2022

CORAM:

HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER

HON'BLE DR. SATYAGOPAL KORLAPATI, EXPERT MEMBER

For Applicant(s): Suo Motu

For Respondent(s): Dr. D. Shanmuganathan for R1, R2, R4 and R7
Mr. Rajat Jonathan Saw for Mr. Darpan for R3
Mr. Sai Sathya Jith for R5
Mr. M.R. Gokul Krishnan for R6
Mr. R. Thirunavukarsu for CPCB

ORDER

1. As per order dated 14.12.2021, this Tribunal had considered the direction issued by this Tribunal while delivering the Judgement dated 28.06.2021

and then passed the following order:

2.As per direction No. 3 the Chairman, Karnataka State Pollution Control Board (KASPCB) and Chairman, Tamil Nadu Pollution Control Board (TNPCB) were directed to monitor the implementation of the recommendations made by the Joint Committee by the respective Departments and also assess the improvement of the water quality in their respective areas and if any further action is to be taken, they were directed to take further action against those who are not complying with the recommendations made by the Joint Committee, which results in further pollution to the Thenpennai River and also the connecting rivers from State of Karnataka which reaches the Kelavarapalli reservoir from where the water is released to Thenpennai River.

3.As per condition No. 4 Central Pollution Control Board, Integrated Regional Office, Bangalore as well as Regional Office Chennai were also directed to monitor the implementation of the recommendations made by the Joint Committee and if there was any violation or non-implementation of the directions, then they were also directed to issue necessary direction to the defaulting Department to comply with the same and on their failure, take appropriate action against them in accordance with law.

4.The Chief Secretary, State of Karnataka was directed to review the action taken by the respective department and if there is any gap found, then to issue necessary direction to the concerned departments for implementation of the directions within their State and if any action was required from the Government level then provide both technical as well as financial support in this regard.

5.The Chief Secretary, State of Tamil Nadu was also directed to implement certain recommendations made by the Joint Committee as well as the Tamil Nadu Pollution Control Board (TNPCB) regarding implementation of the Solid Waste Management Rules, 2016 in these areas which also causes some sort of pollution to water quality in Thenpennai River.

6.The respondents were directed to submit the periodical reports once in three months. With the above observations and directions, the application is disposed of. Though above six months were over, no such reports have been received.

7.Even recently, in some of the newspaper reports, it was reported that similar things are recurring in Thenpennai River when water is being released from Kelavarapalli reservoir.

8.Under such circumstances, we direct the above authorities to submit the compliance report and the action taken report, if there is any non-compliance by the respective departments on or before **11.01.2022** by e-filing in the form of searchable PDF/OCR Supportable PDF and not in the form of Image PDF along with necessary hardcopies to be produced as per rules. If they did not submit the report as directed, then they are directed to appear before this Tribunal through Video Conference, to show cause as to why action should not be taken against them for non-compliance of the direction issued by this Tribunal as contemplated under Section 25 read with Section 26 & 28 of the National Green Tribunal Act, 2010.

9.The Registry is directed to communicate this order to the Chief Secretary, State of Karnataka, Chief Secretary, State of Tamil Nadu, Chairman of both the State Pollution Control Board and also to the Regional Directors of Central Pollution Control Board, Bangalore as well as Chennai along with the Judgment

dated 28.06.2021 for their information, reference and compliance of the direction.

2. Thereafter, the matter has been adjourned from time to time by successive notifications and lastly it was adjourned to today by notification dated 24.01.2022.

3. We have received a Joint Progress report submitted by the Central Pollution Control Board dated 29.09.2021, e-filed on 21.12.2021 which reads as follows:



CHAPTER I

BACKGROUND

In the matter of O.A No. 111 of 2020 regarding "Frothing of Chemical Foam in the River Thenpennai", Hon'ble NGT, Southern Zone, Chennai vide its order dated 20.07.2020 constituted a joint committee comprising of Representatives of District Collectorate, Krishnagiri, Tamilnadu Pollution Control Board, District Collectorate, Bangalore (Urban), Superintending Engr. of PWD & WRDO and Senior Official, CPCB, RD, Bangalore. The joint committee investigated the matter in the light of directions of Hon'ble NGT in O.A No. 125/2017 and Hon'ble Supreme Court in O.S No. 02 of 2015. The causes and sources of pollution have been assessed by the joint committee based on the samples collected from 12 locations in River Thenpennai. It has been ascertained that, the water quality of River Thenpennai falls under the Category E (Irrigation, Industrial Cooling, Controlled Waste Disposal) of the Designated Best Use Criteria notified under the Environment (Protection) Rules, 1986. Therefore, an Action Plan (Long term and short term with timelines) for restoring the quality of River Thenpennai has been devised by the joint committee for compliance by the concerned departments in Government of Karnataka. The joint committee submitted final report on 'Frothing of Chemical Foam in River Thenpennai' in November, 2020.

In the matter, Hon'ble NGT in the Order dated 28.06.2021 recorded that, "13. It is also not possible for the Tribunal to monitor, perpetually, the progress of the work of implementing the directions and also the progress of the work to be done by each department and the improvement happening on account of such implementation, which has to be done by regulators. So under such circumstances, we feel that the matter can be disposed of giving certain directions after accepting reports submitted by the Joint Committees including recommendations."

The Joint Committee report dated 20.11.2020 and further report of November, 2020 and subsequent progress report of the Joint Committee dated 02.06.2021 which are extracted above are recorded and accepted. ii) The concerned Departments mentioned in the Joint Committee report are directed to implement the directions issued by the Joint Committee, so as to resolve the issue

permanently within a time frame provided by them. iii) Chairman, Karnataka Pollution Control Board and Chairman, Tamil Nadu Pollution Control Board are directed to monitor the implementation of the recommendations made by the Joint Committee by the respective Departments and also assess the improvement of the water quality in their respective areas and if any, further action is to be taken, they are directed to take further action against those who are not complying with the directions issued by the Joint Committee, which results in further pollution to the Thenpennai River and also the connecting rivers which reaches the Kelavarapalli reservoir from where the water is released to Thenpennai River from State of Karnataka.

The Central Pollution Control Board, Regional Office, Bangalore as well as Regional Office Chennai are also directed to monitor the implementation of the recommendations made by the Joint Committee and if there is any violation or non-implementation of the directions, then they are also directed to issue necessary direction to the defaulting Department to comply with the same and on their failure, take appropriate action against them in accordance with law. v) The Chief Secretary, State of Karnataka is directed to review the action taken by the respective department and if there is any gap found, then issue necessary direction to the concerned departments for implementing the directions within their State and if any support is required from the Government level then provide both technical as well as financial support in this regard. vi) The Chief Secretary, State of Tamil Nadu is also directed to monitor the directions issued by the Joint Committee as far as State of Tamil Nadu is concerned and also the timeline provided by the Tamil Nadu Pollution Control Board in implementation of the Solid Waste Management Rules, 2016 in these areas which also causes some sort of pollution to water quality in Thenpennai River. vii) The Chief Secretary, State of Karnataka, Chief Secretary, State of Tamil Nadu, Central Pollution Control Board, Regional Office, Bangalore and Chennai and respective Chairman of the Pollution Control Boards are directed to file periodical progress report to this Tribunal, once in three months along with the water quality analysis so as ascertain the improvement caused on account of the implementation of the recommendations made by the respective departments and if they found any gap in spite of the implementation of the recommendations, they are also directed to submit their further remedial measures to be taken by the respective department to resolve the issue permanently when they are filing their progress report, once in three months. viii) The Registry is directed to communicate this order to the Chief Secretary, State of Karnataka, Chief Secretary, State of Tamil Nadu, Chairman of both the State Pollution Control Board and also to the Regional Directors of

Central Pollution Control Board, Bangalore as well as Chennai for information and compliance of the directions as directed above.

Copy of the Hon'ble NGT Order dated 28.06.2021 is appended as **Annexure I.**

CHAPTER II

MEETINGS AND DISCUSSIONS

In compliance with the NGT Order dated 28.06.2021, CPCB, Regional Directorate, Bengaluru sent various communications dated 08.07.2021 and 13.09.2021 to the concerned departments in Government of Karnataka and informed that the recommendations of the joint committee in the report to be executed by the concerned agencies be complied as per the specified timelines. Copy of communications and letters addressed to concerned Departments of Government of Karnataka is appended as **Annexure II**.

With regard to action points related to Tamil Nadu Pollution Control Board, nomination was sought from CPCB, Regional Directorate, Chennai vide letter dated 30.07.2021 in compliance with the Hon'ble NGT Order dated 28.06.2021. Copy of the letter dated 30.07.2021 is appended as **Annexure II**.

Thereafter, CPCB, Regional Directorate, Bengaluru conducted two meetings on 12th August, 2021 and 06th September, 2021 through video conferencing with the members of the joint committee and concerned departments. In the said meeting, it was informed that a format (appended as **Annexure III**) along with Hon'ble NGT order dated 28.06.2021 have been circulated among the members of the committee and concerned agencies/authorities/departments vide aforesaid communications. They were requested to provide individual Action Taken Report on the Action Plan of the Joint Committee Report and compliance thereof.

In the meeting, CPCB briefed the directions of NGT Order dated 28.06.2021 and emphasized that "ii) *The concerned Departments mentioned in the Joint Committee report are directed to implement the directions issued by the Joint Committee, so as to resolve the issue permanently within a time frame provided by them.* iii) *Chairman, Karnataka Pollution Control Board and Chairman, Tamil Nadu Pollution Control Board are directed to monitor the implementation of the recommendations made by the Joint Committee by the respective Departments and also assess the improvement of the water quality in their respective areas and if any, further action is to be taken, they are directed to take further action against those who are not complying with the directions issued by the Joint Committee, which results in further pollution to the Thenpennai River and also the*

connecting rivers which reaches the Kelavarapalli reservoir from where the water is released to Thenpennai River from State of Karnataka.”

“vii) The Chief Secretary, State of Karnataka, Chief Secretary, State of Tamil Nadu, Central Pollution Control Board, Regional Office, Bangalore and Chennai and respective Chairman of the Pollution Control Boards are directed to file periodical progress report to this Tribunal, once in three months along with the water quality analysis so as ascertain the improvement caused on account of the implementation of the recommendations made by the respective departments and if they found any gap in spite of the implementation of the recommendations, they are also directed to submit their further remedial measures to be taken by the respective department to resolve the issue permanently when they are filing their progress report, once in three months.”

In view of above, the concerned departments were asked to provide signed copy of individual progress reports to CPCB (nodal agency) for filing the trimonthly Progress Report before Hon'ble Tribunal in the matter.

Upon detailed deliberation, the following points were discussed in the meeting, which were agreed upon by the concerned departments for necessary compliance;

- (i) Random verification of industries located near the river bed, environmental compensation and performance evaluation of STPs have to be addressed and updated by BWSSB, TNPCB and KSPCB to comply with Hon'ble NGT Order dated 28.06.2021.
- (ii) KSPCB and TNPCB to provide water quality analysis reports of the Interstate monitoring locations (i.e. Mugalur bridge and Sokkarasanapalli) for last three months for finding any improvement in the quality of water in River Thenpennai (in compliance to directions of Hon'ble NGT Order dated 28.06.2021).
- (iii) BWSSB, KSPCB and Lakes Department (BBMP) were also requested to provide information related to flow measurement and water quality of major tanks/lakes associated with River Thenpennai.
- (iv) Hon'ble NGT order and directions were reiterated which is reproduced as, *“... concerned Departments are directed to implement the directions issued by the Joint Committee, so as to resolve the issue permanently within a time frame.... Concerned departments are also directed by Hon'ble Tribunal to assess the improvement of the water quality in their respective areas and if*

any, further action is to be taken, they are directed to take further action against those who are not complying with the directions issued by the Joint Committee, which results in further pollution to the Thenpennai River and also the connecting rivers which reaches the Kelavarapalli reservoir from where the water is released to Thenpennai River from State of Karnataka”

The Joint Report of CPCB, Regional Directorates (Bengaluru and Chennai) in the matter of O.A No 111 of 2020 is prepared based on the inputs and progress made by the concerned departments in Government of Karnataka and Tamilnadu.

CHAPTER III

STATUS OF COMPLIANCE AND PROGRESS MADE

The joint committee devised Action Plan in the Report, November 2020 which comprises of 17 action points viz., (i) Estimation of flow of water in River Thenpennai; (ii) Study of Performance evaluation of Sewage Treatment Plants in Bangalore by engaging a CSIR institute; (iii) Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of wastewater management and discharge mode; (iv) Rejuvenation of lakes to remediate the pollution caused in River Thenpennai; (v) Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification; (vi) Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli; (vii) Regular Water Quality Monitoring at important locations.

The number of action points pertaining to the concerned departments are enumerated as (i) BWSSB – 08; (ii) Minor Irrigation – 03; (iii) KSPCB – 06; (iv) TNPCB – 06; (v) BDA – 03; (vi) BBMP – 01; (vii) CPCB – 01. The department-wise action points and its status of compliance with updated latest progress report is appended as **Annexure IV**.

The Compliance status of the recommendations made in the Progress Report, June 2021 is provided below:

- (1) With respect to flow measurements of major tanks, storm water drains and major confluence points on River Thenpennai, the same has not been carried out completely by BWSSB and Minor Irrigation. BWSSB and Minor Irrigation has informed the joint committee that flow measurements of tanks/lakes, storm water drains and major confluence points are not covered under the purview of their departments. Therefore, the joint committee requests Government of Karnataka to entrust the role and responsibilities to the concerned department(s) and the duties for the same may be earmarked by the Government of Karnataka.**

CPCB, RD, Bengaluru was informed that Lakes department under BBMP is responsible for implementation of various functions stipulated under the Karnataka Lake Conservation and Development Authority Act, 2014 including

improving and monitoring water quality, conserving lake ecology on need basis and to protect them against domestic and industrial pollution.

Therefore, CPCB, RD Bengaluru interacted with concerned departments viz., Bangalore Water Supply and Sewerage Board (BWSSB), Lakes Department under BBMP, Bruhat Mahanagara Palike (BBMP), Minor Irrigation and Ground Water Development (MI) and Karnataka State Pollution Control Board (KSPCB) in the meetings conducted on 12th August, 2021 and 06th September, 2021 through video conferencing, and discussed the role of each of departments in measurement of flow of major tanks, storm water drains and major confluence points on River Thenpennai.

It was learned that the provisions of the Karnataka Lake Conservation and Development Authority Act, 2014 stipulates function of the authority under Section 5, which is reproduced as:

“ 5. Functions of the Authority.- Subject to the provisions of this Act and the rules made thereunder, the functions of the Authority shall be,-

(1) to exercise regulatory control over all the lakes within its jurisdictions including prevention and removal of encroachment of lake;

(2) to protect, conserve, reclaim, regenerate and restore lakes to facilitate recharge of depleting ground water by promoting integrated approach with the assistance of concerned Government departments, local and other authorities;

(3) to take up environmental impact assessment studies for any or all lakes;

(4) to take up environmental planning and mapping of lakes and their surrounding areas with the help of geographical information system and prepare database and atlas of lakes and their catchments;

(5) to prepare a plan for integrated development of lakes;

(6) to improve and also create habitat (wet lands) for aquatic biodiversity, water birds and aquatic plants by reducing sullage and non-point sewage impacts;

(7) to facilitate for impounding storm water drainage system, reduce or remove siltation of lakes by taking up appropriate soil and water conservation measures including afforestation and to augment recharge of ground water aquifers and revive bore-wells;

(8) to improve and monitor water quality, conserve lake ecology on need basis and to protect them against domestic and industrial pollution;

(9) to utilize or allow to utilize the lakes for the purpose of drinking water, fishing, irrigation, education or tourism or any other purpose as the Authority may determine;

(10) to encourage participation of communities and voluntary agencies and to launch public awareness programmes for lake conservation, preservation and protection of lakes;

(11) to advise on any matter that may be referred to it by the Government or any institution.

(12) to promote integrated and co-ordinated applied research on all the relevant issues pertaining to lakes;

(13) to do such other acts as the Authority may consider necessary, conducive or incidental, directly or indirectly, to achieve the object of this Act."

"Authority" is defined as Karnataka Lake Conservation and Development Authority constituted under Section 3.

"lake" means an inland water-body irrespective of whether it contains water or not, mentioned in revenue records as sarkari kere, kharab kere, kunte, katte or by any other name and includes the peripheral catchment areas, Rajakaluve main feeder, inlets, bunds, weir, sluices, draft channels, outlets and main channels of drainage to and fro.

Minor Irrigation has updated the status that in Kolar 78 tanks are filled by pumping 6.69 TMC and in Chikkaballapur 24 tanks are filled by pumping 1.16 TMC, which is accounted as 7.85 TMC in 102 tanks.

In this regard, the action points with regard to flow measurements of major tanks, storm water drains and major confluence points on River Thenpennai is yet to be delineated to the departments by Chief Secretary, Government of Karnataka.

(2) With regard to Study of Performance evaluation of Sewage Treatment Plants in Bangalore, BWSSB may expedite the study awarded to IISC, Bangalore. The outcome of the study and the final report be shared with KSPCB for review before assessment of Environmental

Compensation in case of non-compliances. The final report and outcome of the study has to be made online in public domain.

Bangalore Water Supply and Sewerage Board (BWSSB) informed vide email dated 09.09.2021 that Report is yet to be submitted by the organisation and will be shared once completed. Work order issued to IISC is attached as **Annexure V.**

(3) With regard to completion of sewerage network for the villages in Koramangla & Challaghatta and Hebbal Valleys (of 110 villages identified by BBMP) for tapping the sewage generated, and strengthening of STP conveyance system to improve sewage getting completely tapped and treated, BWSSB shall ensure no sewage is discharged into River Thenpennai through continuous monitoring on a regular basis and taking stringent actions on the defaulters.

With regard to completion of Sewerage network, Bangalore Water Supply and Sewerage Board (BWSSB) provided copy of letter of commencement of the work titled "Design, Engineering, Construction and Commissioning of Sewage Treatment Plants and Intermediate Sewage Pumping Stations with Operation & Maintenance thereof for Seven Years [Works A] and Procurement and Construction of Main Sewers including Manholes in Bytrayanapura Zone (Hebbal Catchment) [Works - B]" under JICA Loan ID - P266" awarded to M/s Passavant Energy & Environment India Pvt Ltd & M/s Passavant Energy & Environment GMBH (JV) Unit, Gurgaon, Haryana. As per the details furnished the work was to commence on 07.07.2021 and will be completed by 06.01.2024. The Operation & Maintenance of the Sewage Treatment Plants (STPs) and Intermediate Sewage Pumping Stations will commence on 08.01.2024 and complete by 07.01.2031.

Similarly, the work awarded to M/s Larsen & Turbo Limited, Mumbai, Maharashtra for Mahadevapura and Bommanahalli Zones (K&C Valley Catchment) was to commence on 02.07.2021 and will complete on 01.01.2024. The Operation and Maintenance of the same will commence on 02.01.2021 and complete on 31.12.2030. Copy of the work orders awarded to the above firms are appended as **Annexure VI.**

(4) With respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions, the joint committee could not identify the

departments in Karnataka responsible for maintaining/restoring the water quality in lakes/tanks. BWSSB, BBMP, BDA and Minor Irrigation have informed the joint committee that monitoring and restoration of water quality of tanks/lakes are not covered under their purview. Therefore, it is submitted that the concerned department in Karnataka be identified by Government of Karnataka and ensure compliance accordingly.

CPCB, RD, Bengaluru interacted with concerned departments viz., Bangalore Water Supply and Sewerage Board (BWSSB), Lakes Department under BBMP, Bruhat Mahanagara Palike (BBMP), Minor Irrigation and Ground Water Development (MI) and Karnataka State Pollution Control Board (KSPCB) in the meetings conducted on 12th August, 2021 and 06th September, 2021 through video conferencing and discussed the role of each of departments with respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions.

The provisions of the Karnataka Lake Conservation and Development Authority Act, 2014 stipulates function of the authority under Section 5, which is reproduced as:

“ 5. Functions of the Authority - Subject to the provisions of this Act and the rules made thereunder, the functions of the Authority shall be,-

(1) to exercise regulatory control over all the lakes within its jurisdictions including prevention and removal of encroachment of lake;

(2) to protect, conserve, reclaim, regenerate and restore lakes to facilitate recharge of depleting ground water by promoting integrated approach with the assistance of concerned Government departments, local and other authorities;

(3) to take up environmental impact assessment studies for any or all lakes;

(4) to take up environmental planning and mapping of lakes and their surrounding areas with the help of geographical information system and prepare database and atlas of lakes and their catchments;

(5) to prepare a plan for integrated development of lakes;

(6) to improve and also create habitat (wet lands) for aquatic biodiversity, water birds and aquatic plants by reducing sullage and non-point sewage impacts;

(7) to facilitate for impounding storm water drainage system, reduce or remove siltation of lakes by taking up appropriate soil and water conservation measures including afforestation and to augment recharge of ground water aquifers and revive bore-wells;

(8) to improve and monitor water quality, conserve lake ecology on need basis and to protect them against domestic and industrial pollution;

(9) to utilize or allow to utilize the lakes for the purpose of drinking water, fishing, irrigation, education or tourism or any other purpose as the Authority may determine;

(10) to encourage participation of communities and voluntary agencies and to launch public awareness programmes for lake conservation, preservation and protection of lakes;

(11) to advise on any matter that may be referred to it by the Government or any institution.

(12) to promote integrated and co-ordinated applied research on all the relevant issues pertaining to lakes;

(13) to do such other acts as the Authority may consider necessary, conducive or incidental, directly or indirectly, to achieve the object of this Act."

"Authority" is defined as Karnataka Lake Conservation and Development Authority constituted under Section 3.

"lake" means an inland water-body irrespective of whether it contains water or not, mentioned in revenue records as sarkari kere, kharab kere, kunte, katte or by any other name and includes the peripheral catchment areas, Rajakaluve main feeder, inlets, bunds, weir, sluices, draft channels, outlets and main channels of drainage to and fro.

Section 3 of the Karnataka Lake Conservation and Development Authority Act, 2014 stipulates Constitution of the Authority which is reproduced as "(1) As soon as may be after the date of commencement of this Act, the Government shall constitute an Authority to be called the Karnataka Lake Conservation and Development Authority. (2) The Authority shall be a body corporate by the name aforesaid having perpetual succession and a common seal, with power, subject to the provisions of this Act to hold property and shall by the said name sue or be

sued. (3) The Governing Council of the Authority shall consist of the following members, namely:-

(a) The Chief Secretary to Government shall be the Chairperson of the Governing Council:-	
(b) The Additional Chief Secretary or Principal Secretary to Government, Forest, Ecology and Environment Department	Ex-officio Member
(c) Additional Chief Secretary or Principal Secretary to Government, Finance Department	Ex-officio Member
(d) Additional Chief Secretary or Principal Secretary to Government, Urban Development Department	Ex-officio Member
(e) The Principal Secretary or Secretary to Government, Minor Irrigation Department	Ex-officio Member
(f) The Principal Secretary or Secretary to Government, Animal Husbandry or Fisheries Department	Ex-officio Member
(g) The Principal Secretary to Government, Revenue Department	Ex-officio Member
(h) The Member Secretary, Karnataka State Pollution Control Board, Bengaluru	Ex-officio Member
(i) The Chairman, Bangalore Water Supply and Sewerage Board, Bengaluru	Ex-officio Member
(j) The Commissioner, Bangalore Development Authority, Bengaluru	Ex-officio Member
(k) The Commissioner, Bruhat Bangalore Mahanagara Palike, Bengaluru	Ex-officio Member
(l) The Secretary to Government Forest, Ecology and Environment Department (Ecology and	Ex-officio Member

Environment)	
(m) Three non-official members nominated by the Government from amongst experts in the in the field of environment and ecology or lake conservation of whom at least one shall be a woman and one shall be a person belonging to the Scheduled Castes or Scheduled Tribes	Non Official Member
(n) The Chief Executive Officer of the Authority	Member Secretary

In this regard, the authority comprising of above members are duly responsible for the functions stipulated under the Karnataka Lake Conservation and Development Authority Act, 2014 for improving and monitoring water quality, conserving lake ecology on need basis and to protect them against domestic and industrial pollution. **Figure 1** depicts the functions of various departments in Government of Karnataka for Conservation and Restoration of Lakes in Karnataka.

It was informed by Lakes Department, BBMP that the water quality is being assessed and monitored by Karnataka State Pollution Control Board and the reports will be furnished to CPCB. However, the same is yet to be provided.

Flow and Water Quality of outlet of the Sewage Treatment Plants (STPs) has been provided by BWSSB, which reveals that the parameters of the treated outlet is complying with the limits notified in General Standards for discharge of Environmental Pollutants. The treated water (7.85 TMC) is being pumped to 78 and 24 tanks of Kolar and Chikkaballapur respectively through Minor Irrigation.

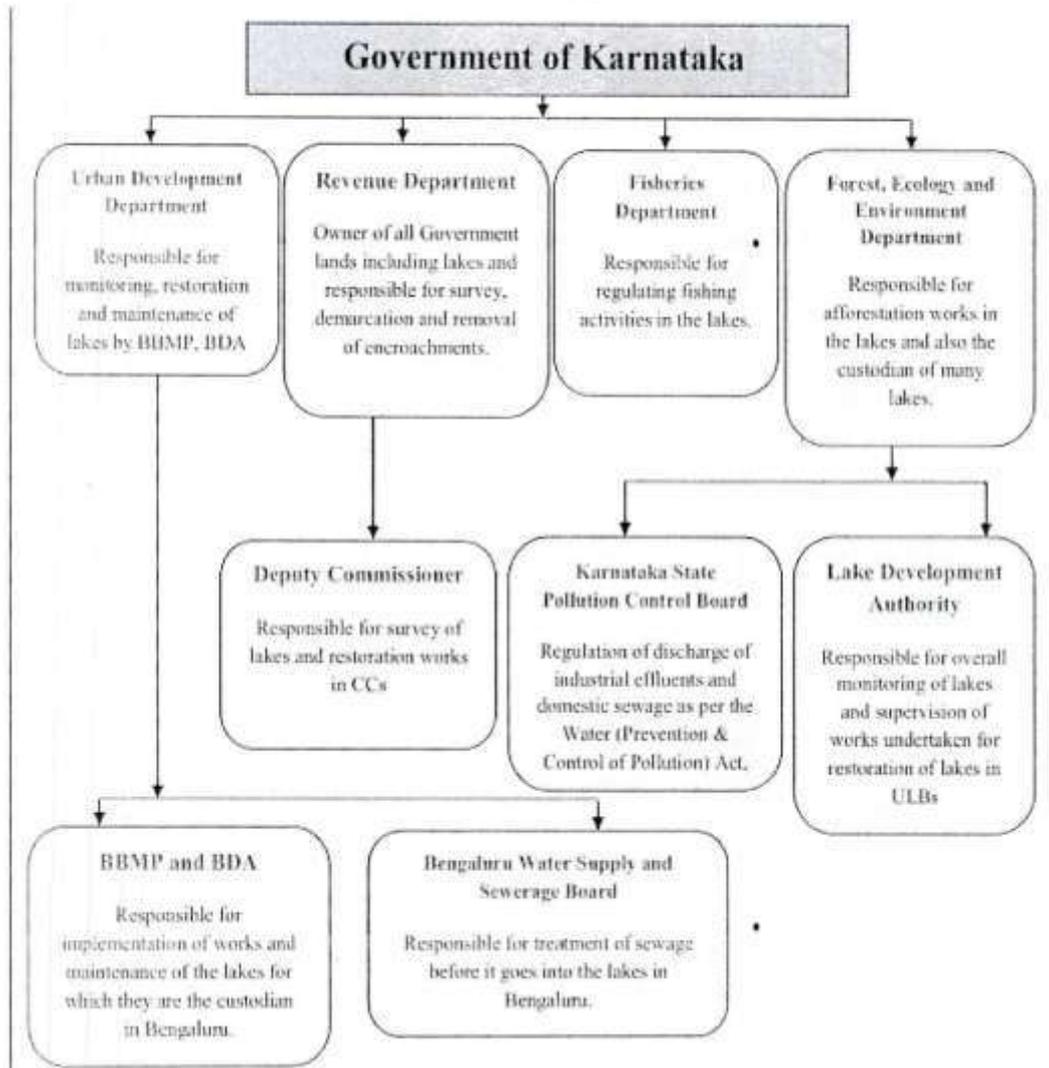


Figure 1. Functions of Various Departments in Government of Karnataka for conservation and restoration of lakes in Urban Local Bodies (ULBs) including Bengaluru

It is observed that various agencies involved are not proactive in taking sustainable initiatives for monitoring water quality of major tanks/lakes associated with River Thenpennai.

KSPCB as a member of the Karnataka Lake Conservation and Development Authority constituted under Section 3 of the Karnataka Lake Conservation and Development Authority Act is required to take proactive measures to coordinate with Lakes Department, BBMP to comply with the

Hon'ble NGT Order dated 28.06.2021 regarding flow measurements and monitoring of water quality in order to maintain/restore the water quality in lakes/tanks associated with River Thenpennai.

In view of above, CPCB, RD, Bengaluru vide letter dated 24.09.2021 regarding Complete updated status of compliance to the Hon'ble NGT Order dated 28.06.2021, again insisted strict compliance of the directions of the aforesaid Hon'ble NGT Order by KSPCB. Copy of the letter is appended as **Annexure VII.**

(5) With respect to Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of wastewater management and discharge mode, KSPCB and TNPCB may continue to do such random inspections regularly to curb the pollution caused to River Thenpennai and ensure no illegal activities are carried out thereof.

Regarding random verifications of industries discharging effluents into the storm water drains, KSPCB informed the committee that they would continue to inspect a minimum of 60 industries to ensure that the industries do not discharge the effluent into the storm water drain. On identifying such instances, action will be initiated under section 33A of Water Act.

Karnataka SPCB vide letter no. KSPCB/NGT/SEO-INFRA/2021-22/2754 dated 08.09.2021 informed that 12 marshals with Emergency Response Vehicles to identify illegal discharges and 04 vehicles have been purchased for the purpose.

Further, TNPCB through Principal Secretary to Government, Environment, Climate Change & Forests Department vide letter no. 12080/EC.1/2021-3, dated 17.09.2021 provided sampling and analysis of the industries located in the periphery and results.

In view of above, CPCB, RD, Bengaluru vide letter dated 24.09.2021 regarding Complete updated status of compliance to the Hon'ble NGT Order dated 28.06.2021, again insisted strict compliance of the directions of the aforesaid Hon'ble NGT Order by KSPCB. Copy of the letter is appended as **Annexure VII.**

- (6) **With regard to Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification, EC has to be imposed on any defaulters or violators causing pollution into the River Thenpennai by KSPCB and TNPCB for the year 2021-22.**

No Environmental Compensation imposed since April, 2021, as KSPCB has not given details of any physical verification or inspection of the units with sampling or analysis carried out for the year 2021-22.

Whereas TNPCB has not found any defaulting units up to September, 2021.

In view of above, CPCB, RD, Bengaluru vide letter dated 24.09.2021 regarding Complete updated status of compliance to the Hon'ble NGT Order dated 28.06.2021, again insisted strict compliance of the directions of the aforesaid Hon'ble NGT Order by KSPCB. Copy of the letter is appended as **Annexure VII.**

- (7) **With regard to Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli, Block Development Officer (monitored by TNPCB) may ensure the completion of the activities related to sewage and solid waste management as per timelines.**

TNPCB has provided the same status of the Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli and informed that the same is under progress.

- (8) **With regard to action point on monitoring trend of water quality and its improvement at major confluence points for the year 2021-22 on a monthly basis, water quality of major confluence points have to be monitored on a regular basis by KSPCB and TNPCB to ensure pollution is under check.**

KSPCB has proposed to install online monitoring to monitor the key parameters at the river Thenpennai at the State border before it leaves Karnataka. These results will be synced with the Integrated Command Control Centre of KSPCB and made available online in the public domain. Periodically the result will be monitored and the graph will be plotted. This would help the KSPCB and CPCB to assess water quality and initiate action whenever there are violations

Feasibility for installation of Continuous Online Water Quality Monitoring Station be worked out at the inter-state river boundary by KSPCB in Karnataka to ensure that improved quality of water reaches Tamilnadu.

After the waste water is treated by the primary STP's situated in the area under the jurisdiction of Bruhat Bengaluru Mahanagar Palike (BBMP), the water flows along various villages situated on the down stream before entering Tamilnadu. Therefore, it is opined that, a separate STP could be installed at a suitable location in Karnataka border, wherein waste water treated by the primary STP's will be treated once again before it flows to Tamilnadu.

Karnataka State Pollution has not informed any updated status or progress on installation of online monitoring system at the border of Karnataka & Tamilnadu for monitoring quality of water flowing in River Thenpennai. However, they informed that the same is proposed to be installed at the border of Karnataka and Tamilnadu.

Water quality analysis of River Thenpennai at the interstate location Sokkarasanapalli in Tamilnadu was provided by TNPCB. In sokkarasanapalli, Tamilnadu the water quality analysis results (as on July 2021) reveal that the water quality falls under Class E as per Designated Best Use Criteria. There is improvement in the water quality in terms of the parameters such as BOD, Turbidity, EC, SAR, B₅ and Free ammonia, however DO & Total Coliform are not meeting the Designated Best Use Criteria for classification of the water. Copy of report of analysis of water quality upto July, 2021 are attached as **Annexure VIII.**

However, water quality analysis result of Mugalur, Karnataka is not provided for the last three months by Karnataka SPCB, which is important to ascertain the water quality at the exit point of Inter State Border in Karnataka.

In addition to above, initiatives and tangible progress is required for installation of Continuous Online Water Quality Monitoring Station at the inter-state river boundary by KSPCB in Karnataka to ensure that improved quality of water reaches Tamilnadu.

In view of above, CPCB, RD, Bengaluru vide letter dated 24.09.2021 regarding Complete updated status of compliance to the Hon'ble NGT Order dated 28.06.2021, again insisted strict compliance of the directions of the

aforesaid Hon'ble NGT Order by KSPCB. Copy of the letter is appended as **Annexure VII.**

- (9) BBMP has not provided status of compliance and action taken report with respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions.**

Despite reminders and continued pursuasion by CPCB, RD, Bengaluru with BBMP, no status of compliance and action taken report with respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions is provided and therefore not complied with the Hon'ble NGT Order dated 28.06.2021.

- (10) With respect to construction of wetlands by Bangalore Development Authority (BDA), the activity needs to be completed within the stipulated timelines and the outcomes are to be provided to the Joint Committee.**

Bangalore Development Authority has submitted the same status regarding construction of wetlands and the same is appended as **Annexure IX.**

- (11) Due to unexpected surge in COVID-19 during April to May, 2021, the joint committee recommends that the timeline for compliance of the above recommendations may be provided as six months (till December 2021).**

In this regard, it is humbly submitted that extension of time up to December 2021 may be provided for all the concerned Departments in Government of Karnataka for complying with the Recommendations of Joint Committee.

4. We have also received another report submitted by Central Pollution Control Board dated 21.01.2022, e-filed on the same date which reads as follows:

CHAPTER I

BACKGROUND

In the matter of O.A No. 111 of 2020 regarding "Frothing of Chemical Foam in the River Thenpennai", Hon'ble NGT, Southern Zone, Chennai vide its order dated 20.07.2020 constituted a joint committee comprising of Representatives of District Collectorate, Krishnagiri, Tamilnadu Pollution Control Board, District Collectorate, Bangalore (Urban), Superintending Engr. of PWD & WRDO and Senior Official, CPCB, RD, Bangalore. The joint committee investigated the matter in the light of directions of Hon'ble NGT in O.A No. 125/2017 and Hon'ble Supreme Court in O.S No. 02 of 2015. The causes and sources of pollution have been assessed by the joint committee based on the samples collected from 12 locations in River Thenpennai. It has been ascertained that, the water quality of River Thenpennai falls under the Category E (Irrigation, Industrial Cooling, Controlled Waste Disposal) of the Designated Best Use Criteria stipulated by CPCB. Therefore, an Action Plan (Long term and short term with timelines) for restoring the quality of River Thenpennai has been devised by the joint committee for compliance by the concerned departments in Government of Karnataka. The joint committee submitted final report on 'Frothing of Chemical Foam in River Thenpennai' in November, 2020.

Considering the Joint Committee Report, Hon'ble NGT in the Order dated 28.06.2021 recorded that, "13. It is also not possible for the Tribunal to monitor, perpetually, the progress of the work of implementing the directions and also the progress of the work to be done by each department and the improvement happening on account of such implementation, which has to be done by regulators. So under such circumstances, we feel that the matter can be disposed of giving certain directions after accepting reports submitted by the Joint Committees including recommendations."

Therefore, Hon'ble NGT disposed of the application with following directions;

" i) The Joint Committee report dated 20.11.2020 and further report of November, 2020 and subsequent progress report of the Joint Committee dated 02.06.2021 which are extracted above are recorded and accepted. ii) The concerned Departments mentioned in the Joint Committee report are directed to implement

the directions issued by the Joint Committee, so as to resolve the issue permanently within a time frame provided by them. iii) Chairman, Karnataka Pollution Control Board and Chairman, Tamil Nadu Pollution Control Board are directed to monitor the implementation of the recommendations made by the Joint Committee by the respective Departments and also assess the improvement of the water quality in their respective areas and if any, further action is to be taken, they are directed to take further action against those who are not complying with the directions issued by the Joint Committee, which results in further pollution to the Thenpennai River and also the connecting rivers which reaches the Kelavarapalli reservoir from where the water is released to Thenpennai River from State of Karnataka.

iv) The Central Pollution Control Board, Regional Office, Bangalore as well as Regional Office Chennai are also directed to monitor the implementation of the recommendations made by the Joint Committee and if there is any violation or non-implementation of the directions, then they are also directed to issue necessary direction to the defaulting Department to comply with the same and on their failure, take appropriate action against them in accordance with law.

v) The Chief Secretary, State of Karnataka is directed to review the action taken by the respective department and if there is any gap found, then issue necessary direction to the concerned departments for implementing the directions within their State and if any support is required from the Government level then provide both technical as well as financial support in this regard.

vi) The Chief Secretary, State of Tamil Nadu is also directed to monitor the directions issued by the Joint Committee as far as State of Tamil Nadu is concerned and also the timeline provided by the Tamil Nadu Pollution Control Board in implementation of the Solid Waste Management Rules, 2016 in these areas which also causes some sort of pollution to water quality in Thenpennai River.

vii) The Chief Secretary, State of Karnataka, Chief Secretary, State of Tamil Nadu, Central Pollution Control Board, Regional Office, Bangalore and Chennai and respective Chairman of the Pollution Control Boards are directed to file periodical progress report to this Tribunal, once in three months along with the water quality analysis so as ascertain the improvement caused on account of the implementation of the recommendations made by the respective departments and if they found any gap in spite of the implementation of the recommendations, they are also directed to submit their further remedial measures to be taken by the respective department to resolve the issue permanently when they are filing their

progress report, once in three months. viii) The Registry is directed to communicate this order to the Chief Secretary, State of Karnataka, Chief Secretary, State of Tamil Nadu, Chairman of both the State Pollution Control Board and also to the Regional Directors of Central Pollution Control Board, Bangalore as well as Chennai for information and compliance of the directions as directed above. ...”

In compliance to the Hon'ble NGT Order dated 28.06.2021, CPCB, Regional Directorate, Bengaluru prepared Joint Progress Report (Trimonthly) along with Regional Directorate, Chennai and submitted in September 2021. The same was also forwarded to the office of Chief Secretary, Karnataka and Tamilnadu and to other concerned departments for necessary compliance.

Hon'ble NGT heard the matter on 14.12.2021, wherein it was recorded that, “... 7. Even recently, in some of the newspaper reports, it was reported that similar things are recurring in Thenpennai River when water is being released from Kelavarapalli reservoir.”

Therefore, Hon'ble NGT vide above said order directed that, “we direct the above authorities to submit the compliance report and the action taken report, if there is any non-compliance by the respective departments on or before 11.01.2022 by e-filing If they did not submit the report as directed, then they are directed to appear before this Tribunal through Video Conference, to show cause as to why action should not be taken against them for non-compliance of the direction issued by this Tribunal as contemplated under Section 25 read with Section 26 & 28 of the National Green Tribunal Act 2010.” Copy of the Hon'ble NGT Order dated 14.12.2021 is appended as **Annexure I**.

CHAPTER II

MEETINGS AND DISCUSSIONS

In compliance with the NGT Order dated 28.06.2021, CPCB, Regional Directorates, Bengaluru & Chennai filed Joint Progress Report, September 2021 before Hon'ble National Green Tribunal, Southern Zone, Chennai through email dated 29.09.2021 based on the status of compliance reports received from concerned departments in Government of Karnataka.

CPCB, Regional Directorate, Bengaluru conducted a meeting on 02nd December, 2021 and 24th December, 2021 through video conferencing with the members of the joint committee and concerned departments. It was informed that the recommendations of the joint committee in the report to be executed by the concerned agencies be complied as per the specified timelines. Copy of email communications and letters addressed to concerned Departments of Government of Karnataka is appended as **Annexure II**.

Further it was emphasized that the Chief Secretary, State of Karnataka, Chief Secretary, State of Tamil Nadu and respective Chairman of the Pollution Control Boards are directed to file periodical progress report to this Tribunal, once in three months along with the water quality analysis so as ascertain the improvement caused on account of the implementation of the recommendations made by the respective departments and if they found any gap in spite of the implementation of the recommendations, they are also directed to submit their further remedial measures to be taken by the respective department to resolve the issue permanently when they are filing their progress report, once in three months. It was also informed that for the purpose of monitoring the progress of the improvement that happened on account of certain directions issued by the Committee which has to be carried out by the respective departments, the Chief Secretary, State of Karnataka should take a lead role for coordinating with the respective departments and monitor periodically the progress of the implementation of the recommendations given by the Joint Committee in the reports.

Upon detailed deliberation, the following points were discussed in the meeting, which were agreed upon by the concerned departments for necessary compliance;

- (i) As directed by Hon'ble NGT, SZ, Chennai vide order dated 28.06.2021 BWSSB, KSPCB and Minor Irrigation were informed to comply with the Joint Committee recommendations related to flow measurement and water quality of major tanks/lakes associated with River Thenpennai. Lakes Department (BBMP) did not participate in the meeting.
- (ii) Random verification of industries located near the river bed, environmental compensation and performance evaluation of STPs have to be addressed and updated by BWSSB, TNPCB and KSPCB periodically to comply with Hon'ble NGT Order dated 28.06.2021.
- (iii) Hon'ble NGT order and directions were reiterated which is reproduced as, *"... concerned Departments are directed to implement the directions issued by the Joint Committee, so as to resolve the issue permanently within a time frame.... Concerned departments are also directed by Hon'ble Tribunal to assess the improvement of the water quality in their respective areas and if any, further action is to be taken, they are directed to take further action against those who are not complying with the directions issued by the Joint Committee, which results in further pollution to the Thenpennai River and also the connecting rivers which reaches the Kelavarapalli reservoir from where the water is released to Thenpennai River from State of Karnataka"*

Further, CPCB, RD, Bengaluru informed that Hon'ble Tribunal, SZ, Chennai vide order dated 14.12.2021 mentioned that, *"4. The Chief Secretary, State of Karnataka was directed to review the action taken by the respective department and if there is any gap found, then to issue necessary direction to the concerned departments for implementation of the directions within their state and if any action was required from the Government level then provide both technical as well as financial support in this regard."*

In this regard, BWSSB has been recommended to prepare time bound action plan for continuous monitoring of STPs to ensure long term compliance besides connecting online monitoring system of all STPs to CPCB server. CPCB, RD, Bengaluru has initiated action on KSPCB to ensure (a) illegal discharge of effluent from industries shall not be made into the river or any other recipient system; and (b) to carry out random inspection of the units in the periphery of River Thenpennai along with sampling of effluent and impose environmental compensation in case of defaulting units; (c) to assess the water quality of the treated sewage from STPs and impose environmental compensation in case of defaulting STPs.

8

CPCB, RD, Bengaluru again insisted KSPCB vide letter dated 10.01.2022 to ensure strict compliance of the directions of the aforesaid Hon'ble NGT Order dated 14.12.2021 and recommendations of the Joint Committee. In case of failing to comply, shall attract actions under Section 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974.

CHAPTER III

STATUS OF COMPLIANCE AND PROGRESS MADE

In compliance to the Hon'ble NGT Orders dated 28.06.2021, CPCB, RD, Bengaluru and Chennai prepared joint progress report (trimonthly) based on the compliance status received from the concerned departments in Government of Karnataka, TNPCB and KSPCB. The joint progress report (trimonthly), September 2021 was filed before Hon'ble NGT, SZ, Chennai through email and post.

Reference is made to the joint committee Action Plan in its Report, November 2020 which comprises of 17 action points viz., (i) Estimation of flow of water in River Thenpennai; (ii) Study of Performance evaluation of Sewage Treatment Plants in Bangalore by engaging a CSIR institute; (iii) Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of wastewater management and discharge mode; (iv) Rejuvenation of lakes to remediate the pollution caused in River Thenpennai; (v) Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification; (vi) Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli; (vii) Regular Water Quality Monitoring at important locations.

The number of action points pertaining to the concerned departments are enumerated as (i) BWSSB - 08; (ii) Minor Irrigation - 03; (iii) KSPCB - 06; (iv) TNPCB - 06; (v) BDA - 03; (vi) BBMP - 01; (vii) CPCB - 01.

The Compliance status of the recommendations made in the Progress Report, June 2021 subsequent to the Joint Progress Report (Trimonthly), September 2021 is provided below:

- (1) With respect to flow measurements of major tanks, storm water drains and major confluence points on River Thenpennai, the same has not been carried out completely by BWSSB and Minor Irrigation. BWSSB and Minor Irrigation has informed the joint committee that flow measurements of tanks/lakes, storm water drains and major confluence points are not covered under the purview of their departments. Therefore, the joint committee requests Government of Karnataka to entrust the role and responsibilities to the concerned**

department(s) and the duties for the same may be earmarked by the Government of Karnataka.

Lakes department under BBMP is responsible for implementation of various functions stipulated under the Karnataka Lake Conservation and Development Authority Act, 2014 including improving and monitoring water quality, conserving lake ecology on need basis and to protect them against domestic and industrial pollution.

The Karnataka Lake Conservation and Development Authority Act, 2014 stipulates function of the authority under Section 5, which is reproduced as:

"5. Functions of the Authority.- Subject to the provisions of this Act and the rules made thereunder, the functions of the Authority shall be,-

(1) to exercise regulatory control over all the lakes within its jurisdictions including prevention and removal of encroachment of lake;

(2) to protect, conserve, reclaim, regenerate and restore lakes to facilitate recharge of depleting ground water by promoting integrated approach with the assistance of concerned Government departments, local and other authorities;

(3) to take up environmental impact assessment studies for any or all lakes;

(4) to take up environmental planning and mapping of lakes and their surrounding areas with the help of geographical information system and prepare database and atlas of lakes and their catchments;

(5) to prepare a plan for integrated development of lakes;

(6) to improve and also create habitat (wet lands) for aquatic biodiversity, water birds and aquatic plants by reducing sullage and non-point sewage impacts;

(7) to facilitate for impounding storm water drainage system, reduce or remove siltation of lakes by taking up appropriate soil and water conservation measures including afforestation and to augment recharge of ground water aquifers and revive bore-wells;

(8) to improve and monitor water quality, conserve lake ecology on need basis and to protect them against domestic and industrial pollution;

(9) to utilize or allow to utilize the lakes for the purpose of drinking water, fishing, irrigation, education or tourism or any other purpose as the Authority may determine;

(10) to encourage participation of communities and voluntary agencies and to launch public awareness programmes for lake conservation, preservation and protection of lakes;

(11) to advise on any matter that may be referred to it by the Government or any institution.

(12) to promote integrated and co-ordinated applied research on all the relevant issues pertaining to lakes;

(13) to do such other acts as the Authority may consider necessary, conducive or incidental, directly or indirectly, to achieve the object of this Act."

"Authority" is defined as Karnataka Lake Conservation and Development Authority constituted under Section 3.

"lake" means an inland water-body irrespective of whether it contains water or not, mentioned in revenue records as sarkari kere, kharab kere, kunte, katte or by any other name and includes the peripheral catchment areas, Rajakaluve main feeder, inlets, bunds, weir, sluices, draft channels, outlets and main channels of drainage to and fro.

In this regard, the action points with regard to flow measurements of major tanks, storm water drains and major confluence points on River Thenpennai is yet to be addressed by the departments under the guidance of the Chief Secretary, Government of Karnataka.

CPCB, RD Bengaluru conducted meetings with concerned departments viz., Bangalore Water Supply and Sewerage Board (BWSSB), Minor Irrigation and Ground Water Development (MI) and Karnataka State Pollution Control Board (KSPCB) on 02nd December, 2021 and 24th December, 2021 through video conferencing and discussed the status of compliance with regard to measurement of flow of major tanks, storm water drains and major confluence points on River Thenpennai along with details of measurement of water quality. Lakes Department under BBMP, Bruhat Bengaluru Mahanagara Palike (BBMP) did not participate in the above meetings.

CPCB, Regional Directorate, Bengaluru vide letter no Tech(39)/Legal(NGT)/RDS/2020-21/676 dated 27.12.2021 forwarded the directions in the Hon'ble NGT Order dated 14.12.2021 to concerned departments in Government of Karnataka including BWSSB, KSPCB and the Chief Secretary which is reproduced as below, "*Even recently, in some of the newspaper reports, it was reported that similar things are recurring in Thenpennai River when water is being released from Kelavarapalli reservoir*". Copy of the letter is appended as **Annexure III**.

It is submitted that a time bound action plan to be devised by Lakes Department, BBMP, BDA, BWSSB and KSPCB under the chairmanship of the Chief Secretary, Government of Karnataka to comply with the action points and recommendations of the Joint Committee.

(2) With regard to Study of Performance evaluation of Sewage Treatment Plants in Bangalore, BWSSB may expedite the study awarded to IISC, Bangalore. The outcome of the study and the final report be shared with KSPCB for review before assessment of Environmental Compensation in case of non-compliances. The final report and outcome of the study has to be made online in public domain.

It was submitted to Hon'ble NGT that Bangalore Water Supply and Sewerage Board (BWSSB) has awarded a project on STP upgradation to IISC, Bangalore to inspect and recommend suitable modifications to the current treatment process to meet the required standards. The study was completed and the report was furnished to CPCB, RD, Bengaluru.

The study included technical visits to understand the process, detailed water quality analysis of samples taken from the STPs etc.

The Report envisages study of 17 STPs viz., 1. K & C valley (60 MLD), 2. Bellandur Amani kere (90 MLD), 3. Kadubeesanhalli phase -1 (50 MLD), 4. Kadugodi (6 MLD), 5. Halasuru (2 MLD), 6. Rajacanal phase -1 (40 MLD), 7. Rajacanal phase -2 (40 MLD), 8. Horamvu Agara (20 MLD), 9. K R Puram phase -1 (20 MLD), 10. Yelemallappa Chettikere (15 MLD), 11. Nagasandra phase -1 (20 MLD), 12. Nagasandra phase -2 (20 MLD), 13. Mallathahalli (5 MLD), 14. Chikkabanavara (5 MLD), 15. Mailasandra phase -1 (75 MLD), 16. Kempabudhi (1MLD), 17. Doddabele (20 MLD). It was informed that Madiwala STP was under maintenance and hence was not operational; similarly, V Valley STP is under up-gradation and hence not operating. Further, the team was informed that the

Kengeri STP was included in the list by mistake. Therefore, these three STP locations were not visited. Excerpts of the Report is provided below;

All STPs were visited and inspected. Water quality analysis was done for samples collected from STPs. Process modifications were suggested for STPs not meeting NGT standard. Out of 17, STPs studied, 6 STPs are meeting NGT-BNR standards. Out of these 6 STPs, 4 are working at maximum capacity and cannot be expected to take on more load. 2 STPs, namely Chikkabanavara and Nagasandra phase 2 can take on more load. Chikkabanavara is currently only using two of the three SBR basins available on site; with the used use of the third basin, it can take up more load. Nagasandra phase 2 is currently operating at half its capacity and therefore can take up an additional load till it meets its design capacity.

Out of the 17, STPs studied, 8 were marginally underperforming in terms of nutrient removal. Out of these 8, four were Extended aeration plants, and 4 were SBRs. Simultaneous nitrification and denitrification by creating aerated and unaerated zones in the aeration basin were suggested as modifications for the Extended aeration plants. The addition of an unaerated mixing stage after the aeration stage was suggested as a modification for the SBR plant.

Out of the 17 STPs studied, 3 were performing very poorly. 2 of these plants were Extended aeration plants, and the remaining one was a UASB plant. The main issue with Extended aeration plants were intermittent operations and insufficient aeration. Inspection and repair of all required equipment were recommended for these plants. Additionally, simultaneous nitrification denitrification by creating aerated and unaerated zones in the aeration basin were suggested as modifications for proper nutrient removal when the plants are operating continuously. The UASB plant maintenance modifications were suggested for the proper functioning of the technology. Further system modification was given to ensure proper nutrient removal.

Standards prescribed by Hon'ble NGT:

S.No	Parameters	Unit	Standard
1.	pH	-	5.5 – 9
2.	BOD	mg/L	10
3.	COD	mg/L	50

4.	TSS	mg/L	20
5.	Total Nitrogen	mg/L	10
6.	Total Phosphorus	mg/L	1
7.	Total Coliforms	MPN/100 ml	<100 desirable, <230 OK

The general recommendations of the study are given below;

- i. Unclean chlorine contact tanks with settled sludge and algal growth are increasing the COD of effluent.
- ii. Chlorine contact tanks should be thoroughly cleaned, tiled and painted with algae-resistant paint or coating, preferably in blue color.
- iii. All plant equipment such as screens, grit scrappers, flow meters and aerators should be inspected and replaced wherever necessary.
- iv. The extent of non-settled portion of sludge should be monitored and reported daily as part of routine SVI and SSI test. This will allow timely tweaking of the process through SCADA.
- v. Chlorine dose should be given to the effluent at all locations to reduce the concentration of pathogenic microorganisms.
- vi. Chlorine demand should be monitored and reported routinely to ensure satisfactory disinfection is being done.
- vii. It is recommended that appropriate residual chlorine content is measured after at least 30 minutes after chlorine addition and needs to be measured before the discharge point.

It is recommended in the draft final IISC report that Continuous monitoring for 6 STPs meeting the NGT standards is necessary to ensure long term compliance with NGT standards. Similarly, continuous monitoring will be required for all other plants after given modifications are applied to ensure long term compliance. Therefore, a final report may be submitted by BWSSB with time bound action plans for meeting the standards in case of all STPs. The outcome and recommendations of the report may be reviewed by Karnataka

SPCB for technical inputs and improvement before implementation of the same. Final Draft Report on 'BWSSB STP upgradation project' prepared by IISC is attached as **Annexure IV**.

- (3) With regard to completion of sewerage network for the villages in Koramangla & Challaghatta and Hebbal Valleys (of 110 villages identified by BBMP) for tapping the sewage generated, and strengthening of STP conveyance system to improve sewage getting completely tapped and treated, BWSSB shall ensure no sewage is discharged into River Thenpennai through continuous monitoring on a regular basis and taking stringent actions on the defaulters.**

With regard to completion of Sewerage network, Bangalore Water Supply and Sewerage Board (BWSSB) provided copy of letter of commencement of the work titled "Design, Engineering, Construction and Commissioning of Sewage Treatment Plants and Intermediate Sewage Pumping Stations with Operation & Maintenance thereof for Seven Years [Works A] and Procurement and Construction of Main Sewers including Manholes in Bytrayanapura Zone (Hebbal Catchment) [Works - B]" under JICA Loan ID - P266" awarded to M/s Passavant Energy & Environment India Pvt Ltd & M/s Passavant Energy & Environment GMBH (JV) Unit, Gurgaon, Haryana. As per the details furnished the work was to commence on 07.07.2021 and will be completed by 06.01.2024. The Operation & Maintenance of the Sewage Treatment Plants (STPs) and Intermediate Sewage Pumping Stations will commence on 08.01.2024 and complete by 07.01.2031.

Similarly, the work awarded to M/s Larsen & Turbo Limited, Mumbai, Maharashtra for Mahadevapura and Bommanahalli Zones (K&C Valley Catchment) commenced on 02.07.2021 and will complete on 01.01.2024. The Operation and Maintenance of the same commenced on 02.01.2021 and will complete on 31.12.2030. Copy of the work orders awarded to the above firms were already submitted to Hon'ble NGT. The same may be monitored by BWSSB for compliance.

- (4) With respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions, the joint committee could not identify the departments in Karnataka responsible for maintaining/restoring the water quality in lakes/tanks. BWSSB, BBMP, BDA and Minor Irrigation have informed the joint committee that monitoring and restoration of water quality of tanks/lakes are not covered under their purview.**

Therefore, it is submitted that the concerned department in Karnataka be identified by Government of Karnataka and ensure compliance accordingly.

CPCB, RD, Bengaluru interacted with concerned departments viz., Bangalore Water Supply and Sewerage Board (BWSSB), Minor Irrigation and Ground Water Development (MI) and Karnataka State Pollution Control Board (KSPCB) except Lakes Department (BBMP) in the meetings conducted on 02nd December, 2021 and 24th December, 2021 through video conferencing and discussed the status of compliance by each of the departments with respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions.

In this regard, it was submitted before the Hon'ble Tribunal that the authority comprising of members viz., Forest, Ecology and Environment Department, Finance Department, Urban Development Department, Minor Irrigation Department, Animal Husbandry or Fisheries Department, Revenue Department, Karnataka State Pollution Control Board, Bengaluru, Bangalore Water Supply and Sewerage Board, Bengaluru, Bangalore Development Authority, Bengaluru, Bruhat Bangalore Mahanagara Palike, Bengaluru are duly responsible for the functions stipulated under the Karnataka Lake Conservation and Development Authority Act, 2014 for improving and monitoring water quality, conserving lake ecology on need basis and to protect them against domestic and industrial pollution.

It was informed by Lakes Department, BBMP that the water quality is being assessed and monitored by Karnataka State Pollution Control Board and the reports will be furnished to CPCB. However, the same is not provided despite reminders in the meetings conducted by CPCB, RD, Bengaluru.

Water Quality of outlet of the Sewage Treatment Plants (STPs) has been provided by BWSSB, which reveals that the parameters of the treated outlet is complying with the limits notified in General Standards for discharge of Environmental Pollutants. Water Quality Analysis report of STPs provided by BWSSB is appended as **Annexure V**. The treated water (11.138 TMC) is being pumped to 126 and 47 tanks of Kolar and Chikkaballapur respectively through Minor Irrigation which is higher as compared to the status provided in September 2021. Further, it has been informed that the number of tanks would be increased to 191 in Kolar and Chikkaballapur.

Water quality analysis result of Mugalur, Karnataka provided by Karnataka SPCB, which is important to ascertain the water quality at the exit

point of Inter State Border in Karnataka reveal that there is improvement of water quality in terms of dissolved oxygen reported in November, 2021.

Further, water quality analysis of River Thenpennai at the interstate location Sokkarasanapalli in Tamilnadu was provided by TNPCB. In sokkarasanapalli, Tamilnadu the water quality analysis results (as on December 2021) reveal that the water quality falls under Class E as per Designated Best Use Criteria. Improvement of water quality in terms of dissolved oxygen is reported in November, 2021.

Upon reviewing the reports of analysis of water quality of River Thenpennai, the water quality analysis results (as on December 2021) reveal that the water quality falls under Class E as per Designated Best Use Criteria.

Water Quality Analysis of River Thenpennai monitored by CPCB, TNPCB and KSPCB are provided as **Annexure VI**.

It is observed that various agencies involved are not proactive in taking sustainable initiatives for monitoring water quality of major tanks/lakes associated with River Thenpennai.

KSPCB as a member of the Karnataka Lake Conservation and Development Authority constituted under Section 3 of the Karnataka Lake Conservation and Development Authority Act is required to take proactive measures to coordinate with Lakes Department, BBMP to comply with the Hon'ble NGT Order dated 28.06.2021 regarding flow measurements and monitoring of water quality in order to maintain/restore the water quality in lakes/tanks associated with River Thenpennai.

BWSSB to ensure continuous monitoring for STPs meeting the NGT standards that is necessary to ensure long term compliance as recommended in the IISc Report in consultation with KSPCB. Similarly, continuous monitoring will be required for all the plants after given modifications are applied to ensure long term compliance.

In view of above, CPCB, RD, Bengaluru again insisted KSPCB vide letter dated 10.01.2022 to ensure strict compliance of the directions of the aforesaid Hon'ble NGT Order dated 14.12.2021 and recommendations of the Joint Committee. In case of failing to comply, shall attract actions under Section 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974.

(5) With respect to Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of

wastewater management and discharge mode, KSPCB and TNPCB may continue to do such random inspections regularly to curb the pollution caused to River Thenpennai and ensure no illegal activities are carried out thereof.

Regarding random verifications of industries discharging effluents into the storm water drains, KSPCB informed the committee that they would continue to inspect a minimum of 60 industries to ensure that the industries do not discharge the effluent into the storm water drain. On identifying such instances, action will be initiated under section 33A of Water Act.

Karnataka SPCB vide letter no. KSPCB/ SEO-INFRA/NGT-111/2020/2020-21/4590 dated 09.12.2021 informed that 12 marshals with Emergency Response Vehicles to identify illegal discharges and 04 vehicles have been purchased for the purpose. Copy of Action Taken Report provided by KSPCB is appended as **Annexure VII**.

Further, TNPCB provided sampling and analysis of the industries located in the periphery and results. Whereas TNPCB has not found any defaulters up to December, 2021.

In view of above, CPCB, RD, Bengaluru again insisted KSPCB vide letter dated 10.01.2022 to ensure strict compliance of the directions of the aforesaid Hon'ble NGT Order dated 14.12.2021 and recommendations of the Joint Committee. In case of failing to comply, shall attract actions under Section 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974.

(6) With regard to Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification, EC has to be imposed on any defaulters or violators causing pollution into the River Thenpennai by KSPCB and TNPCB for the year 2021-22.

KSPCB has to provide updated information on the list of industries with amount of EC imposed, date of inspection / physical verification with sampling or analysis carried out for the year 2021-22.

Whereas TNPCB has not found any defaulters up to December, 2021.

It is informed that, BWSSB STPs upgradation project awarded to IISC is completed and the final draft report has been forwarded to KSPCB for providing

technical inputs and assessment of Environmental Compensation in case of defaulters.

In view of above, CPCB, RD, Bengaluru again insisted KSPCB vide letter dated 10.01.2022 to ensure strict compliance of the directions of the aforesaid Hon'ble NGT Order dated 14.12.2021 and recommendations of the Joint Committee. In case of failing to comply, shall attract actions under Section 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974.

(7) With regard to Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli, Block Development Officer (monitored by TNPCB) may ensure the completion of the activities related to sewage and solid waste management as per timelines.

TNPCB has provided the same status of the Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli and informed that the same is under progress.

In view of above, the Regional Officer, Krishnagiri TNPCB requested member secretary, TNPCB vide letter dated 30.12.2021 that necessary directions may be issued to the Block Development Officer, Hosur Panchayat Union, Hosur, Krishnagiri to comply with the following;

- i. The Hosur Panchayat Union shall comply with the provisions of Solid Waste Management Rules, 2016 and shall comply with the orders passed by the Hon'ble NGT, in O.A No. 606 of 2018 and Hon'ble NGT (SZ) in O.A No 111 of 2020 from time to time.
- ii. The Hosur Panchayat Union shall ensure 100 % collection of solid waste being generated within its jurisdiction with proper segregation, door to door collection, processing and disposal by complying with the provisions of the Solid Waste Management Rules, 2016.
- iii. The Hosur Panchayat Union shall operate and maintain the Micro Compost Centre (MCC) installed at Belathur and Bagalur village efficiently and continuously so as to ensure the processing and disposal of solid waste by complying with the Solid Waste Management Rules, 2016.
- iv. The Hosur Panchayat Union shall expedite the installation of plastic shredding machine at Bagalur village on or before 31.01.2022 and the shredded plastics will be utilized for road laying works as reported.

- v. The Hosur panchayat union shall expedite the construction of diversion channel with wetland system for the Sokkarasanapalli, Chennasadiram and Kanimangalam villages on or before 31.03.2022 for the treatment of sewage generated in the said villages as reported.

Copy of the Action Taken Report as on December, 2021 submitted by TNPCB is appended as **Annexure VIII**.

- (8) With regard to action point on monitoring trend of water quality and its improvement at major confluence points for the year 2021-22 on a monthly basis, water quality of major confluence points have to be monitored on a regular basis by KSPCB and TNPCB to ensure pollution is under check.**

KSPCB has proposed to install online monitoring to monitor the key parameters at the river Thenpennai at the State border before it leaves Karnataka. These results will be synced with the Integrated Command Control Centre of KSPCB and made available online in the public domain. Periodically the result will be monitored and the graph will be plotted. This would help the KSPCB and CPCB to assess water quality and initiate action whenever there are violations.

Feasibility for installation of Continuous Online Water Quality Monitoring Station be worked out at the inter-state river boundary by KSPCB in Karnataka to ensure that improved quality of water reaches Tamilnadu.

After the waste water is treated by the primary STP's situated in the area under the jurisdiction of Bruhat Bengaluru Mahanagar Palike (BBMP), the water flows along various villages situated on the down stream before entering Tamilnadu. Therefore, it is opined that, a separate STP could be installed at a suitable location in Karnataka border, wherein waste water treated by the primary STP's will be treated once again before it flows to Tamilnadu.

Karnataka State Pollution has not informed any updated status or progress on installation of online monitoring system at the border of Karnataka & Tamilnadu for monitoring quality of water flowing in River Thenpennai. However, they informed that the same is proposed to be installed at the border of Karnataka and Tamilnadu.

Initiatives and tangible progress is required for installation of Continuous Online Water Quality Monitoring Station at the inter-state river boundary by KSPCB in Karnataka to ensure that improved quality of water reaches Tamilnadu.

(9) BBMP has not provided status of compliance and action taken report with respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions.

Lakes Department, BBMP has not provided status of compliance and action taken report with respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions and therefore not complied with the Hon'ble NGT Order dated 14.12.2021.

(10) With respect to construction of wetlands by Bangalore Development Authority (BDA), the activity needs to be completed within the stipulated timelines and the outcomes are to be provided to the Joint Committee.

The status of development of construction of wetlands provided by Bangalore Development Authority was submitted to Hon'ble NGT in the Joint Progress Report (Trimonthly), September 2021. It has been informed that the desilting work in Bellandur and Varthur lakes are underway and will be completed on 23.11.2022.

5. Tamil Nadu Pollution Control Board has filed a report showing their progress in a tabular form, e-filed on 03.01.2022 which reads as follows:

Action Points	Agency Responsible (Timeline)	Progress made as on 9 th August, 2021	Proposed Action Plan with target date (if any)	Remarks
I. Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of wastewater management and discharge mode.				
1. Among the industries those that are Red/Orange category (small, medium and large) with treated effluent discharge option as surface water/sewer drain/others (which includes industries having ZLD) in River basin of Thenpennai be monitored for effluent characteristics by concerned SPCBs, so as to ascertain the quality of treated effluent discharge as per the Consent Conditions of SPCBs. The details of the compliance status and action taken report be placed in public domain (TNPCB and KSPCB website).	TNPCB (Six months)	<p>There is no discharge of industrial effluent into river Thenpennai in the area under investigation i.e., from Chokkarasanapalli Village to Kelavarapalli Dam stretch.</p> <p>1) M/s. Premier WVG & SPG Mills Pvt Ltd., Belathur Village, Bagalur / (Red-Large) located nearby the river stretch. It is an textile dyeing and weaving unit having ZLD system and there is no discharge of sewage/trade effluent into outside the unit premises.</p> <p>The details of STP and ZLD based ETP system installed for the treatment of sewage and trade effluent is enclosed vide Annexure-I.</p> <p>The report of Analysis (ROA) of treated sewage and treated trade effluent (RO Permeate) collected</p>	The industries located in the area covered under the investigation in Thenpennai River Basin are closely monitored by the TNPC Board to ensure zero liquid discharge.	<p>The unit is located at a distance of 900 meter from River Thenpennai.</p> <p>Renewal Consent with validity upto 31.03.2022.</p>

Action Points	Agency Responsible (Timeline)	Progress made as on 9 th August, 2021	Proposed Action Plan with target date (if any)	Remarks
		<p>from the unit for the past one year (Jan 2020 to November 2021) is enclosed vide Annexure-II. From the ROA, it reveals that the quality of treated sewage and treated trade effluent are satisfying the standards prescribed by the TNPC Board.</p> <p>The report of analysis (ROA) of AAQ/SM survey conducted in the vicinity of the unit during the period 23.09.2021 is enclosed vide Annexure-III. From the ROA, it reveals that the pollutant parameters are well within the standards prescribed by the TNPC Board.</p>		
V. Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification				
2. EC be calculated and imposed based on Random Verification of Grossly Polluting Industries.	TNPCB (Six months)	No violating/defaulting industries are identified.	-	-
3. Calculation of EC by the three member Committee comprising of CPCB, TNPCB and KSPCB, after submission of Reports by the concerned authorities (BWSSB, KSPCB,	CPCB (Six months on receipt of the Study Report and recommendations/criteria for imposing EC from KSPCB and TNPCB)			

Action Points	Agency Responsible (Timeline)	Progress made as on 9 th August, 2021	Proposed Action Plan with target date (if any)	Remarks
TNPCC).				
VI. Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli				
1. Feasibility study for providing Sewage Treatment options (such as oxidations ponds/ diversion channels or wetlands etc.) by TNPCC followed by implementation by Local authority of the district.	Feasibility study by TNPCC in consultation with local authority for implementation (Six months)	Construction of diversion channel with wet land system at a cost of Rs. 25 Lakh has been provided at Bagalur village for the treatment of sewage generated from part of the Bagalur village by the local body of Hosur Panchayat Union and work has been completed and commissioned.	For the remaining four stretches, construction of wetland system will be executed after approval of District Collector, Krishnagiri under grey water management scheme at the cost of Rs. 25.14 Lakhs and the works will be completed before 31.03.2022.	Bagalur village. Additional time requested by the local body due to COVID Pandemic situation
		Construction of diversion channel with wet land system at a cost of Rs. 24 Lakh has been provided at Belathur village for the treatment of sewage generated from part of the Belathur village by the local body of Hosur Panchayat Union and work has been completed and commissioned.	For the remaining stretches, construction of wetland system will be executed after approval of District Collector, Krishnagiri under grey water management scheme and the works will be completed before 31.03.2022.	Belathur village Additional time requested by the local body due to COVID Pandemic situation



Action Points	Agency Responsible (Timeline)	Progress made as on 9 th August, 2021	Proposed Action Plan with target date (if any)	Remarks
			Construction of diversion channel with wet land system for the treatment of sewage generated from the Sokkarasanapalli village will be carried by the Hosur Panchayat Union after obtaining necessary approval of District Collector, Krishnagiri under grey water management scheme and the works will be completed within 3 months.	Sokkarasanapalli village. Additional time requested by the local body due to COVID Pandemic situation
		The sewage generated from part of the 70 houses is being treated through the septic tank followed by the soak pit.	Construction of diversion channel with wet land system for the treatment of part of sewage generated from the Chennasandiram village will be carried by the Hosur Panchayat Union after obtaining necessary approval of District Collector, Krishnagiri under grey water management scheme and the works will be completed within 3 months.	Chennasandiram Additional time requested by the local body due to COVID Pandemic situation
		The sewage generated from part of 125 houses is being treated through the septic tank followed by the soak pit.	Construction of diversion channel with wet land system for the treatment of part of sewage generated from the Kanimangalam village will be carried by the Hosur Panchayat Union after obtaining necessary approval of District Collector, Krishnagiri	Kanimangalam Additional time requested by the local body due to COVID Pandemic situation

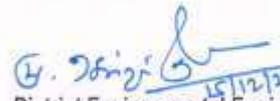
Action Points	Agency Responsible (Timeline)	Progress made as on 9 th August, 2021	Proposed Action Plan with target date (if any)	Remarks
			under grey water management scheme and the works will be completed within 3 months.	
		The sewage generated from 40 houses is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.		Guliganapalli (Kodiyalam) village.
		The sewage generated from Thummanapalli village Panchayat [280 houses in Sathyamangalam and 98 houses in Muneeswar Nagar] is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.		Sathyamangalam, Muneeswar Nagar
		The sewage generated from 190 houses is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.		Lingapuram
		The sewage generated from 220 houses is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.		Baduthepalli

Action Points	Agency Responsible (Timeline)	Progress made as on 9 th August, 2021	Proposed Action Plan with target date (if any)	Remarks
		<p>The average collection of solid waste in the Bagalur Panchayat is about 2.0 MT. The Municipal Solid Waste is being collected through door to door collection by engaging 19 Thoomai Kavalars and deploying with five tri-cycles and three electronic bikes.</p> <p>The local body of Hosur Panchayat Union has constructed the Micro Compost Centre with a maximum capacity to process 3.0 MT of segregated biodegradable municipal solid wastes at a cost of Rs. 20 Lakh.</p>	<p>The MCC centre at Bagalur commissioned.</p> <p>Under Central Government scheme of National Urban Mission project a Plastic shredding unit is proposed at a cost of Rs. 20 Lakhs to handle the plastic wastes and the shredded plastics will be used for road laying works. The work will be completed before 31.01.2022.</p>	Additional time requested by the local body due to COVID Pandemic situation
		The average collection of solid waste in the Belathur Panchayat is about 2.0 MT. The Municipal Solid Waste is being collected through door to door collection by	The MCC centre at Belathur Commissioned.	Belathur

Action Points	Agency Responsible (Timeline)	Progress made as on 9 th August, 2021	Proposed Action Plan with target date (if any)	Remarks
		engaging 19 Thooimai Kavalars and deploying with five tri-cycles and three electronic bikes. The local body of Hosur Panchayat Union has constructed the Micro Compost Centre with a maximum capacity to process 3.0 MT of segregated biodegradable municipal solid wastes at a cost of Rs. 24 Lakh.		
		The solid wastes generated from the Sokkarasanapalli village are being collected and brought to the segregation shed and segregated as bio-degradable and non-biodegradable wastes.		Sokkarasanapalli village.
		The non-biodegradable wastes are burnt through the Solid waste Disposal Incinerator established at Estimate Cost of Rs.18.00 Lakhs by CSR fund of M/s. Excide factory. (Photographs enclosed).		

Action Points	Agency Responsible (Timeline)	Progress made as on 9 th August, 2021	Proposed Action Plan with target date (if any)	Remarks
		engaging 19 Thooimai Kavalars and deploying with five tri-cycles and three electronic bikes. The local body of Hosur Panchayat Union has constructed the Micro Compost Centre with a maximum capacity to process 3.0 MT of segregated biodegradable municipal solid wastes at a cost of Rs. 24 Lakh.		
		The solid wastes generated from the Sokkarasanapalli village are being collected and brought to the segregation shed and segregated as bio-degradable and non-biodegradable wastes.		Sokkarasanapalli village.
		The non-biodegradable wastes are burnt through the Solid waste Disposal Incinerator established at Estimate Cost of Rs.18.00 Lakhs by CSR fund of M/s. Excide factory. (Photographs enclosed).		

Action Points	Agency Responsible (Timeline)	Progress made as on 9 th August, 2021	Proposed Action Plan with target date (if any)	Remarks
		The solid wastes generated from the households are being collected through Thoolmai Kavalars and brought to the segregation shed and segregated as bio-degradable and non-biodegradable wastes for further treatment and dispose. (Photographs enclosed).		Guliganapalli, Sathiyamangalam, Muneeswar Nagar, Lingapuram, Baduthepalli, Kempasandiram, Chennasandiram, Singasadanapalli, Kanimangalam, Kallipuram and Oddapalli Thinna villages.
VII. Regular Water Quality Monitoring at important locations				
1. The trend of water quality and its improvement at major confluence points may be monitored for the year 2021-22 on a monthly basis and a report be submitted to CPCB to ensure the quality of water flowing in River Thenpennai.	TNPCB & KSPCB (to monitor on yearly basis)	The water quality of River Thenpennai is being monitored on monthly basis at interstate border i.e at Chokkarasanapalli Village and the report of analysis for the period from September 2017 to November 2021 is enclosed vide Annexure-IV.		Refer Annexure-IV – ROA of Thenpennai River at Chokkarasanapalli Village from September 2017 to November 2021


 G. Srinivas
 District Environmental Engineer,
 Tamilnadu Pollution Control Board
 Hosur

6. Neither the Karnataka State Pollution Control Board nor the State Government and BBMP had filed their respective progress reports as directed by this Tribunal. Quite unfortunately we have come across another newspaper report published in Dinamalar dated 07.10.2021 under the Caption “தென்பெண்ணை ஆற்றில் ரசாயனம் காணப்படுகிறது” (“Chemical form in Thenpennai River”) this is nothing but continuation of earlier allegations on the basis of which certain directions have been issued to monitor the issue and remedy the situation. But quite unfortunately the

same thing is repeating even now.

7. The State of Karnataka is expected to look into the issue seriously and take appropriate action to prevent the same by implementing the directions issued by this Tribunal on the basis of the Joint Committee appointed by this Tribunal. Being a party to the proceedings, they are not expected to shut their eyes to the realities and not to take action on the basis of the same. This Tribunal had time and again reiterated that financial crisis is not a ground to avoid the responsibility of protecting the environment and they will have to find out resources for this purpose and see that remedial measures are taken as they have got a constitutional mandate under Article 48 (A) of the Constitution of India to protect environment and also provide clean environment as part of right to life as contemplated under Article 21 of Constitution of India.
8. When water is being sent from the reservoir to the neighbouring States, it is intended for multiple purposes including irrigation and drinking. There is a responsibility on the Government which provides the water, to provide the same pollution free so that the neighbouring State beneficiaries can enjoy the same in an effective manner. This responsibility is expected to be carried out by the neighbouring State, namely, the State of Karnataka to see that the water that is being released from the State is pollution free and it is not mixing with any pollutant before it reaches the River on the border. In order to ascertain this aspect only, this Tribunal had directed to provide a monitoring mechanism at both the borders of the State of Tamil

Nadu and State of Karnataka so that the quality of water before it is being released to the river can be monitored and necessary mitigative measures can be taken but no such pro-active steps have been taken from the side of State of Karnataka and they are not diligent enough to file the respective report showing the nature of steps taken by them as well. If the Chief Secretary and Principal Secretary for Environment of State of Karnataka are not filing the reports as directed by this Tribunal regarding the monitoring mechanism evolved by them to supervise the implementation of directions issued by this Tribunal, then they are directed to appear in person to show cause why action should not be taken against them for non-implementation of the directions issued by this Tribunal as contemplated under Section 25 read with Section 26 and 28 of the National Green Tribunal Act, 2010.

9. Pollution Control Board as well as the other official respondents, who are expected to carry out the directions on the basis of the recommendations made by the Joint Committee including BBMP, PWD, Karnataka Pollution Control Board are directed to submit their respective compliance report on or before 23.03.2022 by e-filing in the form of Searchable PDF/OCR Supportable PDF and not in the form of Image PDF along with necessary hardcopies to be produced as per Rules.

10. The Registry is directed to communicate this order to all the official respondents especially to Chief Secretary and Principal Secretary for Environment, State of Karnataka for their information and compliance of

the direction to avoid further coercive steps to be taken by the Tribunal against the erring officials.

11. For consideration of further progress report, post on 23.03.2022.

.....J.M.
(Justice K. Ramakrishnan)

.....E.M.
(Dr. Satyagopal Korlapati)

O. A. No.111/2020,(SZ)
17th February, 2022 (AM)



BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

Original Application No.111 of 2020 (SZ)

(Through Video Conference)

IN THE MATTER OF:

Tribunal on its own motion SUO MOTU
Based on the News Item in Tamil Newspaper Dinamalar
Chennai Edition dated 13.07.2020, "Frothing of
Chemical foam in the River Thenpennai.

And

The Principal Secretary to Government,
Public Works Department,
Secretariat, Fort St. George,
Chennai – 600 009 and others. ...Respondent(s)

Date of Hearing: 27.05.2022.

CORAM:

HON'BLE Mr. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER

HON'BLE Dr. SATYAGOPAL KORLAPATI, EXPERT MEMBER

For Applicant(s)

By Court

For Respondent(s):

Dr. D. Shanmuganathan for R1, R2, R4 & R7

Mr. Rajat Jonathan Shaw represented

Mr. K.M. Darpan for R3

Mr. S. Sai Sathya Jith for R5

Mr. R. Thirunavukarasu for CPCB

ORDER

1. As per order dated 17.02.222, this Tribunal had considered the report submitted by the Central Pollution Control Board (CPCB) and extracted

in Para (3) of the order and also various reports submitted by the other departments and then passed the following order:-

“6. Neither the Karnataka State Pollution Control Board nor the State Government and BBMP had filed their respective progress reports as directed by this Tribunal. Quite unfortunately we have come across another newspaper report published in Dinamalar dated 07.10.2021 under the Caption “தென் தெண்ணை ஆற்றில் ரசாயனம் காணப்படுகிறது” (“Chemical form in Thenpennai River”) this is nothing but continuation of earlier allegations on the basis of which certain directions have been issued to monitor the issue and remedy the situation. But quite unfortunately the same thing is repeating even now.

7. The State of Karnataka is expected to look into the issue seriously and take appropriate action to prevent the same by implementing the directions issued by this Tribunal on the basis of the Joint Committee appointed by this Tribunal. Being a party to the proceedings, they are not expected to shut their eyes to the realities and not to take action on the basis of the same. This Tribunal had time and again reiterated that financial crisis is not a ground to avoid the responsibility of protecting the environment and they will have to find out resources for this purpose and see that remedial measures are taken as they have got a constitutional mandate under Article 48 (A) of the Constitution of India to protect environment and also provide clean environment as part of right to life as contemplated under Article 21 of Constitution of India.

8. When water is being sent from the reservoir to the neighbouring States, it is intended for multiple purposes including irrigation and drinking. There is a responsibility on the Government which provides the water, to provide the same pollution free so that the neighbouring State beneficiaries can enjoy the same in an effective manner. This responsibility is expected to be carried out by the neighbouring State, namely, the State of Karnataka to see that the water that is being released from the State is pollution free and it is not mixing with any pollutant before it reaches the River on the border. In order to ascertain this aspect only, this Tribunal had directed to provide a monitoring mechanism at both the borders of the State of Tamil Nadu and State of Karnataka so that the quality of water before it is being released to the river can be monitored and necessary mitigate measures can be taken but no such pro-active steps have been taken from the side of State of Karnataka and they are not diligent enough to file the respective report showing the nature of steps taken by them as well. If the Chief Secretary and Principal Secretary for Environment of State of Karnataka are not filing the reports as directed by this Tribunal regarding the monitoring mechanism evolved by them to supervise the implementation of directions issued by this Tribunal, then they are directed to appear in person to show cause why action should not be taken against them for non-implementation of the directions issued by this Tribunal as contemplated under Section 25 read with Section 26 and 28 of the National Green Tribunal Act, 2010.

9. Pollution Control Board as well as the other official respondents, who are expected to carry out the directions on the basis of the recommendations made by the Joint Committee including BBMP, PWD, Karnataka Pollution Control Board are directed to submit their respective compliance report on or before 23.03.2022 by e-filing in the form of Searchable PDF/OCR Supportable PDF and not in the form of Image PDF along with necessary hardcopies to be produced as per Rules.

10. The Registry is directed to communicate this order to all the official respondents especially to Chief Secretary and Principal Secretary for Environment, State of Karnataka for their information and compliance of the direction to avoid further coercive steps to be taken by the Tribunal against the erring officials."

2. The case was posted to 23.03.2022 for consideration of further reports. Thereafter, the matter has been adjourned from time to time by successive notifications and lastly, the matter was adjourned to today as per notification dated 27.04.2022. After the case was adjourned, the Karnataka State Pollution Control Board filed an action taken report dated nil, e-filed on 21.03.2022 which reads as follows:-

Action taken report pertaining to Frothing of Chemicals Foam in Thenpennai River in the matter of OA No. 111/2020 as on 19.03.2022.

Ref: NGT order dated: 17.02.2022 in respect of OA No. 111/2020.

In accordance with the directions issued by Hon'ble National Green Tribunal principle Bench, South Zone, Chennai on the matter of OA No. 111/2020. The action details are as under.

Preamble:

Thenpennai River also known as South Pennar or Dhakshina Pinakini is an interstate River. The River originate on South Eastern slopes of Chennakesava Hills, North West of Nandidurg of Chikkaballapur District in Karnataka State at an altitude of 1000 m above meansea level, which flows in the Southern direction through Chikkaballapura, Bengaluru Rural and Bengaluru Urban Districts in Karnataka State and descends to Tamilnadu near Hosur.

Thenpennai River basin is one of the largest Rivers of the State of Tamilnadu. The River has supported many a civilizations of peninsular India in supplying precious water for drinking, irrigation and industry to the people of the state of Karnataka, Tamilnadu and Pondicherry. The total length of the Ponnaiyar river is 432 Km, of which 112 Km lies in Karnataka State, 180 Km in Dharmapuri and Krishnagiri, 34 Km in Thiruvannamalai and 106 Km in Cuddalore, Kallakurichi and Villupuram districts of Tamilnadu before joining Bay of Bengal. En route, it tributaries are Chinnar, Markandeyanabi, Vaniar and Pamban rivers in Tamilnadu. With a total catchment of approximately 16,019 square Km, it is dry for the most part of the year but swells during the North East monsoon season.

In Karnataka, the river traverses through series of zilla panchyat tanks and also Minor irrigation tanks namely Nandi tank, Kuppalli tank, Chadalapura tank, Kothanuru tank, Kolavanahalli tank, Chikkadigenahalli tank, Bommanahalli tank, Kanithahalli tank, Muthur tank, mallur tank, Amani Bhadrana kere tank in Chikkaballapur District, Hoskote Doddakere tank in Bengaluru Rural district, and Yelemallapa Chetty tank in Bengaluru Urban District. Drainage basin of River Thenpennai or South Pennar flowing in Karnataka & Tamilnadu.

Hon'ble National Green tribunal South Zone, Chennai in the matter of OA No. 111/2020 on its own motion based on the news item in Tamil Newspaper Dinamalar Chennai edition dated: 13.07.2020, "Frothing of Chemical form in the River Thenpennai".

- i. On 13th July, 2020 about 640 Cusecs water was discharged from Kelavarapalli Reservoir, Hosur and huge amount of chemical foam was found in Thenpennai River.
- ii. The flow of water into the reservoir increased gradually from 320 cusecs (09 July, 2020) to 480 cusecs (11th July, 2020) due to heavy rainfall in the catchment area. In general, whenever the flow of water increases in Kelavarapalli reservoir the domestic sewage and industrial effluent from Karnataka mixes into the river in huge quantity.



- KSPCB has imposed EC of Rs. 288.80 Crores on 496 No's of Apartment/Commercial establishment and Rs. 1.85 crores was collected. The list is enclosed as **Annexure-V**.
- Action taken report was forwarded to CPCB as per Directions of Hon'ble NGT on 31.03.2021, 31.08.2021, 09.12.2021.

K.S.P.C.B. has engaged 12 Marshals With Emergency response Vehicles to identify illegal discharges. 4 Nos Vehicle has been purchased by the KSPCB for this purpose.

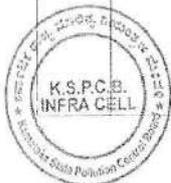
A VC was held on 28.02.2022 on the issue of OA 111/2020 relating to the pollution of Thenpennai River from the Industrial / sewage from the state of Karnataka by CPCB, where in the Principal Secretary, Ecology and Environment also participated. In this regard a letter is also addressed to the Chief Secretary on 24.02.2022.

Further, the ROs of Sarjapura, Chikkaballapura, Kolar, Yelahanka, Mahadevapura, Bommanahalli, Hoskote, Bangalore City West & Anekal have been directed to periodically monitor and submit the report to Board Office.

The next date of hearing on 23.03.2022. The Board has to submit the ATR to Hon'ble NGT on or before 19.03.2022.

Compliance report to recommendation of Joint Committee constituted in respect of OA No. 111/2020 related to Frothing of Chemical foam in river.

Sl No.	Action points	Present status	Proposed action by the Joint committee	Action taken by KSPCB to the Directions of Hon'ble NGT vide orders dated: 17.02.2022.
1	Study of Performance of evaluation of sewage Treatment Plants in Bangalore by engaging a CSIR Institute.	The performance of the STPs located in Koramangla and Challaghatta, Hebbal Valleys are being assessed based on its capacity utilized and characteristics by BWSSB. However, the treated waste water quality needs to be ascertained. Further, Water quality of water (treated water by BWSSB) diverted for irrigation to Chikkaballapura and Kolar Districts through	BWSSB may engage a CSIR Institute like CLRI or NEERI or others for evaluating performance of STPs located in K&C and Hebbal valleys. (viz., there are 32 STPs in Bangalore including 21 STPs in Koramangla & Challaghatta and Hebbal Valleys). The same may be supervised by KSPCB. The final report may be submitted to KSPCB for review.	BWSSB has submitted NEERI report pertaining to performance evaluation report of STPs. In the report BWSSB has come out with standards operating procedures for STP and also mentioned that O & M of existing STPs need to be improved. The same is being taken up by



✓

		<p>Minor irrigation Department is required to be assessed.</p> <p>Therefore, there is need to conduct audit of the data of quantity of sewage generation, Sewage treatment capacity installed vs actually operated and treated wastewater characteristics.</p>		<p>BWSSB and the same will be inspected on periodical basis by KSPCB</p>
2			<p>The outcome of the performance study of STPs may be submitted as Status of Compliance of the State Functionaries of Karnataka to the Monitoring Committee constituted in the matter of O.A 125/2017, for review and reporting.</p> <p>Among the industries those that are Red/Orange category (small, medium and large) with treated effluent discharge option as surface water/sewer drain/others (which includes industries having ZLD) in River basin of Thenpennai be monitored for effluent characteristics by concerned SPCBs, so as to ascertain the quality of treated effluent discharge as per the Consent Conditions of SPCBs. The details of the compliance status and action taken report be placed in public domain (TNPCB and KSPCB website).</p>	<p>12 Marshals have been engaged for any illegal discharge and action will be taken for non complying units.</p>
3	<p>Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random verification.</p>	<p>Performance evaluation of STPs by BWSSB and random inspection industries is required to be carried out by KSPCB/TNPCB with specific reference to River Thenpennai.</p>	<p>EC be calculated and imposed based on the Performance Evaluation of STPs and Random Verification of Grossly Polluting Industries.</p> <p>Calculation of EC by the three member Committee comprising of CPCB, TNPCB and KSPCB, after submission of Reports by the concerned authorities</p>	<p>KSPCB has imposed EC of Rs. 288.80 Cr. On 496 No's of Apartment/Commercial establishment and Rs. 1.40 Cr. has collected.</p>



			(BWSSB, KSPCB, TNPCB)	
4	<i>Regular Water Quality Monitoring at important locations.</i>	<i>Water Quality is being monitored by KSPCB by installing real time monitoring stations in Bellandur and Varthur. Further, Mugulur Bridge and Sokkarasanapalli is being monitored under National Water Quality Monitoring Programme.</i>	<i>The trend of water quality and its improvement at major confluence points may be monitored for the year 2021-22 on a monthly basis and a report be submitted to CPCB to ensure the quality of water flowing in River Thenpennai.</i>	<p>The subject was placed before the 236th meeting of the KSPCB held on 15.03.2022 since the delegation of power exceeds Chairman limits. A letter has been addressed to the Principal Secretary, Government of Karnataka, Department of Ecology & Environment to give exemption under 4G. The work is under progress and shortly, the on line data will be shared in the KSPCB, TNPCB & CPCB website. An Agreement in this regard has been entered with the service provider. At present the water quality is being monitored manually and report is enclosed as Annexure-II.</p>

3. The report says only about the action taken against the erring industries and also the steps taken by the Bangalore Water Supply and Sewerage Board (BWSSB).
4. We have also received another report filed by the Tamil Nadu Pollution Control Board (TNPCB) signed by the officer on 21.03.2022, e-filed on 22.03.2022 which reads as follows:-

3. I state that the Thennapennai River, in Karnataka, traverses through series of zilla panchayat tanks, and also Minor irrigation tanks namely Nandi Tank, Kuppalli Tank, Chandalapura Tank, Kothanuru Tank, Kalavanahalli Tank, Chikkadigenahalli Tank, Bommanahalli Tank, Kanithahalli Tank, Muthur Tank, Mallur Tank, Amani BhadranaKere Tank in Chikkaballapur District, Hoskote Doddakere Tank, and other streams joining Yelemallapa Chetty Tank, last two in Bengaluru Urban District.
4. I state that following the directions of this Hon'ble Tribunal, this answering Respondent had carried tests to determine the water quality. The water samples were collected from various locations on the river bank. The Water Quality Analysis of lakes in Chillaballapura, Yelahanka, Bangalore City East & West, and Mahadevapura, Sarjapura and South Karnataka has been annexed herewith as **Annexure - I**. The summarisation of the same is as below:

District	Inference (Tests based upon Accredited Parameters)
Chikkaballapura	Class D
Yelahanka	Class D
Bangalore City West	Class D
Bangalore City East	Class D [Lake water near temple - Class E]
Mahadevapura	Class D (on average) Near Varthur Lase - Class E
Sarjapura	Class E (on average)
Bangalore City South	Class D

Key for interpretation:

Meaning of Classes as per CPCB Classification of Water Quality:

- **Class D** - Propagation of Wild life and Fisheries - pH between 6.5 to 8.5 Dissolved Oxygen 4mg/l or more; Free Ammonia (as N) 1.2 mg/l or less
- **Class E** - Irrigation, Industrial Cooling, Controlled Waste Disposal - pH betwwn 6.0 to 8.5; Electrical Conductivity at 25C micro mhos/cm Max.2250; Sodium absorption Ratio Max. 26; Boron Max. 2mg/l

[Handwritten signature]

5. I state that this answering Respondent Board has been monitoring the water quality of DakshinaPinakini River near Murugulur Bridge. The water quality is conforming to Class D/E. The Analysis Report is filed herewith as **Annexure - II.**
6. I state that the answering Respondent Board is conducting regular inspection of the industries located in the catchment areas and any defaulting industries are dealt with as per the procedure laid down in law.
7. I state that the answering Respondent Board had issued Closure Notices to 72 defaulting industries in the year 2018, out of which 29 were revoked after compliance. The details of the same are compiled in a list filed herewith as **Annexure - III.**
8. I state that the answering Respondent Board has initiated legal proceedings against 16 defaulting residential apartment complexes. The details of the same are compiled in a list filed herewith as **Annexure - IV.**
9. As per the direction of the Hon'ble NGT in Original Application in 1038/2018, Board imposed Environmental Compensation on 36 industries. Appeal No.2220-2221/2020 against the said order was preferred. The Hon'ble Supreme Court at first instance stayed order of NGT but subsequently disposed of the Civil Appeal with direction to place the grievances before the Hon'ble National Green Tribunal.
10. I state that the answering Respondent Board had imposed Environmental Compensation on 496 residential apartment complexes totalling upto Rs. 288.80 Crores. The list of industries on which this Respondent Board had imposed Environmental Compensation has been annexed herewith as **Annexure - V.**



11. I state that this answering Respondent has engaged 12 Marshals with Emergency Respondent Vehicles to identify illegal discharges. 4 Vehicles have been purchased by this Board for this purpose.

5. They have also given the short term and long term measures to be complied with by the local bodies and certain industries.

6. The Karnataka State Pollution Control Board also filed another report dated 22.03.2022, e-filed on 23.03.2022 which reads as follows:-

3. I state that the Thennapennai River, in Karnataka, traverses through series of zilla panchayat tanks, and also Minor irrigation tanks namely Nandi Tank, Kuppalli Tank, Chandalapura Tank, Kothanuru Tank, Kalavanahalli Tank, Chikkadigenahalli Tank, Bommanahalli Tank, Kanithahalli Tank, Muthur Tank, Mallur Tank, Amani BhadranaKere Tank in Chikkaballapur District, Hoskote Doddakere Tank, and other streams joining Yelemallapa Chetty Tank, last two in Bengaluru Urban District.
4. I state that following the directions of this Hon'ble Tribunal, this answering Respondent had carried tests to determine the water quality. The water samples were collected from various locations on the river bank. The Water Quality Analysis of lakes in Chillaballapura, Yelahanka, Bangalore City East & West, and Mahadevapura, Sarjapura and South Karnataka has been annexed herewith as **Annexure - I**. The summarisation of the same is as below:

District	Inference (Tests based upon Accredited Parameters)
Chikkaballapura	Class D
Yelahanka	Class D
Bangalore City West	Class D
Bangalore City East	Class D [Lake water near temple - Class E]
Mahadevapura	Class D (on average) Near Varthur Lase - Class E
Sarjapura	Class E (on average)
Bangalore City South	Class D

Key for interpretation:

Meaning of Classes as per CPCB Classification of Water Quality:

- **Class D** - Propagation of Wild life and Fisheries - pH between 6.5 to 8.5 Dissolved Oxygen 4mg/l or more; Free Ammonia (as N) 1.2 mg/l or less
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9. As per the direction of the Hon'ble NGT in Original Application in 1038/2018, Board imposed Environmental Compensation on 36 industries. Appeal No.2220-2221/2020 against the said order was preferred. The Hon'ble Supreme Court at first instance stayed order of NGT but subsequently disposed of the Civil Appeal with direction to place the grievances before the Hon'ble National Green Tribunal.
10. I state that the answering Respondent Board had imposed Environmental Compensation on 496 residential apartment complexes totalling upto Rs. 288.80 Crores. The list of industries on which this Respondent Board had imposed Environmental Compensation has been annexed herewith as **Annexure - V.**



11. I state that this answering Respondent has engaged 12 Marshals with Emergency Respondent Vehicles to identify illegal discharges. 4 Vehicles have been purchased by this Board for this purpose.

7. Though it was mentioned that certain annexure were produced, no such annexure is seen produced. They had only given the water quality and the action taken for recovery of compensation against the violators. Though, the learned counsel appearing for State of Karnataka submitted that certain steps have been taken for installing real time monitor of the water quality before its crosses the State boundary, no such report is seen filed. Even on the last hearing date, we directed the Chief Secretary and the principal Secretary for Environment, State of Karnataka to file the report otherwise they will have to face the consequences as contemplated under Section 25, 26 & 28 of the National Green Tribunal Act, 2010.
8. The counsel appearing for the Central Pollution Control Board (CPCB) submitted that they have already issued a direction to the State Pollution Control Board to implement the directions issued by them against the erring units.
9. The Central Pollution Control Board is also expected to file a report regarding the implementation of the directions issued on the basis of the Joint Committee report to be carried out by the State of Karnataka and if not, what is the nature of action taken by them as it is seen from the report that the water coming from the reservoir is mixed with contaminated water before it reaches the boundary of Tamil Nadu and in order to monitor the water quality at the boundary before it is being released as suggested by the committee, we directed the State of Karnataka to provide a real time monitoring system to ensure the water quality before it is being discharged and crossing the boundary of the State, so that the menace that has been raised can be remedied.
10. In the mean time, the other departments, namely, Bruhat Bengaluru Mahanagara Palike (BBMP) and Bangalore Water Supply & Sewerage Board (BWSSB) are also directed to file their further report

regarding the implementation of the Waste Management Rules and Liquid Waste Management Rules, etc.

11. The Chief Secretary, State of Karnataka, the Principal Secretary for Environment and also the Central Pollution Control Board to file a report to this Tribunal on or before **13.07.2022** by e-filing in the form of searchable PDF/OCR Supportable PDF and not in the form of Image PDF along with necessary hardcopies to be produced as per rules.
12. The Registry is directed to communicate this order to the official respondents including the Chairman of Both the State Pollution Control Board, Bruhat Bengaluru Mahanagara Palike (BBMP), Bangalore Water Supply and Sewerage Board (BWSSB), Principal Secretary for Environment, State of Karnataka, Additional Chief Secretary for Environment, State of Tamil Nadu Chief Secretary to Government, State of Karnataka, Chief Secretary to Government, State of Tamil Nadu for their information and also for compliance of the direction.
13. For consideration of compliance report, post on **13.07.2022**.

Sd/-

.....J.M.
(Justice K. Ramakrishnan)

Sd/-

.....E.M.
(Dr. Satyagopal Korlapati)

O. A. No. 111/2020(SZ)
27.05.2022, Sr.



केन्द्रीय प्रदूषण नियंत्रण बोर्ड

CENTRAL POLLUTION CONTROL BOARD

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

NGT MATTER (On Priority)

File No. Tech(39)/Legal(NGT)/RDS/2021-22

February 24, 2022

To

The Chief Secretary to Government
Government of Karnataka
Room No. 320, 3rd Floor
Vidhana Soudha
Bengaluru – 560 001

Sub: Hon'ble NGT, Southern Zone, Chennai order in the matter of O.A. 111 of 2020 (SZ) regarding "Frothing of Chemical Foam in the River Thenpennai" – Compliance

Ref: Orders of Hon'ble NGT, Southern Zone, Chennai dated 17.02.2022
(copy enclosed)

Sir,

In the matter of O.A 111 of 2020, a SuoMotu case registered by the Hon'ble Tribunal, SZ, Chennai on the basis of the newspaper report published in Dinamalar, Chennai City supplement Edition dated 13.07.2020 under the caption "Frothing of Chemical Foam in the River Thenpennai", the issues alleged are large scale foam in Thenpennai River due to untreated chemical effluents discharged from Kelavarapalli Reservoir and residential sewage is also mixed with the water affecting water quality.

The Hon'ble National Green Tribunal, Chennai vide order dated 17.02.2022 mentioned that, "Neither the Karnataka State Pollution Control Board nor the State Government and BBMP had filed their respective progress reports as directed by this Tribunal. Quite unfortunately, we have come across another newspaper report published in Dinamalar dated 07.10.2021 under the Caption ("Chemical form in Thenpennai River") this is nothing but continuation of earlier allegations on the basis of which certain directions have been issued to monitor the issue and remedy the situation." In the aforesaid order, Hon'ble Tribunal issued following directions:

"8. When water is being sent from the reservoir to the neighbouring States, it is intended for multiple purposes including irrigation and drinking. There is a responsibility on the Government which provides the water, to provide the same pollution free so that the neighbouring State beneficiaries can enjoy the same in an effective manner. This responsibility

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क्षेत्रीय निदेशालय (दक्षिण) : निसर्ग भवन, ए-ब्लॉक, प्रथम एवं द्वितीय तल, तिम्मय्या रोड, 7-डी मैन, शिवनगर, बेंगलूरु - ५६० ०७९.

Regional Directorate (South) : " Nisarga Bhawan ", A-Block, 1st & 2nd Floors, Thimmaiah Road, 7th D - Main, Shivanagar, Bengaluru - 560 079.

दूरभाष / Telephone : 080-23233739, 23233827, 23233996, 23233600, 23232559, 23226002, 23222539, Fax : 080-23234059

ई-मेल / E-mail : cpcbszo@yahoo.com, zobangalore.cpcb@nic.in

प्रधान कार्यालय : परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली- ११० ०३२.

Head Office : Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032.

दूरभाष / Telephone : 011-43102030, Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल / E-mail : cpcb@nic.in वेबसाइट / Website : www.cpcb.nic.in

is expected to be carried out by the neighbouring State, namely, the State of Karnataka to see that the water that is being released from the State is pollution free and it is not mixing with any pollutant before it reaches the River on the border. In order to ascertain this aspect only, this Tribunal had directed to provide a monitoring mechanism at both the borders of the State of Tamil Nadu and State of Karnataka so that the quality of water before it is being released to the river can be monitored and necessary mitigative measures can be taken but no such proactive steps have been taken from the side of State of Karnataka and they are not diligent enough to file the respective report showing the nature of steps taken by them as well. If the Chief Secretary and Principal Secretary for Environment of State of Karnataka are not filing the reports as directed by this Tribunal regarding the monitoring mechanism evolved by them to supervise the implementation of directions issued by this Tribunal, then they are directed to appear in person to show cause why action should not be taken against them for non-implementation of the directions issued by this Tribunal as contemplated under Section 25 read with Section 26 and 28 of the National Green Tribunal Act, 2010.

9. Pollution Control Board as well as the other official respondents, who are expected to carry out the directions on the basis of the recommendations made by the Joint Committee including BBMP, PWD, Karnataka Pollution Control Board are directed to submit their respective compliance report on or before 23.03.2022 by e-filing ...”

In view of above, it is kindly requested to ensure compliance of the Hon'ble NGT Order dated 17.02.2022 and furnish the compliance report before Hon'ble NGT. In this regard, a meeting is scheduled on 28.02.2022 (Monday) at 4:00 PM through video conferencing for deliberations on the issues to be addressed by various departments in State Government. Agenda & meeting link will be communicated separately.

Yours faithfully

S. Suresh
24/2/2022

(S. Suresh)

Regional Director

9480672128

ssuresh.cpcb@nic.in

Encl. (i) NGT Order dated 17.02.2022
(ii) NGT Order dated 28.06.2021



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

NGT MATTER (On Priority)

File No. Tech(39)/Legal(NGT)/RDS/2021-22
963

February 24, 2022

To

The Principal Secretary
Department of Forest, Environment & Ecology
Room no. 708, Gate 2, Multi Storied Building
Dr. Ambedkar Veedhi, Bengaluru – 560 001

Sub: Hon'ble NGT, Southern Zone, Chennai order in the matter of O.A. 111 of 2020 (SZ) regarding "Frothing of Chemical Foam in the River Thenpennai" – Compliance

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"8. When water is being sent from the reservoir to the neighbouring States, it is intended for multiple purposes including irrigation and drinking. There is a responsibility on the Government which provides the water, to provide the same pollution free so that the neighbouring State beneficiaries can enjoy the same in an effective manner. This responsibility

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क्षेत्रीय निदेशालय (दक्षिण) : निसर्ग भवन, ए-ब्लॉक, प्रथम एवं द्वितीय तल, तिममय्या रोड, 7-डी मैन, शिवनगर, बेंगलूरु - ५६० ०७९.

Regional Directorate (South) : " Nisarga Bhawan ", A-Block, 1st & 2nd Floors, Thimmaiah Road, 7th D - Main, Shivanagar, Bengaluru - 560 079.

दूरभाष / Telephone : 080-23233739, 23233827, 23233996, 23233600, 23232559, 23226002, 23222539, Fax : 080-23234059

ई-मेल / E-mail : cpCBSzo@yahoo.com, zobangalore.cpcb@nic.in

प्रधान कार्यालय : परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली- ११० ०३२.

Head Office : Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032.

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is expected to be carried out by the neighbouring State, namely, the State of Karnataka to see that the water that is being released from the State is pollution free and it is not mixing with any pollutant before it reaches the River on the border. In order to ascertain this aspect only, this Tribunal had directed to provide a monitoring mechanism at both the borders of the State of Tamil Nadu and State of Karnataka so that the quality of water before it is being released to the river can be monitored and necessary mitigative measures can be taken but no such proactive steps have been taken from the side of State of Karnataka and they are not diligent enough to file the respective report showing the nature of steps taken by them as well. If the Chief Secretary and Principal Secretary for Environment of State of Karnataka are not filing the reports as directed by this Tribunal regarding the monitoring mechanism evolved by them to supervise the implementation of directions issued by this Tribunal, then they are directed to appear in person to show cause why action should not be taken against them for non-implementation of the directions issued by this Tribunal as contemplated under Section 25 read with Section 26 and 28 of the National Green Tribunal Act, 2010.

9. Pollution Control Board as well as the other official respondents, who are expected to carry out the directions on the basis of the recommendations made by the Joint Committee including BBMP, PWD, Karnataka Pollution Control Board are directed to submit their respective compliance report on or before 23.03.2022 by e-filing ...”

In view of above, it is kindly requested to ensure compliance of the Hon'ble NGT Order dated 17.02.2022 and furnish the compliance report before Hon'ble NGT. In this regard, a meeting is scheduled on 28.02.2022 (Monday) at 4:00 PM through video conferencing for deliberations on the issues to be addressed by various departments in State Government. Agenda & meeting link will be communicated separately.

Yours faithfully

S. Suresh
24/2/2022
(S. Suresh)

Regional Director
9480672128
ssuresh.cpcb@nic.in

Encl. (i) NGT Order dated 17.02.2022
(ii) NGT Order dated 28.06.2021



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

Speed Post

File No. A-14011/(OA-111/2020)/2022-WQM-I /14763

22.03.2022

To

The Chairman,
Karnataka State Pollution Control Board,
Parisara Bhawan, 4th & 5th Floors, Church Street,
Bengaluru – 560 001, Karnataka.



Sub: Directions under Section 18(1) (b) of the Water (Prevention and Control of Pollution) Act, 1974 in the matter of O.A No. 111 of 2020 (SZ) regarding 'Frothing of Chemical Foam in River Thenpennai'

WHEREAS, under Section 17 of the Water (Prevention and Control of Pollution) Act, 1974 one of the functions of the State Pollution Control Board including Karnataka State Pollution Control Board (KSPCB) is to plan a comprehensive programme for the Prevention, Control or Abatement of Pollution of streams and wells in the state and to secure the execution thereof; and

WHEREAS, in the matter of O.A No. 111 of 2020, a suo moto case registered based on a News article dated 13.07.2020 published on "Frothing of Chemical Foam in River Thenpennai", the Hon'ble National Green Tribunal (NGT) vide Order dated 28.06.2021 disposed of the case and issued directions that,

- i. The concerned Departments mentioned in the Joint Committee report shall implement the directions issued by the Joint Committee, so as to resolve the issue permanently within a time frame.
- ii. The Chairman, Karnataka Pollution Control Board shall monitor implementation of the recommendations made by the Joint Committee by the respective Departments and also assess the improvement of water quality of River Thenpennai in the respective areas and if any, further action is to be taken.
- iii. The Chairman, Karnataka State Pollution Control Board to file periodical progress report to the Tribunal, once in three months along with the water quality analysis so as to ascertain the improvement caused on account of the implementation of the recommendations made by the respective departments and if they found any gap in spite of the implementation of the recommendations, also directed to submit further remedial measures to be taken by the respective department to resolve the issue permanently when filing the progress report, once in three months.

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pl study and arrange.

एम. मुंडा
4/4/2022

Smt PKS

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

दूरभाष/Tel : 43102030, 22305792, वेबसाइट/Website : www.cpcb.nic.in

- iv. The Central Pollution Control Board (CPCB), Regional Office, Bengaluru as well as Regional Office, Chennai to monitor implementation of the recommendations made by the Joint Committee and if there is any violation or non-implementation of the directions, also directed to issue necessary direction to the defaulting Department (s) to comply with the recommendations of the Joint Committee and on their failure, to take appropriate action against the concerned Department (s) in accordance with law.

WHEREAS, the Central Pollution Control Board, Regional Directorate, Bengaluru and Chennai filed two progress reports in September, 2021 and January, 2022 and made following observations:

- i. The authority comprising of members viz., Forest, Ecology and Environment Department, Finance Department, Urban Development Department, Minor Irrigation Department, Animal Husbandry or Fisheries Department, Revenue Department, Karnataka State Pollution Control Board, Bengaluru, Bangalore Water Supply and Sewerage Board, Bengaluru, Bangalore Development Authority, Bengaluru, Bruhat Bangalore Mahanagara Palike, Bengaluru are duly responsible for the functions stipulated under the Karnataka Lake Conservation and Development Authority Act, 2014 for improving and monitoring water quality, conserving lake ecology on need basis and to protect them against domestic and industrial pollution.
- ii. Upon reviewing the reports of analysis of water quality of River Thenpennai, the water quality analysis results (as on December 2021) reveal that the water quality falls under Class E as per Designated Best Use Criteria.
- iii. KSPCB has not carried out any random verification of industries located in the catchment of the river and not provided updated information on the list of industries with amount of EC imposed, date of inspection / physical verification with sampling or analysis carried out for the year 2021-22.
- iv. KSPCB has proposed for installation of continuous online monitoring system at the border of Karnataka & Tamilnadu for monitoring quality of water flowing in River Thenpennai and no tangible progress is made till date for installation of Continuous Online Water Quality Monitoring Station at the inter-state boundary by KSPCB within the jurisdiction of Karnataka to ensure that improved quality of water reaches Tamilnadu.

WHEREAS, the Hon'ble NGT vide order dated 17.02.2022 mentioned that, newspaper report published in Dinamalar dated 07.10.2021 under the Caption ("Chemical form in Thenpennai River") is nothing but continuation of earlier allegations on the basis of which certain directions have been issued to monitor the issue and remedy the situation.

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WHEREAS, the Hon'ble NGT vide aforesaid order dated 17.02.2022 directed that, Karnataka State Pollution Control Board as well as the other official respondents including Bruhat Bangalore Mahanagara Palike (BBMP), Public Works Department (PWD) to ensure compliance of the recommendations made by the Joint Committee.

WHEREAS, the Central Pollution Control Board, Regional Directorate, Bengaluru held a meeting with the Principal Secretary, Department of Environment, Government of Karnataka along with the concerned line departments, on 28.02.2022 to discuss the status of compliance of the recommendations of the Joint Committee.

NOW, THEREFORE, in exercise of the power conferred under Section 18(1) (b) of the Water (Prevention and Control of Pollution) Act, 1974, the following directions are issued for compliance;

- i. Karnataka State Pollution Control Board (KSPCB) shall issue directions under section 33 (A) of the Water (Prevention and Control of Pollution) Act, 1974 to Bruhat Bangalore Mahanagara Palike (BBMP) and Bangalore Water Supply and Sewerage Board (BWSSB) to ensure stoppage of discharge of untreated sewage.
- ii. KSPCB shall direct BWSSB to ensure continuous monitoring of all STPs for long-term compliance as recommended in the IISc, Bengaluru Report. In case of STPs not covered in IISc report, BWSSB shall be directed to evaluate the performance assessment in a time bound manner.
- iii. KSPCB shall constitute a committee involving BWSSB and IISc, Bengaluru to calculate Environmental Compensation as per the recommendations of the Joint Committee against defaulting STPs, upon finalization of the Report on 'BWSSB STP upgradation Project' by IISc and BWSSB.
- iv. KSPCB shall direct BWSSB to assess the quantity of sewage generated, gap analysis, sewage treated in entire Bengaluru and the sewage that remains untapped due to absence of sewerage networking or other means.
- v. KSPCB shall direct BWSSB to provide analysis of water quality of stipulated monitored in all the inlet and outlet of STPs associated with River Thenpennai and provide underground sewerage system to cover the entire sewage in the catchment area of the river and bridge the treatment gap along with the enforcement of consent management in line with standards for sewage treatment.

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- vi. KSPCB shall carry out random verification of industries located in the river Thenpennai basin and provide updated information on the list of industries, date of inspection / physical verification with sampling or analysis carried out from 2021-22 onwards, including amount of EC imposed in view of the observed violations.
- vii. KSPCB as a member of the Karnataka Lake Conservation and Development Authority constituted under Section (3) of the Karnataka Lake Conservation and Development Authority Act, 2014 shall take proactive measures to coordinate with Lakes Department, BBMP and BWSSB for compliance with regard to flow measurements and monitoring of water quality in order to maintain/restore the water quality in lakes/tanks associated with River Thenpennai.
- viii. KSPCB shall direct lakes department, BBMP to maintain pristine water quality and to provide analysis report of water quality monitored in the lakes/tanks flowing into River Thenpennai.
- ix. KSPCB shall install Continuous Online Water Quality Monitoring Station at the inter-state river boundary by KSPCB within Karnataka jurisdiction to ensure that improved quality of water reaches Tamilnadu in a time bound manner.
- x. KSPCB shall prepare a time bound action plan for implementation of the recommendations made by the Joint Committee in its report filed before Hon'ble NGT in November,2020 and ensure its compliance.
- xi. KSPCB shall file Compliance and Progress Report through the Office of Chief Secretary, Government of Karnataka in compliance with Hon'ble NGT order dated 17.02.2022.

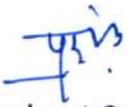
The action taken report along with other actions already taken by KSPCB shall be submitted to the Central Board within 15 days from the date of receipt of aforesaid directions.


(Tanmay Kumar)
Chairman

Contd....5/

Copy to:

1. The Additional Secretary,
Ministry of Environment, Forests and Climate Change
CP-Division, Prithvi Wing, 2nd Floor,
Room No. 216, Indira Paryavaran Bhawan
Aliganj, Jor Bagh Road,
New Delhi – 110003
2. The Joint Secretary,
Ministry of Jal Shakti,
Department of Water Resources, River Development & Ganga Rejuvenation
Shram Shakti Bhawan,
New Delhi-110001.
3. The Joint Secretary,
Ministry of Housing and Urban Affairs,
Nirman Bhawan,
New Delhi- 110011.
4. The Chief Secretary,
Government of Karnataka
Room No;110, Gate II
M S Building, Ambedkar Veedhi
Bengaluru, Karnataka- 560001.
5. The Principal Secretary,
Environment Department
Government of Karnataka
M S Building, Ambedkar Veedhi
Bengaluru, Karnataka- 560001
6. Regional Director,
Central Pollution Control Board
Regional Directorate (South)
1st Floor, Nisarga Bhawan, A-Block,
Thimmaiah Road, 7th D cross, Shivnagar,
Opp Pushpanjali Theatre, Bengaluru-560079
7. DH, UPC-I Division, CPCB, Delhi
8. DH, IPC-VII Division, CPCB, Delhi
9. DH, IT Division, CPCB
10. DH, Law Division, CPCB


(Prashant Gargava)
Member Secretary





केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

NGT MATTER (On Priority)

File No. Tech(39)/Legal(NGT)/RDS/2021-22

June 15, 2022

To

The Principal Secretary
Department of Forest, Environment & Ecology
Room no. 708, Gate 2, Multi Storied Building
Dr. Ambedkar Veedhi, Bengaluru – 560 001

Sub: Hon'ble NGT, Southern Zone, Chennai order in the matter of O.A. 111 of 2020 (SZ) regarding "Frothing of Chemical Foam in the River Thenpennai" – Compliance

Ref: Orders of Hon'ble NGT, Southern Zone, Chennai dated 27.05.2022
(copy enclosed)

Sir,

In the matter of O.A 111 of 2020, a Suo Motu case registered by the Hon'ble Tribunal, SZ, Chennai on the basis of the newspaper report published in Dinamalar, Chennai City supplement Edition dated 13.07.2020 under the caption "Frothing of Chemical Foam in the River Thenpennai", the issues alleged are large scale foam in Thenpennai River due to untreated chemical effluents discharged from Kelavarapalli Reservoir and residential sewage is also mixed with the water affecting water quality. Para 9 and Para 11 of The Hon'ble National Green Tribunal, Chennai order dated 27.05.2022 passed in the afore-said matter is reproduced below: -

"Para 9: The Central Pollution Control Board is also expected to file a report regarding the implementation of the directions issued on the basis of the Joint Committee report to be carried out by the State of Karnataka and if not, what is the nature of action taken by them as it is seen from the report that the water coming from the reservoir is mixed with contaminated water before it reaches the boundary of Tamil Nadu and in order to monitor the water quality at the boundary before it is being released as suggested by the committee, we directed the State of Karnataka to provide a real time monitoring system to ensure the water quality before it is being discharged and crossing the boundary of the State, so that the menace that has been raised can be remedied.

Para 11: The Chief Secretary, State of Karnataka, the Principal Secretary for Environment and also the Central Pollution Control Board to file a report to this Tribunal on or before 13.07.2022 by e-filing ..."

क्षेत्रीय निदेशालय (दक्षिण) : निसर्ग भवन, ए-ब्लॉक, प्रथम एवं द्वितीय तल, तिममय्या रोड, 7-डी मैन, शिवनगर, बेंगलूरु - ५६० ०७९.

Regional Directorate (South) : " Nisarga Bhawan ", A-Block, 1st & 2nd Floors, Thimmaiah Road, 7th D - Main, Shivanagar, Bengaluru - 560 079.

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ई-मेल / E-mail : cpcbszo@yahoo.com, zobangalore.cpcb@nic.in

प्रधान कार्यालय : परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली- ११० ०३२.

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दूरभाष / Telephone : 011-43102030, Fax : 22305793, 22307078, 22307079, 22301932, 22304948

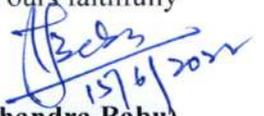
ई-मेल / E-mail : cpcb@nic.in वेबसाइट / Website : www.cpcb.nic.in

- 2 -

In view of the above, it is requested that concerned departments in Government of Karnataka may please be directed to submit compliance status as per enclosed CPCB format (*copy enclosed as Annexure for submitting Status of Compliance to the recommendations of Joint Committee*) along with necessary supporting documents to CPCB for filing Progress Report before Hon'ble NGT, latest by 21.06.2022 to this office.

Also, a meeting is scheduled on 24.06.2022 (Friday) at 4:00 PM at CPCB for deliberations on the issues to be addressed by Nodal officers of various departments in the State, Government of Karnataka. Agenda will be communicated separately to the nodal officers.

Yours faithfully


15/6/2022
(J. Chandra Babu)
Regional Director

Encl. As above



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

NGT MATTER (On Priority)

By E.mail

File No. Tech(39)/Legal(NGT)/RDS/2021-22

June 17, 2022

To

210

The Member Secretary
Karnataka State Pollution Control Board
Parisara Bhavan, #49, Church St,
Bengaluru – 560 001, Karnataka

Sub: Action Taken Report in compliance of Directions under Section 18 (1) (b) of the Water (Prevention and Control of Pollution) Act, 1974 in the matter of O.A. 111 of 2020 (SZ) regarding “Frothing of Chemical Foam in the River Thenpennai”

Ref: CPCB Directions vide File No. A-14011/(OA-111/2020)2022-WQM-I/14763 dated 22.03.2022

Sir,

This has reference to CPCB Directions issued under Section 18 (1) (b) of the Water (Prevention and Control of Pollution) Act, 1974 in the matter of control of “Frothing of Chemical Foam in the River Thenpennai”. Also, it is to inform that CPCB is required to file the compliance status report before Hon'ble NGT, Southern Zone, Chennai in compliance to the order dated 27.05.2022 passed in OA No. 111/2020.

The action taken report of Karnataka SPCB in compliance to the order dated 27.05.2022 passed by Hon'ble NGT in OA No. 111/2020 and point-wise reply in compliance to the aforesaid CPCB directions issued under Section 18 (1) (b) of the Water (Prevention and Control of Pollution) Act, 1974 is yet to be submitted by Karnataka SPCB to enable CPCB for filing the status report before Hon'ble NGT, Southern Zone, Chennai, prior to the next date of hearing scheduled on 13.07.2022.

Also, a meeting is scheduled on 24.06.2022 (Friday) at 4:00 PM at RD, CPCB, Bengaluru for deliberations on the issues to be addressed by Nodal officer(s) of various departments in the State, Government of Karnataka including Karnataka SPCB.

It is requested kindly depute concerned dealing official familiar with the afore-said matter along with the Action Taken Report with the supporting documents for participating in the said meeting and to apprise on the status of action taken by Karnataka SPCB.

Yours faithfully

(J. Chandra Babu)
Regional Director

Encl. As above

क्षेत्रीय निदेशालय (दक्षिण) : निसर्ग भवन, ए-ब्लॉक, प्रथम एवं द्वितीय तल, तिममय्या रोड, 7-डी मैन, शिवनगर, बेंगलूरु - ५६० ०७९.

Regional Directorate (South) : " Nisarga Bhawan ", A-Block, 1st & 2nd Floors, Thimmaiah Road, 7th D - Main, Shivanagar, Bengaluru - 560 079.

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प्रधान कार्यालय : परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली- ११० ०३२.

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ई-मेल / E-mail : cpcb@nic.in वेबसाइट / Website : www.cpcb.nic.in

**Minutes of the Meeting in Compliance with the NGT Order dated
17.02.2022 in the matter of O.A No. 111/2020 regarding
'Frothing of Chemical Foam in River Thenpennai'**

In the matter of O.A No. 111 of 2020 regarding 'Frothing of Chemical Foam in River Thenpennai', Hon'ble NGT vide Order dated 17/02/2022 issued following directions;

"Neither the Karnataka State Pollution Control Board nor the State Government and BBMP had filed their respective progress reports as directed by this Tribunal. Quite unfortunately, we have come across another newspaper report published in Dinamalar dated 07.10.2021 under the Caption ("Chemical form in Thenpennai River") this is nothing but continuation of earlier allegations on the basis of which certain directions have been issued to monitor the issue and remedy the situation.

8. When water is being sent from the reservoir to the neighbouring States, it is intended for multiple purposes including irrigation and drinking. There is a responsibility on the Government which provides the water, to provide the same pollution free so that the neighbouring State beneficiaries can enjoy the same in an effective manner. This responsibility is expected to be carried out by the neighbouring State, namely, the State of Karnataka to see that the water that is being released from the State is pollution free and it is not mixing with any pollutant before it reaches the River on the border. In order to ascertain this aspect only, this Tribunal had directed to provide a monitoring mechanism at both the borders of the State of Tamil Nadu and State of Karnataka so that the quality of water before it is being released to the river can be monitored and necessary mitigative measures can be taken but no such proactive steps have been taken from the side of State of Karnataka and they are not diligent enough to file the respective report showing the nature of steps taken by them as well. If the Chief Secretary and Principal Secretary for Environment of State of Karnataka are not filing the reports as directed by this Tribunal regarding the monitoring mechanism evolved by them to supervise the implementation of directions issued by this Tribunal, then they are directed to appear in person to show cause why action should not be taken against them for non-implementation of the directions issued by this Tribunal as contemplated under Section 25 read with Section 26 and 28 of the National Green Tribunal Act, 2010.

9. Pollution Control Board as well as the other official respondents, who are expected to carry out the directions on the basis of the recommendations made by the Joint Committee including BBMP, PWD, Karnataka Pollution Control Board are directed to submit their respective compliance report on or before 23.03.2022 by e-filing ..."

In compliance with aforesaid Hon'ble NGT order dated 17/02/2022, CPCB, RD, Bengaluru conducted a meeting on 28th February, 2022 at 4:00 PM through video conferencing with the officials from concerned departments in Government of Karnataka and Tamilnadu. List of participants is enclosed as **Annexure-A**.

Bengaluru, Bangalore Development Authority, Bengaluru, Bruhat Bangalore Mahanagara Palike, Bengaluru involved are not proactive in taking sustainable initiatives for monitoring water quality of major tanks/lakes associated with River Thenpennai.

- (ii) No improvement in the water quality monitored in Mugalur and Sokkarasanapalli locations in River Thenpennai. Upon reviewing the reports of analysis of water quality of River Thenpennai, the water quality analysis results (as on December 2021) reveal that the water quality still falls under Class E as per Designated Best Use Criteria.
- (iii) KSPCB has not carried out any random verification of industries located in the river and not provided updated information on the list of industries with amount of EC imposed, date of inspection / physical verification with sampling or analysis carried out for the year 2021-22.
- (iv) Karnataka State Pollution has not informed any updated status or progress on installation of online monitoring system at the border of Karnataka & Tamilnadu for monitoring quality of water flowing in River Thenpennai. However, they informed that the same is proposed to be installed at the border of Karnataka and Tamilnadu.

Sh Vijay Mohan Raj, IFS, Principal Secretary, Department of Forest, Ecology and Environment explained that, efforts are being taken by Government of Karnataka for water quality management in water bodies. Periodical water quality analysis reports of monitoring locations in River Thenpennai have also been furnished to CPCB, RD, Bengaluru. As outflow of Bellandur and Varthur lakes are flowing into River Thenpennai, online water quality monitoring systems are already in place and monthly meetings are also being convened in this regard. He also mentioned that, random verification of industries (R/O) located in the River basin will be carried out by KSPCB in addition to those units, wherein Environmental Compensation and Closure were issued in 2020-21.

Sh Syed Khaja M, SEO, KSPCB informed that with regard to water quality analysis, all lakes/tanks (186 nos.) are monitored by KSPCB and the report along with findings will be submitted to CPCB, RD, Bengaluru.

Sh Navaneeth K L, EE, BWSSB informed that the draft Report on 'BWSSB STP upgradation Project' will be finalized and submitted to KSPCB for further evaluation and review for imposing Environmental Compensation in case of defaulters.

Upon deliberations, the following decisions were taken for further compliance of the Hon'ble NGT Order dated 17.02.2022;

- (i) KSPCB will carry out any random verification of industries located in the river basin and provide updated information on the list of industries with amount of EC imposed, date of inspection / physical verification with sampling or analysis carried out from 2021-22 onwards.

- (ii) Upon finalization of the Report on 'BWSSB STP upgradation Project' by IISc and BWSSB. CPCB, RD, Bengaluru suggested that a committee comprising of BWSSB, IISc and KSPCB needs to be constituted for review and evaluation of the Report on 'BWSSB STP upgradation Project' before assessment of environmental compensation for the defaulters, if any.
- (iii) BWSSB to assess the quantity of sewage generated, sewage treated in entire Bengaluru and the sewage that remains untapped due to absence of sewerage networking or other means.
- (iv) KSPCB needs to ensure that BWSSB provides Analysis of Water Quality monitored in all the STPs associated with River Thenpennai and provide underground sewerage system to cover the entire sewage catchment area of the river and bridge the treatment gap along with the enforcement of consent management in line with standards for sewage treatment.
- (v) KSPCB as a member of the Karnataka Lake Conservation and Development Authority constituted under Section 3 of the Karnataka Lake Conservation and Development Authority Act needs to take proactive measures to coordinate with Lakes Department, BBMP and BWSSB for compliance with regard to flow measurements and monitoring of water quality in order to maintain/restore the water quality in lakes/tanks associated with River Thenpennai.
- (vi) KSPCB shall direct lakes department, BBMP to maintain pristine water quality and provide analysis report of water quality monitored in the lakes/tanks flowing into River Thenpennai.
- (vii) KSPCB shall install Continuous Online Water Quality Monitoring Station at the inter-state river boundary by KSPCB in Karnataka to ensure that improved quality of water reaches Tamilnadu.
- (viii) KSPCB shall prepare a time bound action plan for implementation of the recommendations made by the Joint Committee and ensure compliance thereof.

The official nominations from the concerned departments in Government of Karnataka may be communicated to CPCB, RD, Bengaluru for ensuring compliance of the Hon'ble NGT Order dated 17.02.2022.

Upon detailed deliberation, it was decided in the meeting that the status of compliance on the above will be arranged to be provided to CPCB, RD, Bengaluru. The progress report on behalf of Karnataka in compliance to Hon'ble NGT Order dated 17.02.2022 may be consolidated and filed by Karnataka SPCB through the Chief Secretary, Government of Karnataka before Hon'ble Tribunal on or before 23.03.2022.

The meeting ended with thanking note.

List of Participants

1. Sh Vijay Mohan Raj, Principal Secretary
Forest, Ecology and Environment Department
Government of Karnataka
2. Sh Syed Khaja M, Senior Environmental Officer
Karnataka State Pollution Control Board
Parisara Bhawan, Bangalore
3. Sh Navaneeth K L, Environmental Engineer
BWSSB, Bangalore
4. Dr Senthilkumar M, District Environmental Engineer
Tamilnadu Pollution Control Board
Hosur, Tamilnadu
5. Assistant Executive Engineer, PWD
Thiruvannamalai Circle, Tamilnadu
6. Smt Selvi P K
Scientist D, CPCB
Regional Directorate, Bengaluru

Minutes of the Meeting in Compliance with the NGT Order dated 27.05.2022 in the matter of O.A No. 111/2020 regarding 'Frothing of Chemical Foam in River Thenpennai'

In compliance to the Hon'ble NGT order dated 27/05/2022 passed in O.A No 111 of 2020 regarding 'Frothing of Chemical Foam in River Thenpennai', CPCB, RD, Bengaluru held a meeting on 24th June, 2022 at 4:00 PM with the officials from concerned departments in Government of Karnataka and Tamilnadu to take a stock on Action Taken for ensuring compliance to the Hon'ble NGT directions. List of participants is enclosed as *Annexure-A*.

Sh J Chandra Babu, Regional Director, CPCB, Bengaluru extended warm welcome to all the officials from various departments of Government of Karnataka and Tamilnadu present in the meeting. It was informed that, CPCB is required to file the progress report in compliance of the aforesaid NGT order dated 27.05.2022. He requested all the departments to provide Action Taken Report on the Compliance Status of the Recommendations of the Joint Committee in the format circulated to the departments vide email dated 15th June 2022. Thereafter, he requested Smt P K Selvi, Sc D to brief on the Hon'ble NGT directions.

Smt P K Selvi, Sc D, Regional Directorate, CPCB, Bengaluru briefed the directions of the Hon'ble Tribunal vide aforesaid order dated 27/05/2022 as well as recommendations of the joint committee constituted by Hon'ble NGT.

Sh Yatish, SEO, KSPCB, Bengaluru informed the following status of compliance to the actions points related to improvement of water quality of River Thenpennai, random inspection of industries in the river catchment and online monitoring of water quality in the interstate border;

- i. ATR against directions under Section 33A of the Water (Prevention and Control of Pollution) Act, 1974 issued to various agencies in the Government of Karnataka for violations related to discharge of untreated effluent / sewage to river Thenpennai will be submitted by 30/06/2022.
- ii. BWSSB to apprise the findings of the Final Report on BWSSB STP upgradation project to KSPCB for calculation of Environmental Compensation on defaulters.
- iii. Water Quality Assessment Report of the monitoring stations installed on River Thenpennai and water quality of the lakes/tanks falling in the catchment of River Thenpennai under preparation by KSPCB.
- iv. Online monitoring station installed near Mugalur bridge in the interstate border on River Thenpennai and the data is being acquired from third party by KSPCB. Status report awaited from KSPCB.

- v. Random inspection of industries, STPs and RWA Apartments were carried out in the catchment of river Thenpennai for the year 2021-22 and report awaited from KSPCB.

Sh Manjunath Mirangan J C, AEE, BWSSB, Bengaluru informed the following status of compliance to the actions points related to improvement of water quality of River Thenpennai and monitoring of water quality of treated water discharged into lakes/tanks in Karnataka;

- i. Final Report on BWSSB STP upgradation project prepared and review of the gap in the performance of STPs is under preparation in association with KSPCB. Environmental Compensation (EC) shall be imposed on the defaulters in case of gap in treatment of domestic sewage by the STPs.
- ii. Clean up of storm water drain are being carried out along with curtailing of illegal sewage / effluent discharges into the drains. These projects namely, K-100 and K-200 are being reviewed by the Chief Secretary, Government of Karnataka.
- iii. Water quality of treated water from STPs are being regularly monitored through Real Time Monitoring Systems (RTMS) and Real Time Water Quality Monitoring Stations (RTWQMS) connected with KSPCB server.

Sh R Venkatesan, DEE, TNPCB mentioned that the activities related to solid waste management and sewage management from 13 villages in the catchment of River Thenpennai within jurisdiction of Tamilnadu would be completed within one month and the same would be provided to CPCB by 30/06/2022.

After detailed deliberation, the following decisions were taken in the meeting;

- i. BDA, BBMP, Lake Department and Minor Irrigation, Department of Karnataka neither attended the meeting nor responded or provided desired information to CPCB till today.
- ii. KSPCB to provide Action taken report on the aforesaid actions taken along with point-wise reply in compliance to the Directions dated 22.03.2022 issued under Section 5 of Environment (Protection) Act, 1974 by CPCB.
- iii. BWSSB to provide Action Taken Report on the above activities undertaken along with the details of STPs in K&C and Hebbal valley, BWSSB STP upgradation projects be provided with justification. Further, gap in treatment of sewage generated in Bengaluru be assessed along with Proposed STP projects in the K&C and Hebbal Valley be provided by 30/06/2022.
- iv. The review of performance assessment of STPs based on the Final Report on BWSSB STP upgradation project jointly by KSPCB & BWSSB for calculation of Environmental Compensation (EC) on the defaulters.
- v. Information related to control of pollution sources including discharge from Automobile Service stations, Dobhi Ghats in Bengaluru along river Thenpennai and a policy for reuse of treated water be provided by KSPCB and BWSSB.

- vi. ATR of BDA, BBMP & Lake department in Compliance to Hon'ble NGT directions dated 27/05/2022 in O.A No. 111/2020 to be submitted.
- vii. The above information shall be arranged to be provided by concerned agencies on or before **30.06.2022 (Wednesday)** so as to enable CPCB, RD, Bengaluru in filing the progress report before Hon'ble NGT, SZ, Chennai.

Meeting ended with Vote of Thanks to the Chair.

List of Participants

S No	Name & Organization	Contact Number	E mail
1.	Sh J Chandra Babu Regional Director CPCB, Regional Directorate Nisarga Bhawan, Shiva Nagar Bengaluru	-	jcb.cpcb@nic.in
2.	Sh Yatish Senior Environmental Officer Karnataka State Pollution Control Board Parisara Bhawan, Church Street, Bengaluru	9845311406	
3.	Sh Manjunath Miragan J C, Assistant Environmental Engineer Cauvery Bhavan, Kempegowda Road, Bengaluru	9743371110	miraganjc.manjunath@gmail.com
4.	Sh R Venkatesan District Environmental Engineer Tamilnadu Pollution Control Board Hosur, Tamilnadu	8651042207	deehosur@gmail.com
5.	Sh V Rangasamy Assistant Engineer Tamilnadu Pollution Control Board Hosur, Tamilnadu	8870470643	-
6.	Sh V Deenadayalan Assistant Engineer Tamilnadu Pollution Control Board Hosur, Tamilnadu	8870470670	-
7.	Smt P K Selvi Scientist D CPCB, Regional Directorate Nisarga Bhawan, Shiva Nagar Bengaluru	9868166753	pkselvi.cpcb@nic.in



ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ
Karnataka State Pollution Control Board

"ಪರಿಸರ ಭವನ", 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ.49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು-560001, ಕರ್ನಾಟಕ ರಾಜ್ಯ ಭಾರತ
"Parisara Bhavan", 1st to 5th Floor, # 49, Church Street, Bangalore - 560 001, Karnataka State, India

No. PCB NGT OA 111 2020 / 2450

Date:

08 JUL 2022

To
The Registrar,
National Green Tribunal,
Southern Zone Bench Kalas Mahal,
Kamarajar Salai, PWD Estate, Chepauk,
Triplicane, Chennai - 600005.



Respected Sir,

Subject: Action taken report related to South Pinakini (Thenpennai) River for the quarter ended on 30.06.2022 (01.04.2022 to 30.06.2022).

Reference: Hon'ble NGT Order dated: 27.05.2022 in the matters related to OA No. 111/2020.

Please find enclosed herewith action taken report for the quarter ended on 30.06.2022 (01.04.2022 to 30.06.2022) in the matters related to OA No. 111 of 2022 pertaining to South Pinakini (Thenpenai) river. This is for kind information and consideration.

Yours faithfully

Member Secretary

Copy to:

1. Regional Director, CPCB Regional Directorate (South), Nisarga Bhavana, 7th D Main, Thimmaiah Road, Shivanagara, Bengaluru 560 079, for information.
2. Chief Environmental Officer-1, KSPCB, for kind information.
3. Chief Environmental Officer-2, KSPCB, for kind information.

o/c

**Action Taken Report for the Quarter Ended on 30.06.2022
(Period 01.04.2022 to 30.06.2022) as per the Honorable NGT Order dated 27.05.2022.**

Sl No.	Action points	Present status	Proposed action by the Joint committee	Actions taken by KSPCB
1	Study of Performance of evaluation of sewage Treatment Plants in Bangalore by engaging a CSIR Institute.	<i>The performance of the STPs located in Koramangla and Challaghatta, Hebbal Valleys are being assessed based on its capacity utilized and characteristics by BWSSB. However, the treated waste water quality needs to be ascertained. Further, Water quality of water (treated water by BWSSB) diverted for irrigation to Chikkaballapura and Kolar Districts through Minor irrigation Department is required to be assessed. Therefore, there is need to conduct audit of the data of quantity of sewage generation, Sewage treatment capacity installed vs actually operated and treated wastewater characteristics.</i>	<i>BWSSB may engage a CSIR Institute like CLRI or NEERI or others for evaluating performance of STPs located in K&C and Hebbal valleys. (viz., there are 32 STPs in Bangalore including 21 STPs in Koramangla & Challaghatta and Hebbal Valleys). The same may be supervised by KSPCB. The final report may be submitted to KSPCB for review.</i>	KSPCB had addressed letter to BWSSB on 14.06.2022, requesting them furnish action taken by them in improving the performance of their STPs located in Hebbal valley and K & C valley, as per evaluation report submitted by IISc to them. As a response BWSSB has submitted their reply letter dated: 22.06.2022 delineating action taken by them in this regard. Copies of the KSPCB & BWSSB letters are enclosed as Annexure-1
2			<i>The outcome of the performance study of STPs may be submitted as Status of Compliance of the State Functionaries of Karnataka to the Monitoring Committee constituted in the matter of O.A 125/2017, for review and reporting.</i> <i>Among the industries those that are Red/Orange category (small, medium and large) with treated effluent discharge option as surface water/sewer</i>	The Monitoring Committee constituted in the matters related to OA No. 125/2017 is no more existing with quashing of the case on 12.03.2021. The Jurisdictional Offices of KSPCB having Thenpennai River catchment area have inspected 10 red category industries and 7 orange category industries. 08 number of effluent

			<p><i>drain/others (which includes industries having ZLD) in River basin of Thenpennai be monitored for effluent characteristics by concerned SPCBs, so as to ascertain the quality of treated effluent discharge as per the Consent Conditions of SPCBs. The details of the compliance status and action taken report be placed in public domain (TNPCB and KSPCB website).</i></p>	<p>samples have been collected out of which 3 are non conforming and notices were issued to such organizations by the concerned Jurisdictional Regional Offices.</p> <p>Annexure -2</p>
3	<p><i>Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random verification.</i></p>	<p><i>Performance evaluation of STPs by BWSSB and random inspection industries is required to be carried out by KSPCB/TNPCB with specific reference to River Thenpennai.</i></p>	<p><i>EC be calculated and imposed based on the Performance Evaluation of STPs and Random Verification of Grossly Polluting Industries.</i></p> <p><i>Calculation of EC by the three member Committee comprising of CPCB, TNPCB and KSPCB, after submission of Reports by the concerned authorities (BWSSB, KSPCB, TNPCB)</i></p>	<p>KSPCB has imposed EC of Rs. 288.80 Cr. On 496 Nos of Apartment/Commercial establishment and Rs. 1.40 Cr. has been collected so far.</p> <p>Joint Committee has been constituted by KSPCB on 25.04.2022 for Calculating Environmental Compensation in respect of Defaulting BWSSB STPs.</p> <p>Further, KSPCB has issued Memo to ROs in this regard vide No. 1895, dated: 14.06.2022. As a result Rs. 48.076 Cr EC has been levied on various BWSSB STPs. List enclosed as Annexure-3</p>

4	<i>Regular Water Quality Monitoring at important locations.</i>	<i>Water Quality is being monitored by KSPCB by installing real time monitoring stations in Bellandur and Varthur. Further, Mugulur Bridge and Sokkarasanapalli is being monitored under National Water Quality Monitoring Programme.</i>	<i>The trend of water quality and its improvement at major confluence points may be monitored for the year 2021-22 on a monthly basis and a report be submitted to CPCB to ensure the quality of water flowing in River Thenpennai.</i>	KSPCB has installed continuous online water quality monitoring system at the border of Karnataka & Tamilnadu near Mugulur Bridge for monitoring quality of water flowing in River Thenpennai. The water quality report for the months of April, May and June 2022 is enclosed herewith (Annexure-4) .
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✓ *Annu Kurup*
Senior Environmental Officer

ಫ್ಯಾಕ್ಸ್ / Fax : 080-25586321

ಈಮೇಲ್ / Email : ho@kspcb.gov.in

ವೆಬ್‌ಸೈಟ್ / Website : http://kspcb.gov.in



080-25581383, 25589112
080-25589113, 25589114

ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ
Karnataka State Pollution Control Board

"ಪರಿಸರ ಭವನ", 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ
"Parisara Bhavan", 1st to 5th Floor, # 49, Church Street, Bangalore - 560 001, Karnataka State, India

No. PCB NGT OA 111/2020 / 1894

Date: 14 JUN 2022

To
Mr. B. C. Gangadhar,
Chief Engineer, BWS & SB,
Wastewater Division,
5th Floor, Cauvery Bhavana,
KG Road, Bengaluru 560 009.

ರವಾನಿ ಕಳುಹಿಸಿ

Sir,

Subject:

Furnishing progress report in respect of National Green Tribunal matter related to South Pinakini River – Regarding.

References:

1. National Green Tribunal, Southern Zone, Chennai, Suo Moto case OA No 111 of 2020.
2. Joint Committee Report of November 2020.
3. NGT Order dated 28.06.2021.

You are aware that in the matter of Original Application No. 111 of 2020 related to South Pinakini River, a joint Committee had been constituted as per the direction of the National Green Tribunal for rejuvenating the said river. As per the NGT Order dated: 28.06.2021, the progress report on the recommendations made by the Joint Committee shall have to be filed before the Tribunal every quarter And as per the recommendations of the Committee BWS & SB has engaged IISc for evaluation of their STPs located in Hebbal & K&C Valleys.

In view of the above you are here by requested to furnish the progress made by BWS & SB in improving the performance of the said STPs for the period up to June 2022, as per the suggestions made in the STP upgradation report submitted by IISc. As per the suggestions of the Joint Committee BWS & SB is also required to submit final report to the KSPCB on the action initiated on the recommendations of IISc Report.

o/c
Yours faithfully


Senior Environmental Officer

Email: cewwm@bwssb.gov.in

Ph: 080-22945106



ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಮಂಡಳಿ

BANGALORE WATER SUPPLY & SEWERAGE BOARD
O/o Chief Engineer(WWM), 5th Floor, Cauvery Bhavan, Bangalore-560009.

No. BWSSB/CE(WWM)/ACE(WWM)-1/DCE(WWM)/TA-1/ 546/2022-23 Date : 22/06/22

To

Member Secretary
Karnataka State Pollution Control Board
Parisara Bhavan, 1st to 5th Floor,
49, Church Street,
Benagaluru -560001.

Sir,

Sub: Visit of Chairperson Hon'ble National Green Tribunal, Principal Bench,
New Delhi to Bengaluru from July 17-24, 2022 – Reg

Ref: No.KSPCB/CEO-1/2022/94/Dt:09-06-2022

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With reference to the above as desired in the letter cited at reference please find herein enclosed a brief note on the works of BWSSB for your information and needful action.

Yours faithfully,


Chief Engineer(WWM)(I/C)
BWSSB.

Encl: As above

Agenda Points for the meeting with Chairperson, Hon'ble NGT, Principal Bench, New Delhi

At present Bangalore city is receiving 1460 MLD of water from all the Cauvery water supply schemes. The water extracted through public and private borewell is 400 MLD. The total water consumed by Bangalore is 1860 MLD. The total **Sewage generated** is about 80% of the total water supplied i.e., **1488 MLD** which is generated from three Major Valleys.

The capacity of the Sewage treatment plants, Sewage generated and Sewage treated in Bangalore city is tabulated below:

Total Capacity in MLD	Total Sewage Generated in MLD	Total Sewage Treated	
		in MLD	%
1527.50	1488.00	1274.15	85.63

After commissioning of the CWSS V Stage Work during 2024 additional 775 MLD of water will be supplied to newly added 110 villages of Bangalore City. The total Water supplied to Bangalore will be 2175 MLD. The total **Sewage generated** is about 80% of the total water supplied i.e., **1740 MLD** which is generated from three Major Valleys.

Sl. No	Name	Capacity in MLD				Sewage Generated in 2024 in MLD
		Existing	Under Construction	Proposed	Total	
1	K&C Valley	664.50	39.00	0.00	703.50	1740.00
2	V-Valley	576.00	53.00	29.00	718.00	
3	Hebbal Valley	287.00	44.00	130.00	461.00	
	Total	1527.50	136.00	159.00	1882.50	

- **Sewage entering into the Storm Water Drains from newly added 110 villages to BBMP jurisdiction.**

The sewage network and STP's in newly added 110 villages are not yet provided. Hence the sewage generated in those area is entering into Storm water drains. The Sewage flow from the 110 Villages will be augmented after completion of the works taken up under CWSS 5th stage under JICA funding's. At present laying of

lateral pipes, submains, trunk mains and construction of STPs are in progress which are planned to complete by 2024.

- **Non availability of Buffer zones to access the Sewage network inside Storm Water Drains for maintenance.**

BWSSB had planned to link the sewage lines to the STPs to increase the flow to the plants to its designed capacities. Accordingly, BWSSB has taken up and completed linking works to stop the sewage entering the lakes. The completion of STP's has enabled BWSSB to arrest wastewater directly flowing to lakes.

Further, apart from sewage generated from 110 villages area, around 5% of the sewage is not possible to arrest which is entering the lake diversion channel due to site constraints and non-availability of buffer zones for carrying out the routine desilting works of the sewer lines which are running in the SWDs. In most of the buffer zones the buildings have been constructed and it is not possible to deploy sewer cleaning machines for carrying out the routine cleaning of such sewer lines.

In view of difficulties and practical problems and more site constraints and in such places the competent authority shall have to provide any alternative land for carrying out the works of shifting of sewer lines on either side of the drains in the buffer zones. In this regard several meetings were conducted with the engineers of BWSSB, BBMP, BDA and Consultants and it was decided to highlight the issue to other stakeholders and to government for further directions.

In many locations the encroachments and non-availability of space on either side of the SWD, the work of shifting of sewer lines is not possible from SWDs. Thus, it is essential for the stake holders to provide proper space on either sides of SWD to maintain the sewer lines and to lay the sewer lines outside the SWD to arrest the sewage flowing in SWD's to the sewer network.

The sewers which were laid inside the SWDs in K&C Valley is 50.37 kms.
V Valley is 84 Km and Hebbal Valley is 18 Km

BWSSB will take up similar Projects such as K100 or DTSS, etc. in phased manner to arrest the remaining sewage flowing in SWD.

- **Upgradation of existing STPs**

The work of Design, Upgradation and Rehabilitation of existing 248 MLD capacity Used Water Treatment Plants at K&C Valley, Bengaluru including Commissioning,

Operation & Maintenance for a period of 5 years along with O&M during Design, Upgradation and Rehabilitation period has been entrusted to M/s. SUEZ India Pvt Ltd on tender basis with awarded cost of INR 610.50 Crore (Work Value INR 494.37 + 2 year O&M cost INR 14.36 Crore plus 5 year O&M INR 101.76 Crore) with the date of commencement and date of completion as 27-04-2022 and 26-04-2024 (24 Months duration) respectively. The project is having 24 Months O&M during Construction and 60 Months O&M post construction.

Further as per the orders of the Hon'ble National Green Tribunal in O.A. No.1069/2018 it is required for the Board to take up similar upgradation works of the other old existing 20 wastewater treatment plants of the City. In the upgradation works the plant will be complied to BNR Removal and effluent parameters will be complied as per the directions of the Hon'ble NGT. Further, sludge handling structures will be added to treat the generated sludge.

The total capital cost for upgradation of all these 20 plants will be Rs.1411.00 crore which includes physical contingencies, provisional sum, PMC and escalation charges. In the Budget speech of Hon'ble Chief Minister for the year 2022-23 in the Joint session it was mentioned that Rs.1500.00 crore have been allotted for the upgradation works of wastewater treatment plants of the city. The Proposal have been submitted to Govt. of Karnataka for approval and seeking funds.


~~Chief Engineer (WWM)~~



Annexure-2

SI No	Name & Address of the industry	Size & category	Number of effluent samples collected during inspection
1	Kalyani Motors Pvt. Ltd., Sy. No. 129/4, Kalyani Platina Tech Park, Kundalahalli Village, Bengaluru 560 066.	MO	The treated wastewater is recycled back for washing of vehicles. Hence, the sample not collected.
2	M/s. Exxon Mobil Company India Private Limited, Plot No. 05, Road No. 8, EPIP, Whitefield, Bangalore Urban District, Bangalore – 560 066.	LR	Sewage is being disposed in to Septic tank and Soak pit
3	Goodrich Aerospace Services Pvt Ltd Sy No. 14/1, 14/2 & 15/1 Maruthi Indl Estate, Hoody Village, K.R.Puram, B'lore-48 Bangalore East Taluk	LR	01 (Collected from STP) Non-conforms to the prescribed standards
4	Bioplus Life Sciences Pvt Ltd, Sy No.10-1a, Hoodi VilageOpp Bhagini Restaurant, KR.Puram Hobli Bangalore East Taluk	LO	Sewage is being disposed in to Septic tank and Soak pit
5	HAL Foundry & Forge Division, Sy No. 93 to 102, HAL (BC), P.B.No.1791 Vimanapura (PO), Old Airport Road Bangalore East Taluk	LR	02 (Collected from STP & ETP) Both Conforms to prescribed Standards
6	Grindwell Norton Ltd, Sy No. 110, Devanahalli Road, Opp. Old Madras Rad, Bangalore East Taluk	LO	01 (Collected from ETP) Conforms to prescribed Standards
7	M/s Arna Dairy, Sy No. 80/3, Kyalasanahalli Village, Kothnur Post, KR puram Hobli, Bengaluru East Taluk	SO	02 (Collected on 31/05/2022 as per Water Act, 1974 at 1) Treated trade effluent collected from outlet of ETP & 2) Partially treated trade effluent collected from the open drain being discharged into stream)

8	Reliance Jio Infocomm Limited No. 1155, 3rd wing Block-C, HM tech park, Hope farm circle, Whitefield, Bengaluru	LR	01 (Collected from Common STP of HM Techpark at Site no.12/1B & 13/1A Pattandur Agrahara village, Whitefield, K.R.Puram hobli, Bengaluru East) Non-Conforms to prescribed Standards
9	M/s Baxter Innovations And Business Solution Pvt. Ltd., - Prestige Shantiniketan located at Tower B, 7th Floor, Crescent - 3 & 4 tower of Prestige Shantiniketan, Sy. No.70,71,72,73,74,77 & 78 of Sadaramangala and Sy. No. 129 & 130 of Hoodi Village, K. R. Puram Hobli, Bengaluru East Taluk Bengaluru	LO	Sewage is being treated in Common STP of Prestige Shantiniketan & trade effluent is being disposed to CETP
10	Molex India Limited., Plot No.6A, Sadaramangala Indl Area, Kadugodi Post, Bengaluru -560 067	LR	01 (Collected from STP) Non-conforms to the prescribed Standards
11	Ecron Acunova Pvt Ltd, SJR I Park, Hoody Village EPIP, K.R.Puram, Whitefield Bangalore East Taluk	LR	Sewage is being treated in Common STP of SJR I Park
12	Ion Exchange Service Limited, No. C-72 & 83, Devasandra Indl Area TI Ancillary Indl Estate Bangalore East Taluk	SR	The trade effluent is being handing over to authorized CETP.
13	ISRO Satellite Integration and Establishment, Sy No 96 to 99, 105 to 116, 147 & 148, Karthik Nagar, Near Doddanekundi, Marathahalli Airport, Whitefield Road, ISRO Satellite Centre, Group head, C and MG, Old Airport Road, Bengaluru 560 017	LR	01 (Collected from STP) The report is awaited

14	HAL Airport Services Centre, Gate No.30,Vimanapura Post, HAL, Bangalore East Taluk	LO	Not collected the samples. Because the sewage is being treated in the Common Sewage Treatment Plant located at HAL, FMD, Post Box No. 1730, Vimanapura Post, Bengaluru East Taluk, Bengaluru.
15	Universal Flexible Private Limited, No.2c, 4th Cross, dyvasandra Industrial Area,Whitefield Road, Bangalore East Taluk	LR	during inspection ETP has been dismantled. Now sought for change of category from Red to Green.
16	Krishna Industries, Sy. No. 115, Devasandra Indl Area, Whitefield Road, Bangalore East Taluk	SR	The trade effluent is being handing over to authorized CETP.
17	M/s. Wipro GE Healthcare Private Limited (Formerly Known as M/s GE Medical Systems (India) Pvt. Ltd.), Plot No. 122 (Part-1), Export Promotion Industrial Park, Whitefield, Bangalore – 560 066	LO	01 (Collected from STP) The analysis report is awaited

Annexure-3

Information on Environmental Compensation levied and its status

Sl. No	Regional Office	Number of BWSSB STP's	Environmental Compensation levied	Remarks
1	RO, Bengaluru City South	2	3,22,50,000/-	Yet to collect
2	RO, Bommanahalli	6	19,11,00,000/-	Yet to collect
3	RO, Hoskote	1	2,35,37,500/-	Yet to collect
4	RO, Yalahanka	6	9,03,00,000/-	Yet to collect
5	RO, Mahadevapura	3	8,62,20,000/-	Yet to collect
6	RO, Bengaluru City East	2	5,73,60,000/-	Yet to collect

Annexure- 4

Dakshina Pinakini River Mugalur Bridge-2022-23

Sl. No	Parameters	Units	05.04.2022	10.05.2022	09.06.2022
1	pH@25C		6.9	6.9	7.1
2	Temperature	C	25	25	25
3	Conductivity @25 ⁰ C	us/cm	1273	1446	1087
4	Total Coliform	MPN/100ml	540x10 ⁵	540x10 ⁵	540x10 ⁵
5	Fecal Coliform	MPN/100ml	39x10 ⁵	63x10 ⁵	33x10 ⁵
6	Dissolved oxygen	mg/L	BDL	3.4	1.8
7	BOD	mg/L	146	16	29
8	COD	mg/L	380	172	192
9	Nitrates as N	mg/L	6.54	4	4
10	Ammonia as N		22	25	23
11	Ammicals Nittrogen NH4-N	mg/L			
12	Turbidity	mg/L	46.4	13.9	18
13	Total Hardnees as CaCO3	mg/L	300	240	232
14	Calcium as CaCO3	mg/L	152	132	120
15	Magnesium as CaCO3	mg/L	148	108	112
16	Chloride as Cl	mg/L	204	148	128
17	Sodium as Na	mg/L	142	112	94
18	potassium as K	mg/L	11	24	22
19	Sulphate as SO4	mg/L	34	20	13
20	P-Alkalinty as CaCO3	mg/L	Nil	Nil	Nil
21	T-Alkalinty as CaCO3	mg/L	460	292	280
22	TDS	mg/L	866	694	750
23	Total Phoshate as P	mg/L	0.5	BDL	1
24	Fluoride as F	mg/L	0.18	BDL	0.23
25	Boron as B	mg/L	BDL	BDL	BDL
26	Bicarbonate(HCO3)	mg/L	460	292	
27	Carbonate(CO3)	mg/L	Nil	Nil	Nil
28	Total Chromium as Cr	mg/L	0.022		
29	Cadmium	mg/L	0.004		
30	Copper	mg/L	0.075		
31	Lead	mg/L	0.012		
32	Nickel	mg/L	0.044		
33	Zinc	mg/L	0.131		
34	Iron	mg/L	3.433		
35	Manganese	mg/L	0.517		
36	Sodium absorpition ratio				
37	Fecal Streptococi	mg/L			
	INFERENCE		Class"E"	Class"E"	Class"E"



ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ
Karnataka State Pollution Control Board

"ಪರಿಸರ ಭವನ", 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ.49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು-560001, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ
"Parisara Bhavan", 1st to 5th Floor, # 49, Church Street, Bangalore - 560 001, Karnataka State, India

No. PCB NGT OA 111 2020 2250

Date: 02 JUL 2022

To
The Member Secretary,
Central Pollution Control Board,
Parivesh Bhavan, East Arjun Nagar,
Delhi-110 032.

B
ರವಾನಿರಲಾಗಿವೆ

Sir,

Subject: Action taken report related to South Pinakini (Thenpennai) River.

Reference: CPCB letter No. A-14011/OA-111/2020/2022-WQM-1, dated: 22.03.2022.

Please find enclosed herewith action taken report in respect of Directions issued by the CPCB under sec 18(1) (b) of the Water (Prevention and Control of Pollution) Act, 1974 pertaining to South Pinakini (Thenpennai) River in the matters related to NGT OA No. 111 of 2020. This is for kind information.

Draft Approved by Member Secretary

Yours faithfully

Encl: As above

Sd/-

Member Secretary

Copies to:

1. Technical Officer to Chairman informing to bring the matter to the kind notice of the Chairman.
2. Regional Director, CPCB, Nisarga Bhavana, 7th D Main, Thimmaiah Road, Shivanagara, Bengaluru 560 079, for information.

O/C

Senior Environmental Officer

K

Action Taken Report pertaining to South Pinakini (Thenpennai) River

Sl No	CPCB Directions	Compliance
1	Karnataka State Pollution Control Board (KSPCB) shall issue directions under Section 33 (A) of the Water (Prevention and Control of Pollution) Act, 1974 to Bruhat Bengaluru Mahanagara Palike (BBMP) and Bangalore Water Supply and Sewerage Board (BWSSB) to ensure stoppage of discharge of untreated sewage.	KSPCB has issued Directions to (Bruhat Bengaluru Mahanagara Palike) BBMP in this regard vide letter No. 887, dated: 10.05.2022.
2	KSPCB shall direct BWSSB to ensure continuous monitoring of all STPs for long-term compliance as recommended in the IISc, Bengaluru Report. In case of STPs not covered in IISc report, BWSSB shall be directed to evaluate the performance assessment in a time bound manner.	KSPCB has issued Directions to (Bangalore Water Supply and Sewerage Board) BWSSB in this regard vide letter No. 886, dated: 10.05.2022.
3	KSPCB shall constitute a committee involving BWSSB and IISc, Bengaluru to calculate Environmental Compensation as per the recommendations of the Joint Committee against defaulting STPs, upon finalization of the Report on BWSSB STP upgradation Project' by IISc and BWSSB.	Joint Committee has been constituted vide Memorandum No. 530, dated: 25.04.2022
4	KSPCB shall direct BWSSB to assess the quantity of sewage generated, gap analysis, sewage treated in entire Bengaluru and the sewage that remains untapped due to absence of sewerage networking or other means.	KSPCB has issued Directions to (Bangalore Water Supply and Sewerage Board) BWSSB in this regard vide letter No. 886, dated: 10.05.2022.
5	KSPCB shall direct BWSSB to provide analysis of water quality of stipulated monitored in all the inlet and outlet of STPs associated with River Thenpennai and provide underground sewerage system to cover the entire sewage in the catchment area of the river and bridge the treatment gap along with the enforcement of consent management in line with standards for sewage treatment.	KSPCB has issued Directions to (Bangalore Water Supply and Sewerage Board) BWSSB in this regard vide letter No. 886, dated: 10.05.2022.
6	KSPCB shall carry out random verification of industries located in the river Thenpennai basin and provide updated information on the list of industries, date of inspection / physical verification with sampling or analysis carried out from 2021-22 onwards, including amount of EC imposed in view of the observed violations.	Regional Offices of KSPCB are conducting inspection of industries and collecting samples of treated effluents periodically. In this regard a Memo has been addressed to the Jurisdictional Regional Offices connected with South Pinakini (Thenpennai) River catchment area, informing to furnish the details of

		inspections carried out, samples collected & action taken at their end in respect of non compliance observed if any.
7	KSPCB as a member of the Karnataka Lake Conservation and Development Authority constituted under Section (3) of the Karnataka Lake Conservation and Development Authority Act, 2014 shall take proactive measures to coordinate with Lakes Department, BBMP and BWSSB for compliance with regard to flow measurements and monitoring of water quality in order to maintain/restore the water quality in lakes/tanks associated with River Thenpennai.	KSPCB is coordinating with Lake Conservation and Development Authority, BBMP & BWSSB for compliance with regard to flow measurement and monitoring water quality in order to maintain or restore water quality in lakes and tanks associated with river South Pinakini (Thenpennai).
8	KSPCB shall direct lakes department, BBMP to maintain pristine water quality and to provide analysis report of water quality monitored in the lakes/tanks flowing into River Thenpennai.	KSPCB has issued Directions to (Bruhat Bengaluru Mahanagara Palike) BBMP in this regard vide letter No. 887, dated: 10.05.2022.
9	KSPCB shall install Continuous Online Water Quality Monitoring Station at the inter-state river boundary by KSPCB within Karnataka jurisdiction to ensure that L improved quality of water reaches Tamilnadu in a time bound manner.	Online water quality monitoring station near Mugulur Bridge to measure the water quality parameters of river South Pinakini has already been installed on 19.03.2022. The work related to displaying the water quality data acquired, on the websites of CBCP, TNPCB & KSPCB in open domain is under progress.
10	KSPCB shall prepare a time bound action plan for implementation of the recommendations made by the Joint Committee in its report filed before Hon'ble NGT in November 2020 and ensure its compliance.	Recommendations of the Joint Committee are being implemented by way of actions mentioned above.
11	KSPCB shall file Compliance and Progress Report through the Office of Chief Secretary, Government of Karnataka in compliance with Hon'ble NGT order.	KSPCB is filing compliance & progress report to the Hon'ble NGT (National Green Tribunal) on quarterly basis. The latest such report has been filed before the NGT on 19.03.2022 & the next one is scheduled to be filed on or before 13.07.2022.

Please note: Copies of the documents mentioned above are enclosed herewith for reference.


Senior Environmental Officer



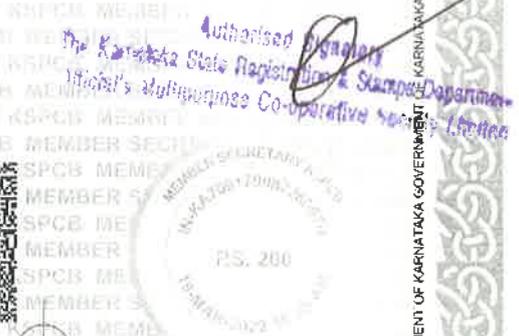
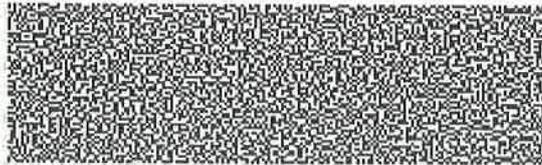
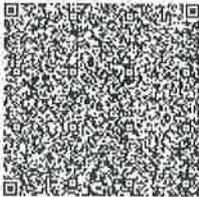
सत्यमेव जयते

INDIA NON JUDICIAL

Government of Karnataka

e-Stamp

Certificate No. : IN-KA70917998726097U
 Certificate Issued Date : 19-Mar-2022 10:49 AM
 Account Reference : NONACC (FI)/ kacrsf108/ DOMLUR2/ KA-BN
 Unique Doc. Reference : SUBIN-KAKACRSFL0875730646116478U
 Purchased by : MEMBER SECRETARY KSPCB
 Description of Document : Article 12 Bond
 Description : AGREEMENT
 Consideration Price (Rs.) : 0
 (Zero)
 First Party : MEMBER SECRETARY KSPCB
 Second Party : GREENVIRONMENT INNOVATION AND MARKETING INDIA PL
 Stamp Duty Paid By : MEMBER SECRETARY KSPCB
 Stamp Duty Amount(Rs.) : 200
 (Two Hundred only)



Please write or type below this line

AGREEMENT

THIS AGREEMENT IS EXECUTED ON 19th March 2022 at Bengaluru.

Between

Karnataka State Pollution Control Board, having its Head Office at Parisara" Bhavan" No #49, Church Street, Bengaluru - 560001, being referred to as "Client" (which term unless repugnant to or inconsistent with the context, mean and include its successors and permitted assigns)

[Signature]
Member Secretary

AND

[Signature]



Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please Inform the Competent Authority.

Greenenvironment Innovation and Marketing India Private Ltd, having its registered office at 2nd Floor, Campus 3A, RMZ Millenia, 11, MGR Main Rd., Kandancavadi, Perungudi, Chennai, Tamil Nadu 600096, hereinafter referred to as "Service Provider" (which term unless repugnant to or inconsistent with the context, mean and include its successors and permitted assigns)

Whereas,

- a) **Client**, The Karnataka State Pollution Control Board (KSPCB) is a legal entity entrusted for control of pollution in the Indian State of Karnataka. The Board regulates air, water and environmental pollution.
- b) **Service Provider**, Smart Environmental Management startup company was approached by the Client to submit a proposal for Solar Powered IoT based Sensors for Lake Monitoring for Mugalur Brigde (Interstate Boundary of Karnataka & Tamil Nadu) site as / on service-based for 2 years.
- c) **Client and Service Provider** has agreed upon the above proposal as per the terms and condition mentioned in "ANNEXURE – 1".

1. Scope of Service:

- a) **Service Provider** will provide services of Solar Powered IoT based Sensors for Lake Monitoring System on rental service basis including supply, installation (Software & Hardware), equipment's on / as service-based agreed as per "ANNEXURE – 1"
- b) **Client** will recnet all necessary real time data daily basis from system installed at the site through the software of the **Service Provider**

c) Contract Duration:

This Agreement is made for period of 24 months starting from 19th March 2022 to 18th March 2024.

d) Payment Terms:

- (i) **Service Provider** shall be paid by the **Client** for supplying of data as specified in the Annexure, as per terms agreed in the Proposal Rs. 62,500/- + Applicable GST per month after the submission of monthly invoice (after installation and commissioning of data generation in the system).

e) Termination:

- (i) Either Party to this Agreement shall be at liberty to terminate this Agreement by giving one-month notice to the other Party in writing and in furtherance to which the said Agreement shall come to an end.
- (ii) Without limiting the generality of any other clause in this Agreement, client or service provider may terminate this Agreement immediately by notice in writing if in breach of any term of this Agreement.

f) General Terms:

- (i) The ownership of the equipment/hardware installed at site during and after the contract duration will continue with the **Service Provider**

: 3 :

- (ii) **Service Provider** and/or personnel/s shall follow strict hygiene policy while providing services at the project site by wearing face mask, hand sanitising and follow other measures as communicated by the client from time to time.
- (iii) **CONFIDENTIALITY: Service Provider** for the purpose of this Agreement shall maintain strict confidentiality of the information belonging to the **client** and that may have come into **Service Provider** possession or knowledge because of the services rendered by **Service Provider** under this Agreement. Such information shall not be divested or disclosed to any third party under any circumstances, whatsoever, without obtaining prior written approval from **Client**.
- (iv) **Intellectual Property Rights [IPR]: Service Provider** is aware that the ownership of all IPR in respect of any invention, idea, design or other original work which arises as a consequence of, or results from, the **Service Provider** services to the **Client**, whether embodied or not, shall vest mutually within either party.
- (v) **FORCE MAJEURE:** None of the Parties shall be liable for any failure or delay in performing its obligations under this Agreement, if such failure or delay is, either wholly or in part, due to *force majeure* conditions such as flood, earthquake, epidemic, pandemic, lockdown, wars, fire, riots or any other cause beyond the control of such party. The Party affected by the *force majeure* condition shall forthwith notify the other party of the nature and extent thereof and shall make best efforts to mitigate such condition. If the *force majeure* condition in question prevails for a continuous period in excess of one month, the Parties shall enter into bonafide discussion with a view to alleviating its effect or to agreeing upon such arrangements as may be acceptable to both the Parties.
- (vi) **STATUTORY COMPLIANCE: Service Provider** shall comply with all statutory and prescribed laws, rules and regulations, obtain all licenses, permissions, certificates, registrations to enable **Service Provider** to discharge the obligations under this Agreement. **Service Provider** shall furnish the **Client** with copies of all such licenses, certificates as and when demanded by the **Client**.
- (vii) **GOVERNING LAW & DISPUTE RESOLUTION:** The Agreement shall be governed by laws of India. It is mutually agreed between the parties that in the event of any difference of opinion arising out of/ or relating to this agreement including interpretation of its terms, will be resolved through joint discussion by both the parties. If the parties could not resolve within themselves the matter shall be referred to a sole arbitrator who shall decide the matter and such decision shall be binding on the parties to the dispute. The arbitration shall be conducted in accordance with the provisions of the Indian Arbitration and Conciliation Act, 2019 or any other substituted legislation for the time being in force.
- (viii) **WAIVER:** Neither Party shall be deemed to have waived any provision of this Agreement or the exercise of any rights held under this Agreement unless such waiver is made expressly and in writing. Waiver by either party of a breach of violation of any provision of this Agreement shall not constitute a waiver of any subsequent or other breach or violation.


Member Secretary
Karnataka State Pollution Control Board
No. 49, 'Parisara Bhavan'
Church Street, Bengaluru-560 001




: 4 :

- (x) **SEVERABILITY:** If any provision of this Agreement is held invalid for any reason whatsoever, such invalidity shall not affect the validity or operation of any other provision of this Agreement and such invalid provision shall be deemed to have been deleted from this Agreement.
- (xi) **ASSIGNMENT:** Neither Party shall assign its rights or obligations herein to any person without obtaining prior approval in writing of the other Party in that behalf.
- (xii) **NOTICE:** Any notice or demand required or permitted to be given hereunder shall be given in writing sent via E-mail or by registered mail at the address set forth on the first page hereof. Any notice or demand given by personal delivery shall be deemed to have been received on the date of delivery.

IN WITNESS WHEREOF, the parties here to have executed this Agreement at on this day of 19th March 2022.

For Karnataka State Pollution Control Board



Member Secretary

Mr. Srinivasalu, IFS ~~Member Secretary~~ Karnataka State Pollution Control Board
Authorized Signatory No. 49, 'Parisara Bhavan'
Church Street, Bengaluru-560 001.

For Greenenvironment Innovation and Marketing India P. Ltd



Mr. Varun Sridharan
Authorized Signatory



In the presence & Witness of:

1. M.G. Valthish, SEO-Infra, KSPCB, Bangalore



2. Jayaprakash



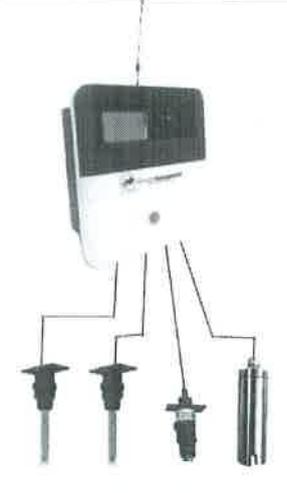
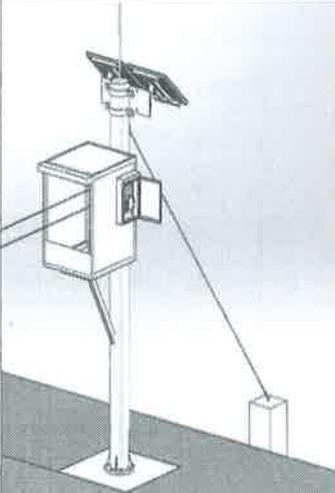
Assistant Scientific Officer
ARMC



"ANNEXURE 1"

Scope of Work Checklist – Solar Powered IoT based Sensors for Lake Monitoring

1. Product Specification

	System Specification		
	Water Quality	Measuring Range	
	pH	0 to 14	
	Turbidity	0 to 100 NTU	
	Residual Chlorine / ORP	0 to 4 ppm	
	Total Suspended Solids (TSS eq)	0 to 100 ppm	
	Nitrate	0 to 500 ppm	
	Dissolved Oxygen	0 to 20 ppm	
	Total Dissolved Solids (TDS)	0 to 10000 ppm	
	Water Quantity - Flow meters with pipe connectors		
	Pressure Transmitters - 0-1/0-5/0-10/0-16/0-25 Kg/Cm2		
	Pump Automation - Real time pump running hours with controls (Upto 6 pumps)		
	Water quality sampling - In-line with self cleaning method		

2. Key Technical Features:



Sensor Input		Data & Software	
Sensor Ports	7 sensor ports, RS485 serial communication port	Data hosting	Cloud
Sensor Connection	Wired	Cyber-security	TLS 1.2 Protocol
Sensor Interface	RS 485 serial communication	Software integration	REST API
Connectivity		IoT software platform	Web-based from desktop, tablet & mobile
Cellular	Available Technologies - 2G, 4G	Greenvironment Mobile App	iOS, Android
SIM Card	Single SIM Slot	Data export options	PDF, CSV
Cellular Connection	IoT SIM Airtel & Vodafone (India)	Device memory	Inbuilt SD Card
Data Transmission	Periodic, as per client requirement	Data Communication	Two-way Authentication
Antenna	External Antenna	Alert Notification	SMS, email, voice
Enclosure		System health check	Included
Dimension	235 (H) X 260 (W) X 130 (D)	Power Supply	
Enclosure Material	MS Powder coated enclosure with ABS from panel	Primary Power Supply	230V Single Phase
		Other Options: Solar power, Battery	75 Watt Panel, 20 Ah

3. Cost to Customer – IoT Sensors Based Lake Monitoring

SUBSCRIPTION CHARGES (INCLUDES HARDWARE + CALIBRATION + SPARES + SOFTWARE LICENCE)




Member Secretary
Karnataka State Pollution Control Board
 No. 49, 'Pansara Bhavan'
 Church Street, Bengaluru-560 007





S.No	Real Time Monitoring Service	Units	Annual Subscription	
			Unit Price / month	Total Charges /month.
1	Annual Subscription Charges for Solar Powered IoT Sensors Based Ten Pennai River Monitoring at Mugalur Bridge. Water Quality Parameters 1. pH 2. Turbidity 3. Conductivity 4. Oxidation Reduction Potential 5. Dissolved Oxygen 6. Total Suspended Solids 7. Total Dissolved Solids 8. Nitrate	1	₹62,500/-	₹62,500/-
Monthly Subscription Charges				₹62,500/-

4. Deliverables:

1. Real Time dashboard & mobile app with multi user login option
2. Automated daily and monthly performance report of the plant
3. Data transfer to KSPCB & TNPCB + CPCB Server through API integration
4. 24x7 Troubleshooting virtual support and if any equipment is damaged and not in the list of exclusion will be replace by our Greenenvironment.

5. Terms & Conditions

1. Contract duration: 2 years
2. Payment terms: Monthly / Quarterly / Annual Subscription amount to be paid in advance within 10 days from the date on the Invoice
3. Taxes: 18 % GST applicable on every invoice for all the services.
4. The ownership of the equipment/hardware during and after the Term will continue with Greenenvironment.
5. Exit Clause: Either party may terminate this contract on thirty (30) calendar days written notice or, The company shall have the right to terminate this contract at any time prior to any closing date, if the payment is not done within 45 days from the date on the invoice.

6. Exclusions:

1. If any installations of equipment's/accessories involving temporary shutdown/ modifications/ replacement are required, client to provide all necessary support and with the approval of client's concerned department.
2. Continuous power, water and internet connectivity as required to be made available by client


Member Secretary
Karnataka State Pollution Control Board
 No. 49, 'Parisara Bhavan'
 Church Street, Bengaluru-560 001





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Karnataka State Pollution Control Board

"ಪರಿಸರ ಭವನ", 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ
"Parisara Bhavan", 1st to 5th Floor, # 49, Church Street, Bangalore - 560 001, Karnataka State, India

PCB 01 Infra NGT 111 2020

530

Date:

25 APR 2022

Office Memorandum**Subject:**

Constitution of Joint Committee for Calculating Environmental Compensation in respect of Defaulting BWSSB STPs in the Matter Related to Original Application No 111 of 2020 – Regarding.

ವರದಿಸಲಾಗಿದೆ

References:

1. National Green Tribunal, Southern Zone, Chennai, Suo Moto case OA No 111 of 2020.
2. Joint Committee Report of November 2020.
3. NGT Order dated 17.02.2022.
4. Directions under Section 18 (1) (b) given to Chairman, KSPCB by Central Pollution Control Board vide their letter no. 14763 dated: 22.03.2022.
5. Department of Forest, Environment & Ecology, Government of Karnataka letter dated: 08.04.2022.

Preamble:

As per the Orders dated 17.02.2022 of the National Green Tribunal, Southern Zone, Chennai in the Matter Related to Original Application No 111 of 2020 concerning chemical frothing in River Thenpennai (River South Pinakini in Kannada), the Central Pollution Control Board has given directions to the Chairman of Karnataka State Pollution Control Board under section 18 (1) (b) of the Water (Prevention and Control of Pollution) Act, 1974, on 22.03.2022, directing KSPCB constitute a Committee involving the representatives of the following Organizations, for calculating Environmental Compensation in respect of defaulting BWSSB STPs as per the Report of the Joint Committee submitted during November 2020. Hence, in compliance with the said Directions the following committee has been constituted consisting of the representatives of the following Departments:

Sl. No.	Name of the Officer	Position in the Committee	Members
1.	Regional Senior Environmental Officer- Bengaluru South, KSPCB, Nisarga Bhavan, Thimmaiah Road, 7th D Main Rd, Shivanagar, Bengaluru, Karnataka 560079	Member	Mr S.K. Vasudeva 9945276544
2.	The Chief Engineer, Bangalore Water Supply & Sewerage Board, Cauvery Bhavan, 7 th Floor, KG Road, Bengaluru-560009.	Member	Mr Gangadhar Ph 9845444050
3.	Centre of Sustainable Technologies, Indian Institute of Science, Bengaluru-560 012	Member	Prof. Shivakumar Babu Ph.94484 80671

4.	Environmental Officer, Regional Office Sarjapura, KSPCB, Nisarga Bhavan, Thimmaiah Road, 7th D Main Rd, Shivanagar, Bengaluru, Karnataka 560079	Member Convener	Mr C.R.Manjunath Ph 9845367378
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In view of the above you are hereby called upon to take immediate action in this regard and submit the report to the Board office for onward submission of the same to the Hon'ble NGT before they take up the matter during next hearing.

Encl.: copy of CPCB directions.

Draft Approved by Member Secretary

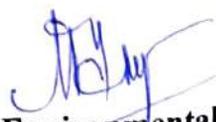
Sd/-
Member Secretary
Karnataka State Pollution Control Board

To,

1. Regional Senior Environmental Officer,
Bengaluru South, KSPCB, Nisarga Bhavan,
Thimmaiah Road, 7th D Main Rd, Shivanagar,
Bengaluru, Karnataka 560079.
2. Chief Engineer, Wastewater Division,
Bangalore Water Supply & Sewerage Board,
Cauvery Bhavan, 7th Floor, KG Road,
Bengaluru 560009.
3. Centre of Sustainable Technologies,
Indian Institute of Science,
Bengaluru 560 012.
4. Environmental Officer,
Regional Officer, Sarjapura, KSPCB,

Copy to:

1. Law Officer, KSPCB, for information & necessary action.
2. Technical Officer to Chairman to bring to the kind notice of the Chairman.
3. Office Copy.


Senior Environmental Officer





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Karnataka State Pollution Control Board

“ಪರಿಸರ ಭವನ”, 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ, ಭಾರತ
"Parisara Bhavana", 1st to 5th Floor, # 49, Church Street, Bengaluru - 560 001, Karnataka, INDIA

BWSSB direction
No. PCB 01 Infra NGT OA 111 2020 / 886

Date: 10 MAY 2022

Directions Issued under Section 33 (A) of the Water (Prevention and Control of Pollution) Act, 1974, Read with Rule 34 (4) of Karnataka State Board for the Prevention and Control of Water Pollution (Procedure for Transaction of Business) and the Water (Prevention and Control of Pollution) Rules, 1976.

Subject:

Non-Compliance with the provisions of the Water (Prevention and Control of Pollution) Act, 1974 in the matter related to OA No. 111 of 2020 (SZ), Chennai- Regarding.

References:

1. November 2020 Report of Joint Committee.
2. National Green Tribunal, Southern Zone, Chennai Order dated 17.02.2022.
3. Directions under Section 18 (1) (b) given to Chairman, KSPCB by Central Pollution Control Board vide their letter no. 14763 dated: 22.03.2022.
4. Department of Forest, Environment & Ecology, Government of Karnataka letter dated: 08.04.2022.
5. Board Office Memorandum No 530, dated 25.04.2022.

Background:

As per the Orders dated 17.02.2022 of the National Green Tribunal, Southern Zone, Chennai in the Matter Related to Original Application No 111 of 2020 concerning chemical frothing in River Thenpennai (River South Pinakaini in Kannada) a seasonal river that takes the flow from K & C and Hebbal Valleys of the city of Bengaluru primarily by way of influx of sewage effluent, the Central Pollution Control Board has given directions to the Chairman of Karnataka State Pollution Control Board under section 18 (1) (b) of the Water (Prevention and Control of Pollution) Act, 1974, on 22.03.2022, directing KSPCB give directions to Bangalore Water Supply & Sewerage Board (that is BWS & SB) and Bruhath Bengaluru Mahanagara Palike (that is BBMP) to ensure stoppage of discharge of untreated sewage effluent in order to improve the water quality of the river by way of improving the quality of treated sewage discharged into the valleys leading to it.

Water is scarce and is a precious resource to be conserved, protected for maximum reuse. In view of the above and in compliances to the Orders of the National Green Tribunal and Directions of the Central Pollution Control Board and in exercise of the powers conferred under Section 33 (A) of the Water (Prevention and Control of Pollution) Act, 1974 and Read with Rule 34 (4) of Karnataka State Board for the Prevention and Control of Water Pollution (Procedure for Transaction of Business) and the Water (Prevention and Control of Pollution) Rules, 1976, Karnataka State Pollution Control Board hereby issues the Directions as below:

1. BWS & SB shall ensure continuous monitoring of all STPs for long term compliance as recommended in the Report of IISc, Bengaluru. In case of STPs not covered in the IISc Report, BWS & SB shall evaluate the performance assessment in a time bound manner of 3 months interval.
2. BWS & SB shall assess the quality of sewage generated, gap analysis, sewage treated in entire Bengaluru and the sewage that remains untapped due to the absence of sewerage networking or other means.
3. BWS & SB shall provide the analysis reports of water quality, at stipulated frequency as per Consent, monitored in all the inlet and outlet of STPs associated with River Thenpennai and provide underground sewerage system to cover the entire sewage in the catchment area of the river and bridge the treatment gap along with the treating the sewage effluents to standards stipulated in the Consent Order at all times.

FOR AND BEHALF OF THE
KARNATAKA STATE POLLUTION CONTROL BOARD.
BANGALORE

Sd/-

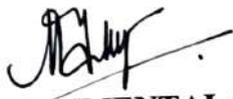
CHAIRMAN

To:

The Chairman,
Bangalore Water Supply and Sewerage Board
(BWS & SB),
1st Floor Cauvery Bhavan,
K.G. Road, Bengaluru – 560 001

Copy to:

1. The Regional Senior Environmental Officer, KSPCB, Bengaluru South, for information and necessary action.
2. The Regional Senior Environmental Officer, KSPCB, Bengaluru City, for information and necessary action.
3. The Regional Senior Environmental Officer, KSPCB, Bengaluru North, for information and necessary action.
4. Environmental Officer, KSPCB, Regional Office Sarjapura, for information and necessary action.
5. Environmental Officer, KSPCB, Regional Offices: Bengaluru City South, Bengaluru City East, Bommanahalli, Mahadevapura, Yelahanka, for information and necessary action.
6. The Law Officer, KSPCB, for information and necessary action.
7. Master file.
- ✓ 8. Case file.


SENIOR ENVIRONMENTAL OFFICER





ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ
Karnataka State Pollution Control Board

"ಪರಿಸರ ಭವನ", 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ
"Parisara Bhavan", 1st to 5th Floor, # 49, Church Street, Bangalore - 560 001, Karnataka State, India

No. PCB 01 Infra NGT OA 111 2020 / 887

Date: 10 MAY 2022

Directions Issued under Section 33(A) of the Water (Prevention and Control of Pollution) Act, 1974, Read with Rule 34 (4) of Karnataka State Board for the Prevention and Control of Water Pollution (Procedure for Transaction of Business) and the Water (Prevention and Control of Pollution) Rules, 1976.

Subject:

Non-Compliance with the provisions of the Water (Prevention and Control of Pollution) Act, 1974 in the matter related to OA No. 111 of 2020 (SZ), Chennai- Regarding.

References:

1. November 2020 Report of Joint Committee.
2. National Green Tribunal, Southern Zone, Chennai Order dated 17.02.2022.
3. Directions under Section 18 (1) (b) given to Chairman, KSPCB by Central Pollution Control Board vide their letter no. 14763 dated: 22.03.2022.
4. Department of Forest, Environment & Ecology, Government of Karnataka letter dated: 08.04.2022.
5. Board Office Memorandum No 530, dated 25.04.2022.

Background:

As per the Orders dated 17.02.2022 of the National Green Tribunal, Southern Zone, Chennai in the Matter Related to Original Application No 111 of 2020 concerning chemical frothing in River Thenpennai (River South Pinakaini in Kannada) a seasonal river that takes the flow from K & C and Hebbal Valleys of the city of Bengaluru primarily by way of influx of sewage effluent, the Central Pollution Control Board has given directions to the Chairman of Karnataka State Pollution Control Board under section 18 (1) (b) of the Water (Prevention and Control of Pollution) Act, 1974, on 22.03.2022, directing KSPCB give directions to Bangalore Water Supply & Sewerage Board (that is BWS & SB) and Bruhath Bengaluru Mahanagara Palike (that is BBMP) to ensure stoppage of discharge of untreated sewage effluent in order to improve the water quality of the river by way of improving the quality of treated sewage discharged into the valley leading to it.

Water is scarce and is a precious resource to be conserved, protected for maximum reuse. In view of the above and in compliances to the Orders of the National Green Tribunal and Directions of the Central Pollution Control Board and in exercise of the powers conferred under Section 33 (A) of the Water (Prevention and Control of Pollution) Act, 1974 and Read with Rule 34 (4) of Karnataka State Board for the Prevention and Control of Water Pollution (Procedure for Transaction of Business) and the Water (Prevention and Control of Pollution) Rules, 1976, Karnataka State Pollution Control Board hereby issues the Directions as below:

1. BBMP, through its Lakes Department, shall make the flow measurements and monitor the water quality in order to maintain / restore the water quality in Lakes / Tanks associated with River Thenpennai.
2. BBMP, through its Lakes Department, shall maintain pristine water quality and provide analysis report of water quality monitored in the Lakes / Tanks flowing into River Thenpennai.

FOR AND BEHALF OF THE
KARNATAKA STATE POLLUTION CONTROL BOARD,
BANGALORE
Sd/-

CHAIRMAN

To:

The Commissioner,
Bruhat Bengaluru Mahanagara Palike (BBMP),
Hudson Circle, Bengaluru 560 002

Copy to:

1. The Regional Senior Environmental Officer, KSPCB, Bengaluru South, for information and necessary action.
2. Regional Office Sarjapura, for information and necessary action.
3. The Law Officer, KSPCB, for information and necessary action.
- ✓ 4. Master file.
5. Case file.


SENIOR ENVIRONMENTAL OFFICER

✓
80

ACTION TAKEN REPORT ON SHORT TERM & LONG TERM ACTION PLAN IN THE JOINT COMMITTEE REPORT IN THE MATTER OF O.A NO. 111 OF 2020 BY TAMILNADU POLLUTION CONTROL BOARD (AS ON 22-06-2022)

- ❖ **Status of Compliance and Action Taken Report on the Action Plan**
[Action Points [III (1), V (2), V (3), VI (1), VI (2), VII (1)]]

Submitted by

**DISTRICT ENVIRONMENTAL ENGINEER
TAMILNADU POLLUTION CONTROL BOARD
HOSUR, KRISHNAGIRI DISTRICT**

Action Points	Agency Responsible (Timeline)	Progress made as on 15 th March, 2022	Proposed Action Plan with target date (if any)	Remarks
III. Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of wastewater management and discharge mode.				
<p>1. Among the industries those that are Red/Orange category (small, medium and large) with treated effluent discharge option as surface water/sewer drain/others (which includes industries having ZLD) in River basin of Thenpennai be monitored for effluent characteristics by concerned SPCBs, so as to ascertain the quality of treated effluent discharge as per the Consent Conditions of SPCBs. The details of the compliance status and action taken report be placed in public domain (TNPCB and KSPCB website).</p>	<p>TNPCB (Six months)</p>	<p>There is no discharge of industrial effluent into river Thenpennai in the area under investigation i.e., from Chokkarasanapalli Village to Kelavarapalli Dam stretch.</p> <p>1) M/s. Premier WVG & SPG Mills Pvt Ltd., Belathur Village, Bagalur / (Red-Large) located nearby the river stretch. It is an textile dyeing and weaving unit having ZLD system and there is no discharge of sewage/trade effluent into outside the unit premises.</p> <p>The details of STP and ZLD based ETP system installed for the treatment of sewage and trade effluent is enclosed vide Annexure-I.</p> <p>The report of Analysis (ROA) of treated sewage and treated trade effluent (RO Permeate) collected</p>	<p>The industries located in the area covered under the investigation in Thenpennaiar River Basin are closely monitored by the TNPC Board to ensure zero liquid discharge.</p>	<p>The unit is located at a distance of 900 meter from River Thenpennai.</p> <p>Renewal Consent with validity up to 31.03.2022. The unit has submitted renewal application vide OCMMS and it is under process.</p>

Action Points	Agency Responsible (Timeline)	Progress made as on 15 th March, 2022	Proposed Action Plan with target date (if any)	Remarks
		<p>from the unit for the past one year (March 2021 to April 2022) is enclosed vide Annexure-II. From the ROA, it reveals that the quality of treated sewage and treated trade effluent are satisfying the standards prescribed by the TNPC Board.</p> <p>The report of analysis (ROA) of AAQ/SM survey conducted in the vicinity of the unit during the period 23.09.2021 is enclosed vide Annexure-III. From the ROA, it reveals that the pollutant parameters are well within the standards prescribed by the TNPC Board.</p>		

V. Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification

2. EC be calculated and imposed based on Random Verification of Grossly Polluting Industries.	TNPCB (Six months)	No violating/defaulting industries are identified.	-	-
3. Calculation of EC by the three member Committee comprising of CPCB, TNPCB and KSPCB, after submission of Reports by the concerned authorities (BWSSB, KSPCB, TNPCB).	CPCB (Six months on receipt of the Study Report and recommendations/criteria for imposing EC from KSPCB and TNPCB)			

Action Points	Agency Responsible (Timeline)	Progress made as on 22.06.2022	Proposed Action Plan with target date (if any)	Remarks
TNPCB).				
VI. Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli				
1. Feasibility study for providing Sewage Treatment options (such as oxidations ponds/ diversion channels or wetlands etc.) by TNPCB followed by implementation by Local authority of the district.	Feasibility study by TNPCB in consultation with local authority for implementation (Six months)	<ol style="list-style-type: none"> 1. Construction of diversion channel with wet land system at a cost of Rs. 25 Lakh has been provided at Bagalur village for the treatment of sewage generated from part of the Bagalur village by the local body of Hosur Panchayat Union and work has been completed and commissioned. 2. 90 Nos of Individual House hold soak pits have been completed in Bagalur Village and the construction of 111 Nos of Individual House hold soak pits are under progress. 3. Construction of diversion channel with wet land system at a cost of Rs. 19 Lakhs is under progress at Durgadevi street and Chandhai street in Bagalur village for the treatment of sewage generated from part of the Bagalur village 4. Construction of diversion channel with wet land system at a cost of Rs. 20.00 Lakhs is 	We only construct, Horizontal filter bed work and it has been completed and commissioned.	<p>Bagalur village.</p> <p>Additional time requested by the local body due to COVID Pandemic situation.</p> <p>TNPC Board has issued direction to the BDO, Hosur Panchayat Union, Hosur, Krishnagiri District vide Proc.No.T6/TNPCBd/F.LAW/LAIII/000045/W/2021-1 Dated: 09.02.2022 to expedite the construction of diversion channel with wet land system for the remaining stretches at Bagalur Village on or before 31.03.2022 for the treatment of sewage generated in Bagalur Village.(Copy enclosed).</p> <p>TNPC Board has issued direction to the Executive Engineer,WRO, PWD,Upper Pennaiyar Basin Division, Dharmapuri vide Proc. No. T6/TNPCBd/F.LAW/LAIII/00</p>

		<p>under progress at Ambedkar Nagar and Rajiv Gandhi Nagar area in Bagalur village Panchayat for the treatment of sewage generated from part of the Ambedkar Nagar and Rajiv Gandhi Nagar area in Bagalur village Panchayat.</p>		<p>0045/W/2021-2 Dated: 09.02.2022 to ensure that no domestic sewage is allowed to let into the River Thenpenaiyar. (Copy enclosed).</p>
		<ol style="list-style-type: none"> 1. Construction of diversion channel with wet land system at a cost of Rs. 24 Lakh has been provided at Belathur village for the treatment of sewage generated from part of the Belathur village by the local body of Hosur Panchayat Union and work has been completed and commissioned. 2. In Belathur Village the construction of 30 Nos of Individual House hold soak pits are nearing completion stage. 3. Construction of diversion channel with wet land system at a cost of Rs. 40 Lakhs is under progress at Kalaignar Nagar and Jeeva Nagar in Belathur village for the treatment of sewage generated from part of the Belathur village are nearing completion stage. 	<p>For the remaining stretches, construction of wetland system will be executed after approval of District Collector, Krishnagiri under grey water management scheme and the works will be completed before 31.03.2022 as reported by the BDO, Hosur.</p> <p>For that Horizontal filter bed Administration Sanction obtained and work is in progress we will complete before 30/07/2022</p>	<p>Belathur village</p> <p>Additional time requested by the local body due to COVID Pandemic situation.</p>

Action Points	Agency Responsible (Timeline)	Progress made as on 15 th March, 2022	Proposed Action Plan with target date (if any)	Remarks
		Construction of diversion channel with wet land system at a cost of Rs. 11.04 Lakhs is under progress at Sokkarasanapalli Village for the treatment of sewage generated from part of the Sokkarasanapalli village are nearing completion stage.	Construction of Horizontal filter bed work has been commenced and completed.	Sokkarasanapalli village. Additional time requested by the local body due to COVID Pandemic situation.
		The sewage generated from part of the 70 houses is being treated through the septic tank followed by the soak pit.	Construction of diversion channel with Horizontal filter bed for the treatment of part of sewage generated from the Chennasandiram village will be carried by the Hosur Panchayat Union after obtaining necessary approval of District Collector, Krishnagiri under grey water management scheme and the works will be completed within 3 months as reported by the BDO, Hosur.	Chennasandiram Additional time requested by the local body due to COVID Pandemic situation.
		The sewage generated from part of 125 houses is being treated through the septic tank followed by the soak pit.	Construction of diversion channel with Horizontal filter bed for the treatment of part of sewage generated from the Kanimangalam village will be carried by the Hosur Panchayat Union after obtaining necessary approval of District Collector, Krishnagiri	Kanimangalam Additional time requested by the local body due to COVID Pandemic situation.

Action Points	Agency Responsible (Timeline)	Progress made as on 15 th March, 2022	Proposed Action Plan with target date (if any)	Remarks
		<p>The sewage generated from 40 houses is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.</p>	<p>under grey water management scheme and the works will be completed within 3 months as reported by the BDO, Hosur.</p>	<p>Guliganapalli (Kodiyalam) village.</p>
		<p>The sewage generated from Thummanapalli village Panchayat [280 houses in Sathyamangalam and 98 houses in Muneeswar Nagar] is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.</p>		<p>Sathiyamangalam, Muneeswar Nagar</p>
		<p>The sewage generated from 190 houses is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.</p> <p>Construction of diversion channel with wet land system at a cost of Rs. 20.00 Lakhs is under progress at Balaji Nagar and Lingapuram Village for the treatment of sewage generated from part of the Balaji Nagar and Lingapuram village.</p>		<p>Lingapuram</p>

Action Points	Agency Responsible (Timeline)	Progress made as on 15 th March, 2022	Proposed Action Plan with target date (if any)	Remarks
		The sewage generated from 220 houses is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.		Baduthepalli
		The sewage generated from 25 houses is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.		Kempasandiram
		<p>The sewage generated from 121 houses is being treated through the septic tank followed by the soak pit and there is no discharge of sewage into River Thenpennai.</p> <p>Construction of diversion channel with wet land system at a cost of Rs. 9.93 Lakhs is under progress at Singasadanapalli Village for the treatment of sewage generated from part of the Singasadanapalli village</p>		Singasadanapalli

Action Points	Agency Responsible (Timeline)	Progress made as on 15 th March, 2022	Proposed Action Plan with target date (if any)	Remarks
<p>2. Solid Waste Management Plan be devised and executed by concerned Block Development Officer, Hosur Taluk to ensure the solid wastes are not disposed on the riverside and managed as per Solid Waste Management Rules, 2016.</p>	<p>Concerned Block Development Officer to submit to TNPCB (six months)</p>	<p>The local body of Hosur Panchayat Union has removed the solid waste dumped in the banks of River Thenpennai.</p>		<p>Bagalur</p> <p>TNPC Board has issued direction to the BDO, Hosur Panchayat Union, Hosur, Krishnagiri District vide Proc.No.T1/TNPCBd/LAW/LAIII NGT/F.13038/2021-1 Dated: 03.02.2022 to comply with the Provisions of Solid Waste Management Rules 2016 (copy enclosed)</p> <p>TNPC Board has issued direction to the Executive Engineer,WRO, PWD,Upper Pennaiyar Basin Division, Dharmapuri vide Proc. No. T1/TNPCBd/LAW/LAIIINGT/F.13038/2021-1 Dated: 04.02.2022 to ensure that no solid wastes are permitted to dump on either sides of River stretches. (copy enclosed)</p>

Action Points	Agency Responsible (Timeline)	Progress made as on 15 th March, 2022	Proposed Action Plan with target date (if any)	Remarks
		<p>The average collection of solid waste in the Bagalur Panchayat is about 2.0 MT. The Municipal Solid Waste is being collected through door to door collection by engaging 19 Thooimai Kavalars and deploying with five tri-cycles and three electronic bikes.</p> <p>The local body of Hosur Panchayat Union has constructed the Micro Compost Centre (MCC) with a maximum capacity to process 3.0 MT of segregated biodegradable municipal solid wastes at a cost of Rs. 20 Lakh and commissioned.</p>	<p>Under Central Government scheme of National Rurban Mission project a Plastic shredding unit is proposed at a cost of Rs. 20 Lakhs to handle the plastic wastes and the shredded plastics will be used for road laying works. The work has been Commenced and completed.</p>	<p>Additional time requested by the local body due to COVID Pandemic situation.</p>
		<p>The average collection of solid waste in the Belathur Panchayat is about 2.0 MT. The Municipal Solid Waste is being collected through door to door collection by</p>		<p>Belathur</p>

Action Points	Agency Responsible (Timeline)	Progress made as on 15 th March, 2022	Proposed Action Plan with target date (if any)	Remarks
		<p>engaging 19 Thooimai Kavalars and deploying with five tri-cycles and three electronic bikes. The local body of Hosur Panchayat Union has constructed the Micro Compost Centre (MCC) with a maximum capacity to process 3.0 MT of segregated biodegradable municipal solid wastes at a cost of Rs. 24 Lakh and commissioned.</p>		
		<p>The solid wastes generated from the Sokkarasanapalli village are being collected and brought to the segregation shed and segregated as bio-degradable and non-biodegradable wastes.</p>		Sokkarasanapalli village.
		<p>The non-biodegradable wastes are burnt through the Solid waste Disposal Incinerator established at Estimate Cost of Rs.18.00 Lakhs by CSR fund of M/s. Excide factory. (Photographs enclosed).</p>		

Action Points	Agency Responsible (Timeline)	Progress made as on 15 th March, 2022	Proposed Action Plan with target date (if any)	Remarks
		The solid wastes generated from the households are being collected through Thooimai Kavalars and brought to the segregation shed and segregated as bio-degradable and non-biodegradable wastes for further treatment and dispose. (Photographs enclosed).		Guliganapalli, Sathiyamangalam, Muneeswar Nagar, Lingapuram, Baduthepalli, Kempasandiram, Chennasandiram, Singasadanapalli, Kanimangalam, Kallipuram and Oddapalli Thinna villages.

VII. Regular Water Quality Monitoring at important locations				
1. The trend of water quality and its improvement at major confluence points may be monitored for the year 2021-22 on a monthly basis and a report be submitted to CPCB to ensure the quality of water flowing in River Thenpennai.	TNPCB &KSPCB (to monitor on yearly basis)	The water quality of River Thenpennai is being monitored on monthly basis at interstate border i.e at Chokkarasanapalli Village and the report of analysis for the period from September 2017 to May 2022 is enclosed vide Annexure-IV.		Refer Annexure-IV – ROA of Thenpennai River at Chokkarasanapalli Village from September 2017 to May 2022.

For

 District Environmental Engineer,
 Tamilnadu Pollution Control Board,
 Hosur.

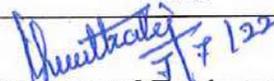
Thenpennaiyar River Water samples collected at Chokarasanapalli village at the inter State Border by the TNPCB, DEE, Hosur from January 2021 to December 2021

Sl. No.	Parameter	Units	Date of Sample Collection										
			20.01.2021	25.02.2021	25.03.2021	27.04.2021	28.06.2021	27.07.2021	23.08.2021	23.09.2021	26.10.2021	22.11.2021	21.12.2021
1	pH	Number	7.63	7.04	6.35	6.92	6.17	6.09	7.23	6.29	6.66	6.38	6.68
2	Total Suspended Solids	mg/l	100	72	94	84	74	60	96	48	12.0	18	8.0
3	Total Dissolved Solids	mg/l	696	244	150	728	750	464	584	584	464	440	576
4	Chloride	mg/l	205	200	90	180	190	160	160	195	130	130	195
5	Sulphate	mg/l	74	26	40	42	40	21	48	53	91	50	52
6	Oil and Grease	mg/l	2	2	2	4	2	2	2	2	1.0*	1.0*	2.0
7	BOD 3 days at 27°C	mg/l	31	47	40	23	26	24	49	46	3.0	5.0	18.0
8	COD	mg/l	152	168	224	136	40	104	200	96	64	24	72
9	Dissolved Oxygen	mg/l	0.39	0.51	0.96	0.21	0.58	2.42	2.6	2.68	6.12	4.51	2.95
10	Conductivity	µs/cm	-	-	-	-	1162	720	906	906	719	682	892
11	Turbidity	NTU	-	-	-	-	2.52	2.34	2.32	2.30	2.34	2.38	2.30
12	SAR (Sodium Absorption Ratio)	meq/L	-	-	-	-	0.64	0.56	0.58	0.54	0.52	0.56	0.54
13	Boron	mg/l	-	-	-	-	0.002*	0.07	0.06	0.07	0.06	0.06	1.86
14	Free Ammonia (NH3)	mg/l	-	-	-	-	0.36	1.95	1.95	1.87	1.76	1.88	0.06
AEL, TNPCB, Salem													
15	Total Coliform	MPN / 100 ml	1300	1400	2600	1700	1200	700	1200	1500	1200	580	940
16	Fecal Coliform	MPN / 100 ml	----	----	----	840	----	260	----	----	----	250	----

For
Shrutha
7/7/22
District Environmental Engineer,
Tamilnadu Pollution Control Board,
Hosur.

Thenpennaiyar River Water samples collected at Chokarasanapalli village at the inter State Border by the TNPCB, DEE, Hosur from May 2022

Sl. No.	Parameter	Units	Date of Sample Collection				
			24.01.2022	22.02.2022	23.03.2022	25.04.2022	24.05.2022
1	pH	Number	7.17	7.08	6.87	6.70	6.57
2	Total Suspended Solids	mg/l	16.0	14.0	16.0	8.0	10.0
3	Total Dissolved Solids	mg/l	694	730	354	350	324
4	Chloride	mg/l	215	220	205	200	155
5	Sulphate	mg/l	125	14	22	72	147
6	Oil and Grease	mg/l	2.0	2.0	1.0*	1.0*	1.0*
7	BOD 3 days at 27°C	mg/l	9.0	10.0	28.0	23.0	6.0
8	COD	mg/l	48	48.0	80.0	48.0	72.0
9	Dissolved Oxygen	mg/l	2.36	0.28	0.73	0.92	1.04
10	Turbidity	mg/l	2.31	2.32	2.34	2.31	2.34
11	SAR (Sodium Absorption Ratio)	mg/l	0.88	0.89	0.87	0.88	0.89
12	Boron	mg/l	1.80	1.82	1.8	1.8	1.5
13	Free Ammonia	mg/l	0.07	0.08	0.08	0.08	0.10
14	Conductivity	mg/l	1075	1132	1653	7.0	1126
AEL, TNPCB, Salem							
15	Total Coliform	MPN / 100 ml	1200	1500	1700	2100	2200
16	Fecal Coliform	MPN / 100 ml	-----	-----	840	-----	-----


 For District Environmental Engineer,
 Tamilnadu Pollution Control Board,
 Hosur.

FORMAT**COMPLIANCE STATUS IN THE MATTER OF O.A NO 111 OF 2020 ON
"FROTHING OF CHEMICAL FOAM IN RIVER THENPENNAI"**

S.No	Agency / Department Responsible for Complying the Action Plan of the Joint Committee	Action Points	Point wise Compliance Status of the Recommendations made in the Progress Report with targets (including timelines)	Proposed Due date for further compliance	Issues and Concerns	Remarks
1.	KSPCB	(i), (ii), (iv), (v), (vi), (viii)				
2.	TNPCB	(iv), (v), (vi), (vii)				
3.	BWSSB	(i), (ii), (iii), (iv)				
4.	BBMP	(iii), (iv), (ix)	Complied			
5.	BDA	(x)				
6.	Karnataka Tank/Lake Conservation & Protection Authority or agency responsible for flow measurement and water quality maintenance in lakes	(i), (ix)				

**RECOMMENDATIONS IN THE JOINT COMMITTEE REPORT IN THE
MATTER OF O.A NO. 111 OF 2020**

The joint Committee submitted the following observations and recommendations based on the compliance status provided by the concerned departments in Karnataka and Tamilnadu with respect to the short term and long term action plan in the joint committee report;

- i. **FLOW MEASUREMENTS:** With respect to flow measurements of major tanks, storm water drains and major confluence points on River Thenpennai, the same has not been carried out completely by BWSSB and Minor Irrigation. BWSSB and Minor Irrigation has informed the joint committee that flow measurements of tanks/lakes, storm water drains and major confluence points are not covered under the purview of their departments. Therefore, the joint committee requests Government of Karnataka to entrust the role and responsibilities to the concerned department(s) and the duties for the same may be earmarked by the Government of Karnataka. (**Agencies: BWSSB, KSPCB, Karnataka Tank Conservation & Protection Authority and GoK**)
- ii. **PERFORMANCE STUDY OF STPs:** With regard to Study of Performance evaluation of Sewage Treatment Plants in Bangalore, BWSSB may expedite the study awarded to IISC, Bangalore. The outcome of the study and the final report be shared with KSPCB for review before assessment of Environmental Compensation in case of non-compliances. The final report and outcome of the study has to be made online in public domain. (**Agencies: KSPCB and BWSSB**)
- iii. **SEWERAGE NETWORK:** With regard to completion of sewerage network for the villages in Koramangla & Challaghatta and Hebbal Valleys (of 110 villages identified by BBMP) for tapping the sewage generated, and strengthening of STP conveyance system to improve sewage getting completely tapped and treated, BWSSB shall ensure no sewage is discharged into River Thenpennai through continuous monitoring on a regular basis and taking stringent actions on the defaulters. (**Agencies: BBMP and BWSSB**)
 - **Sewerage network is being managed exclusively by BWSSB. Hence the required information is to be collected from the concerned department.**
- iv. **WATER QUALITY MONITORING AND ANALYSIS:** With respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions, it is submitted that the concerned department in

Karnataka along the river stretches be identified by Government of Karnataka and ensure compliance accordingly. (**Agencies: BWSSB, BBMP, KSPCB, TNPCB and GoK**)

- **WATER QUALITY MONITORING AND ANALYSIS** is being managed exclusively by **KSPCB**. Hence the required information is to be collected from the concerned department.

- v. **RANDOM VERIFICATION OF INDUSTRIES/ESTABLISHMENTS:** With respect to Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of wastewater management and discharge mode, KSPCB and TNPCB may continue to do such random inspections regularly to curb the pollution caused to River Thenpennai and ensure no illegal activities are carried out thereof.

Regarding random verifications of industries discharging effluents into the storm water drains, KSPCB informed the committee that they would continue to inspect a minimum of 60 industries to ensure that the industries do not discharge the effluent into the storm water drain. On identifying such instances, action will be initiated under section 33A of Water Act. (**Agencies: KSPCB and TNPCB**)

- vi. **ENVIRONMENTAL COMPENSATION FOR STPs:** With regard to Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification, EC has to be imposed on any defaulters or violators causing pollution into the River Thenpennai by KSPCB and TNPCB for the year 2021-22. (**Agencies: KSPCB and TNPCB**)

- vii. **SEWAGE AND SOLID WASTE MANAGEMENT IN VILLAGES, TN:** With regard to Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli, Block Development Officer (monitored by TNPCB) may ensure the completion of the activities related to sewage and solid waste management as per timelines.

In case of sokkarasanapalli, the parameters such as BOD, DO & Total Coliform are not complying with the standards notified under Environment (Protection) Rules, 1986. Besides, the parameters namely, turbidity, EC, SAR, Boron and Free ammonia may also be analysed to ascertain the classification of the water as per Designated Best Use Criteria. (**Agencies: TNPCB**)

viii. **INSTALLATION OF CONTINUOUS ONLINE WATER QUALITY MONITORING STATION:** With regard to action point on monitoring trend of water quality and its improvement at major confluence points for the year 2021-22 on a monthly basis, water quality of major confluence points have to be monitored on a regular basis by KSPCB and TNPCB to ensure pollution is under check.

KSPCB has proposed to install online monitoring to monitor the key parameters at the river Thenpennai at the State border before it leaves Karnataka. These results will be synced with the Integrated Command Control Centre of KSPCB and made available online in the public domain. Periodically the result will be monitored and the graph will be plotted. This would help the KSPCB and CPCB to assess water quality and initiate action whenever there are violations

Feasibility for installation of Continuous Online Water Quality Monitoring Station be worked out at the inter-state river boundary by KSPCB in Karnataka to ensure that improved quality of water reaches Tamilnadu.

After the waste water is treated by the primary STP's situated in the area under the jurisdiction of Bruhat Bengaluru Mahanagar Palike (BBMP), the water flows along various villages situated on the down stream before entering Tamilnadu. Therefore, it is opined that, a separate STP could be installed at a suitable location in Karnataka border, wherein waste water treated by the primary STP's will be treated once again before it flows to Tamilnadu. (**Agencies: KSPCB and GoK**)

ix. **ACTON TAKEN BY BBMP:** BBMP has not provided status of compliance and action taken report with respect to Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions. (**Agencies: Karnataka Tank Conservation & Protection Authority and BBMP**)

- **The state Government has transfered 202 lakes to BBMP for development and maintenance. Out of which 19 lakes are DISUSED LAKES have lost the lake character. In the remaining 183 lakes 89 lakes have been developed comprehensively by diverting the sewage inflow and maintaining the water quality, 39 lakes are being under development from CM's Nagarothana Programme, and another 28 lakes comprehensive development is proposed in CM's Amrutha Nagarothana grants. Once these lakes were rejuvenated comprehensively the water qualities will**

be maintained without inflow of sewage in to the lake bed. The remaining 27 lakes will be taken up in the coming financial year based on the priority and availability of funds.

- x. **ACTION TAKEN BY BDA:** With respect to construction of wetlands by Bangalore Development Authority (BDA), the activity needs to be completed within the stipulated timelines and the outcomes are to be provided to the Joint Committee. (**Agencies: BDA**)

--{The pointwise compliance status, progress made and updated status on the action plan (short term and long term in **Annexure I**) shall be provided to CPCB, RD, Bengaluru and Chennai by concerned departments in Karnataka and Tamilnadu through concerned State Pollution Control Board on or before 21.06.2022 (Tue).}

Note: In compliance to the Hon'ble NGT Order dated 28.06.2021, the status of compliance of the short-term and long term measures by the concerned departments may also be updated (please refer Annexure I).

Water quality of River Thenpennai be monitored by concerned SPCB of Karnataka and Tamilnadu at suitable inter-state locations (including Mugalur bridge, Sokkarasanapalli and others) and the analysis reports be submitted before Hon'ble Tribunal once in three months.

In compliance to the Hon'ble NGT Order dated 28.06.2021, if there is any violation or non-implementation of the directions, then Hon'ble also directed CPCB to issue necessary direction to the defaulting Department to comply with the same and on their failure, take appropriate action against them in accordance with law.


Chief Engineer (Lakes)
Bruhat Bengaluru Mahanagara Palike

**SHORT TERM AND LONG TERM ACTION PLAN IN THE JOINT
COMMITTEE REPORT IN THE MATTER OF O.A NO. 111 OF 2020**

The joint committee with due cognizance of the water quality of River Thenpennai reported in section 5.2 of the Joint Committee Report and the action plan already reported by the joint monitoring team comprising of KSPCB, KSPCB and TNPCB and execution of the action plan on remedial action for restoration of Bellandur, Agara and Varthur lakes at Bangalore by the monitoring committee in O.A no. 125/2017, the following long term and short term action plan has been prepared;

Action Points	Agency Responsible (Timeline)	Progress made as on 31 st March, 2021	Proposed Action Plan with target date (if any)	Remarks
1. Estimation of flow of water in River Thenpennai				
1. BWSSB to measure the flow and discharge of all the tanks / lakes located in Koramangla & Challaghatta, Hebbal Valleys flowing in to River Thenpennai viz., Agara, Bellandur, Varthur, Channasandra, Yellamalappa Chetty, samethanahalli weir Mugalur etc. Flow details of tanks in the upstream (Hoskote taluk, Bangalore rural, chikkaballapur) may also be included if overflow is detected.	BWSSB and Minor Irrigation (Three months)			
2. Flow or discharge of each of the tanks that are recharged by	Minor Irrigation (Three months)			

<p>treated wastewater by BWSSB i.e. 126 tanks in Kolar District and 65 tanks in Chikaballapur district.</p> <p>3. Measurement of flow of all the major drains (i.e storm water drains) joining the river for estimate of flow of River Thenpennai and maintenance of all records.</p>	<p>BWSSB and Minor Irrigation (Three months)</p>			
<p>II. Study of Performance evaluation of Sewage Treatment Plants in Bangalore by engaging a CSIR institute</p>				
<p>(i) BWSSB may engage a CSIR Institute like CLRI or NEERI or others for evaluating performance of STPs located in K&C and Hebbal valleys. (viz., there are 32 STPs in Bangalore including 21 STPs in Koramangla & Challaghatta and Hebbal Valleys). The same may be supervised by KSPCB. The final report may be submitted to KSPCB for review.</p>	<p>BWSSB and KSPCB (Six months)</p>			
<p>(ii) Completion of sewerage network for the villages in Koramangla & Challaghatta and</p>	<p>BWSSB (as per the timeline fixed in O.A No. 125/2017)</p>			

<p>Hebbal Valleys (of 110 villages identified by BBMP) for tapping the sewage generated, as already submitted to Hon'ble Tribunal, Principal Bench, Delhi in the matter of O.A no. 125/2017. (Next date of hearing: 15.01.2021)</p> <p>(iii) Strengthening of STP conveyance system to improve sewage getting completely tapped and treated, in order to avoid discharge into River Thenpennai.</p> <p>(iv) The outcome of the performance study of STPs may be submitted as Status of Compliance of the State Functionaries of Karnataka to the Monitoring Committee constituted in the matter of O.A 125/2017, for review and reporting.</p>	<p>BWSSB (on a regular basis)</p> <p>KSPCB and BWSSB (after completion of the study)</p>			
<p>III. Random Verification of grossly polluting (water polluting) industries located in the River Basin and Assessment of wastewater management and discharge mode.</p>				
<p>i. Among the industries that are</p>	<p>TNPCB & KSPCB (six months)</p>			

<p>Red/Orange category (small, medium and large) with treated effluent discharge option as surface water/sewer drain/others (which includes industries having ZLD) in River basin of Thenpennai be monitored for effluent characteristics by concerned SPCBs, so as to ascertain the quality of treated effluent discharge as per the Consent Conditions of SPCBs. The details of the compliance status and action taken report be placed in public domain (TNPCB and KSPCB website).</p>				
<p>IV. Rejuvenation of lakes to remediate the pollution caused in River Thenpennai</p>				
<p>1. Advisory for development of Biodiversity park and wetland in the River basin of Thenpennai or Dakshina Pinakini as per CPCB Guidelines titled '<i>Guidelines for setting up of Biodiversity parks in Floodplains of Rivers of India, including River Ganga</i>' be notified in</p>	<p>BDA and concerned State functionaries of Government of Karnataka (six months)</p>			

<p>consultation with Government of Karnataka and KSPCB.</p> <p>2. Completion of Biodiversity park, which comprises of;</p> <p>(i) Feasibility study for development of Biodiversity parks in the River basin of Thenpennai</p> <p>(ii) Preparation of Detailed Project Report (DPR) for development of Biodiversity parks in Bellandur an Varthur</p> <p>(iii) Award of Project</p> <p>(iv) Completion of the Project</p>	<p>Bangalore Development Authority (not more than One year or as per the timeline fixed in O.A No. 125/2017)</p>			
<p>V. Environmental Compensation be imposed by SPCBs after evaluating performance of STPs and identification of defaulters upon Random Verification</p>				
<p>1. EC be calculated and imposed based on the Performance Evaluation of STPs and Random Verification of Grossly Polluting Industries.</p> <p>2. EC be calculated and imposed based on Random Verification of Grossly Polluting Industries.</p> <p>3. Calculation of EC by the three member</p>	<p>BWSSB and KSPCB (Six months)</p> <p>TNPCB (Six months)</p> <p>CPCB (Six months on receipt of the Study Report and recommendations/criteria</p>			

<p>Committee comprising of CPCB, TNPCB and KSPCB, after submission of Reports by the concerned authorities (BWSSB, KSPCB, TNPCB).</p>	<p>for imposing EC from KSPCB and TNPCB)</p>			
<p>VI. Sewage and Solid Waste Management in the villages (13) adjoining River Thenpennai up till Kelavarapalli</p>				
<p>1. Feasibility study for providing Sewage Treatment options (such as oxidations ponds/ diversion channels or wetlands etc.) by TNPCB followed by implementation by Local authority of the district.</p>	<p>Feasibility study by TNPCB in consultation with local authority for implementation (six months)</p>			
<p>2. Solid Waste Management Plan be devised and executed by concerned Block Development Officer, Hosur taluk to ensure the solid wastes are not disposed on the riverside and managed as per Solid Waste Management Rules, 2016.</p>	<p>Concerned Block Development Officer to submit to TNPCB (six months)</p>			
<p>VII. Regular Water Quality Monitoring at important locations</p>				
<p>1. The trend of water quality and its improvement at major confluence points may be monitored for the year 2021-22 on a</p>	<p>TNPCB & KSPCB (to monitor on yearly basis)</p>			

<p>monthly basis and a report be submitted to CPCB to ensure the quality of water flowing in River Thenpennai.</p>				
<p>2. Responsibility as a Custodian of Rivers/tanks in Karnataka vests with State Functionaries namely, BWSSB, BBMP, BDA, Lake Development Authority, Minor Irrigation Department. Therefore, Water Quality of the water flowing in River Thenpennai be maintained pristine and tested for its characteristics in the respective jurisdictions.</p>	<p>BWSSB, BBMP, BDA, Minor Irrigation Department (every year)</p>	<p>←</p>	<p>—</p>	<p>—</p>

Note: In compliance to the Hon'ble NGT Order dated 18.02.2021, the improvement of the water quality on account of the short-term measures and long term measures that has been taken by the departments may also be provided.

S. M. M. S. S. S.
 Chief Engineer (Lakes)
 Bruhat Bengaluru Mahanagara Palike



Annexure VII
ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ

Bangalore Development Authority



ಸಂಖ್ಯೆ : BDA/Com/EM/T- 139 /2022-23
No.

ದಿನಾಂಕ : 05/07/2022
Date :

To,

Regional Director,
Central Pollution Control Board,
Regional Directorate (South),
Nisarga Bhawan, A-Block
1st & 2nd Floors, Thimmaiah Road,
7th D Main, Shivanagar,
Bangalore-560 079.

As discussed, for incorporation in the compliance status report, which already submitted for obtaining approval of competent authority
scd(MSP/157)

Sir,

Sub:- Hon'ble NGT, Southern Zone, Chennai order in the matter of O.A. 111 of 2020 (SZ) regarding "Frothing of Chemical Foam in the River Thenpennai"

- Ref:-
1. Hon'ble NGT order in the matter of O.A. 111 of 2020 (SZ), dated.18.02.2021.
 2. Hon'ble NGT order in the matter of O.A. 111 of 2020 (SZ), dated.28.06.2021.
 3. This office letter no.BDA/Com/EM/T-32/2021-22, dated.21.05.2021.
 4. Your office e-mail dated.16.09.2021.
 5. This office letter no.BDA/Com/EM/T-142/2021-22, dated.17.09.2021.
 6. Your office e-mail dated.23.12.2021.
 7. Your office letter No. Tech(39)/Legal(NGT)/RDS/2021-22/204, dated.15.06.2022. addressing Principal Secretary department of Forest, Environment and Ecology

With reference to the above subject regarding rejuvenation of Bellandur & Varthur lakes to remediate the pollution caused in the River Thenpennai, the up to date Progress Report by Bangalore Development Authority is hereby attached for further necessary action.

Yours faithfully

[Handwritten Signature]
Commissioner,

Bengaluru Development Authority

[Handwritten Signature]
Bengaluru

BANGALORE DEVELOPMENT AUTHORITY

Hon'ble NGT, Southern zone, Chennai order in the matter of OA No.111/2020 (SZ) regarding "Frothing of Chemical Foam in the River Thenpennai" – Compliance and Action Taken Report

Case No	Petitioner	Subject	Status	Action Taken
OA 125/2017	Court on its own	Preparation of Detailed Project Report (DPR) for Development of Biodiversity parks in Bellandur & Varthur Lake.	<p>Bangalore Development Authority has the jurisdiction of Bellandur & Varthur lakes. It has undertaken the desilting work in these two lakes. As per the action plan submitted by BDA for rejuvenation of Bellandur and Varthur lake, development of wetland provision is made in the DPR. However, provision for development of biodiversity park was included pursuant to the Hon'ble NGT direction on 11.12.2019 indicating "Steps may be explored for development of wet lands and biodiversity parks apart from other remedial action for reducing the pollution load on the recipient water bodies".</p> <p>Accordingly for development of biodiversity parks in Bellandur & varthur lakes, the following available area within the lake periphery was prepared under the advice of NGT appointed Monitoring committee.</p> <p>The Hon'ble NGT appointed Monitoring Committee submitted the following area details on formation of Biodiversity parks before the Hon'ble NGT.</p> <p>An area of 52.24 acres (East of bund 5.8 acres near suncity 13.85 acres near Y-junction North west corner 11.77acres Ambedkar nagar and nearby area 14.87</p>	Desilting work is under progress. Construction of wet land in Bellandur at Y Junction for an extent 85 acres and at HAL inlet for an extent of 60 acres is proposed and necessary plant species and general arrangement of wetland has been vetted by

			<p>acres) in Bellanduru lake: 16.6 acres (near main let 6.9 acres: Siddapura west side 2.46 acres and near Balagere 7.24 acres) in Varthur lake for biodiversity parks. The suggested areas are out of the periphery of the lakes. In such areas (biodiversity parks.) silt of appropriate quantity from the lakes may be used for rising to appropriate heights. The biodiversity parks may be raised with help of an expert committee in the field. The biodiversity parks will act as carbon sink, lung space and habitat to avian and other fauna and flora. The committee suggested that no other structures should be allowed in the lake areas than as suggested by the NGT in para 28(xii)</p> <p>The Hon'ble NGT in its order dated 4/13.08.2020 has rejected the proposals with the following observation. "BDA has wrongly understood that biodiversity parks are to be setup within the lake boundary. Such parks are to be setup along the periphery of the lake boundary.</p> <p>Once again to impress upon the Hon'ble NGT for formation of biodiversity park and islands within the lake on similar lines done in other lakes of Bangalore, vide IA No.392/2020 and 395/2020 in Original Application No.125/2017. Hon'ble NGT rejected the proposal in its order dated 15.12.2020, highlighting the submission of learned Amicus Curiae to the Hon'ble NGT as below;</p>	<p>Dr.T.V.Ramachandra, Prof. IISc, Bangalore.</p> <p>In Varthur lake, about 70% of de-silting work is completed. Construction of wet land at main inlet for an extent of 120 acres has been planned and will be taken up after the completion of rainy season. Similarly, necessary plant species and general arrangement of wetland has been vetted by Dr.T.V.Ramachandra, Prof. IISc, Bangalore.</p> <p>De-silting work, transportation of excavated silt and wetland construction work has been delayed due to recent heavy rains in summer season, due to which lakes are flooded with rain water. Once the water level in the lake recedes the de-silting work, transportation of silt and wetland construction works will</p>
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<p>be taken up and completed.</p>	<p><i>"The BDA has wrongly understood that biodiversity parks are to be set up within the lake boundary. Such parks are to be set up along the periphery of lake boundary".</i></p> <p><i>To carry out the biodiversity parks along the periphery of lake boundary in Bellandur & Varthur lake, no Government land is available along the periphery of the lake, as per the information given by the Additional Director of Land Records, (Bangalore east) Dated.06.11.2020.</i></p> <p><i>Once again on the advice of Hon'ble NGT appointed Monitoring Committee to identify and carryout survey, the area between tank full level and tank boundary where water does not spread throughout the year. Such area has been identified and marked on the lake map with levels. The new proposal with 99 acres 07 guntas in Bellandur lake and 31acres 15guntas in Varthur lake were indentified and submitted to Hon'ble NGT appointed Monitoring committee. The Monitoring Committee submitted the proposal before the Hon'ble NGT for consideration. Hon'ble NGT in its order dated.12.03.2021 placed the observation & comments of Amicus Curiae as stated below:</i></p> <p><i>Progress against item No.20 with reference to setting up of bio-diversity park is not satisfactory. It is pointed out that the BDA has again taken a wrong stand for demarcating area between maximum flood level and</i></p>
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		<p><i>the lake periphery instead of doing so along the periphery of the lake boundary i.e. ensuring that area of lakes is not used in the process. The proposal of the BDA appears to be to develop the bio-diversity park within the boundary of the lake and the full tank level adversely affects the lake.</i></p> <p><i>Hence, there is no space available for development of biodiversity parks near Bellandur & Varthur lake. However development of wetland has already been considered and work order has been issued to the agencies. Meanwhile agencies have taken up de silting of designated area of wetland for construction of wetland in Bellandur & Varthur lakes.</i></p>	
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Anil Kumar
Commissioner,
BDA, Bengaluru
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