

Date: 06.03.2020

Monitoring Committee

(Appointed by NGT vide order dated 06.12.2018 and 18.12.2019 in O.A.No.125/2017)

Karnataka State Pollution Control Board,
"Parisara Bhavan", 2nd Floor,
#49, Church Street, Bengaluru-560 001.
E-mail:- mcngt61@gmail.com

To,

The Registrar,
National Green Tribunal,
Faridkot House, Copernicus Marg,
Near India Gate, New Delhi,
Delhi -110 001.

Sir,

Sub: Synopsis of the Report of the Committee to the National Green Tribunal in compliance of its orders dated 18.12.19 and 06.12.2018 issued in regard to the Bellandur, Varthur and Agaram Lakes.

Pursuant to the directions issued by the Hon'ble National Green Tribunal (NGT) in its order dated 18.12.2019 read with order dated 06.12.2018, the Committee headed by the undersigned had met several times (8 meetings and 7 field visits after the 18.12.2019 NGT order) and in these meetings it reviewed the progress of works/activities of the implementation of the directions of the National Green Tribunal and also the implementations of the directions issued by this Committee during visits and meetings.

This Committee has submitted a report dated 20.09.2019 conveying to the NGT, the action taken by this Committee and compliance made by the concerned departments of the Government of Karnataka as on that day which may be considered as a part of this report. It is further stated here that for the works / activities which are fully complied and submitted in the report dated 20.09.2020 as per the order dated 06.12.2018 have not been specifically traversed in this report. The emphasis has been laid on the “sum up” directions issued in the order dated 18.12.2019. It may be noted that there was no further progress after the progress achieved before submitting the final report (20.09.2019) except the construction activities of the ongoing works in STPs (BWSSB). The progress has accelerated since the Committee resumed its review from 18.12.2019. Therefore, a continuous Monitoring mechanism is emphasised.

It is submitted that the names of the officials who are responsible for carrying out the ongoing works are the same as submitted in the report dated 20.09.2020.

In this synopsis details are given as per the sequence of the orders dated 18.12.2019 and 06.12.2018.

Sl No	Directions in NGT order dated 18.12.19 and / or 06.12.18	Particular of the works	Observations of the Committee for Bellandur and Varthur lakes
1	2	3	4
1	<i>18.12.2019 para 28 (i) Timelines for execution of projects for setting up of STPs and laying of sewerage network may not be extended beyond 30.09.2020. If the works remains incomplete even till 30.09.2020, compensation will be liable to be paid @</i>	a) Construction of 150 MLD Sewage Treatment Plant at K&C Valley.	Overall 75.21% is progress is achieved against the planned target of 86.38%. The BWSSB states that the pending work will be completed by 30.07.2020.
		b) Sarakki - 5.0 MLD STP at Sarakki lake.	Completed and commissioned.
		c) Hulimavu - 10 MLD STP.	Completed and commissioned.
		d) Chikkabeguru - 5.0 MLD	The overall progress is 72.00% against the planned

<p><i>Rs. 10 lakh per STP per month which may be liable to recovered from the erring officers, apart from adverse entries in their service records and other adverse action.</i></p>	STP.	target of 92.00%. The work will be completed by 31.03.2020
	e) Agaram - 35 MLD STP	The STP is put into operation, presently stabilization of process is under progress. The overall progress is 97.24% against the planned target of 100.00%.
	f) Construction of 210 MLD capacity ISPS at Koramangala Sports Complex.	The ISPS is ready for operation. But the sewage will be pumped after completion of the 150 MLD STP i.e., 30-07-2020.
	g) Laying of 1800 mm dia raising main from 210 MLD ISPS to 150 MLD STP.	Laying of pipelines in the storm water drains (SWD) is very difficult as the location of the work in this drain is at the end of the valley carrying huge quantity of storm water. At present 3500 RMT of pipeline work is completed as against 5375 RMT. However, this work will be completed before 30-07-2020 when the STP is commissioned.
	h) Waste water wet well - 32.5 MLD capacity near the premises of 90 MLD Bellanduru	Work order is issued. It is planned to complete by 19.02.2021.
	i) Augmenting sewage from Iblur side and conveying to Bellandur Ammannikere STP (Laying of sewer sub main)	About 950 mtrs out of 2425 mtrs of 900/600/450mm dia RCC NP3 pipeline along the alignment is laid. Work is under progress. The work is planned to be completed by 30-06-2020.

		<p>j) A proper mechanism should be developed/placed to identify the blockages in the existing UGDs and to attend them mechanically.</p>	<p>BWSSB has 165 Jetting cum suction machines and 40 de-silting machines to clean the UGD lateral network. 10 more machines are under procurement and by February 2020, BWSSB will be in a position clear the manholes once in a year. 6 High Pressure desilting machines and one recycler machine are engaged in cleaning of sub-mains and main sewers.</p>
		<p>k) Proposal for upgradation of all existing STPs with facilities to removal of Biological Nutrient Removal at 248 MLD STP at K&C Valley.</p>	<p>The operating STPs of 90 MLD at Bellandur Amanikere, 60 MLD STP at K&C Valley, 5 MLD STP at Sarakki and under construction STP's of 150 MLD at K&C Valley, 5 MLD at Chikkabegur, 10 MLD Hulimavu and 35 MLD STP at Agaram are functioning with Biological Nutrient Removal process. The working STPs at Cubbon Park and Lalbagh are Tertiary Treatment Plants. For the 248 MLD (KC Valley), the approval of the State Government is obtained and a work order dated 03.03.2020 has been issued in favour of M/s. KRIDL, Bengaluru, to complete the work by 30.09.2020. Further, a work order has been issued to M/s. CH2M Hill (India) Pvt Ltd., on 02.03.2020 for project management consultant services for the work of upgradation / re-habitation of existing STPs at KC Valley. The works are expected to be completed by 30.09.2020 as reported by Chairman, BWSSB.</p>

		<p>1) To properly design UGD network so as to feed the existing STPs to their full capacity. Reuse of treated water from the STP under construction.</p>	<p>To stop the sewage entering natural drains at 294 locations are identified where sewage is entering into SWD. The work is under progress. With regard to reuse of the treated water BWSSB has envisaged the utilization as under:-</p> <table border="1"> <thead> <tr> <th>Sl. No</th> <th>Name of the STP</th> <th>Capacity (in MLD)</th> <th>Quantity committed to Minor Irrigation Department (in MLD)</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td rowspan="3">K & C Valley</td> <td>218</td> <td>218</td> <td></td> </tr> <tr> <td>2.</td> <td>30</td> <td>30</td> <td></td> </tr> <tr> <td>3.</td> <td>60</td> <td>60</td> <td></td> </tr> <tr> <td>4.</td> <td>Bellandur Ammanikhane</td> <td>90</td> <td>90</td> <td></td> </tr> <tr> <td>5.</td> <td>Kadabeesanahalli</td> <td>50</td> <td>-</td> <td>Committed to KIADB.</td> </tr> <tr> <td>6.</td> <td>Sarakki (Recently commissioned)</td> <td>5</td> <td>4</td> <td></td> </tr> <tr> <td colspan="2">Total of Existing STPs</td> <td>453</td> <td>402</td> <td></td> </tr> <tr> <td colspan="5">B Under Construction STPs</td> </tr> <tr> <td>7.</td> <td>Agara</td> <td>35</td> <td>30</td> <td></td> </tr> <tr> <td>8.</td> <td>K & C Valley</td> <td>150</td> <td>120</td> <td></td> </tr> <tr> <td>9.</td> <td>Hulimavu</td> <td>10</td> <td>9</td> <td></td> </tr> <tr> <td>10.</td> <td>Chikkabegur</td> <td>5</td> <td>4</td> <td></td> </tr> <tr> <td colspan="2">Total of Under Construction STPs</td> <td>200</td> <td>163</td> <td></td> </tr> <tr> <td colspan="2">Total</td> <td>653</td> <td>565</td> <td></td> </tr> </tbody> </table>	Sl. No	Name of the STP	Capacity (in MLD)	Quantity committed to Minor Irrigation Department (in MLD)	Remarks	1.	K & C Valley	218	218		2.	30	30		3.	60	60		4.	Bellandur Ammanikhane	90	90		5.	Kadabeesanahalli	50	-	Committed to KIADB.	6.	Sarakki (Recently commissioned)	5	4		Total of Existing STPs		453	402		B Under Construction STPs					7.	Agara	35	30		8.	K & C Valley	150	120		9.	Hulimavu	10	9		10.	Chikkabegur	5	4		Total of Under Construction STPs		200	163		Total		653	565	
Sl. No	Name of the STP	Capacity (in MLD)	Quantity committed to Minor Irrigation Department (in MLD)	Remarks																																																																								
1.	K & C Valley	218	218																																																																									
2.		30	30																																																																									
3.		60	60																																																																									
4.	Bellandur Ammanikhane	90	90																																																																									
5.	Kadabeesanahalli	50	-	Committed to KIADB.																																																																								
6.	Sarakki (Recently commissioned)	5	4																																																																									
Total of Existing STPs		453	402																																																																									
B Under Construction STPs																																																																												
7.	Agara	35	30																																																																									
8.	K & C Valley	150	120																																																																									
9.	Hulimavu	10	9																																																																									
10.	Chikkabegur	5	4																																																																									
Total of Under Construction STPs		200	163																																																																									
Total		653	565																																																																									
2	<p>18.12.2019 para 28 (ii) <i>Bengaluru Water Supply and Sewerage Board (BWSSB) must ensure that no sewage /</i></p>	<p>a) Construction of diversion channels to divert the sewage / effluent. b) Interim remediation.</p>	<p>The peripheral temporary diversion channels have been constructed by the BDA in both the lakes and sewage water is flowing through this channel. Entry of sewage water into these two lakes have been stopped. Further,</p>																																																																									

	<p><i>effluent is discharged into the lakes and till setting up of STPs, interim remediation must be done forthwith. Any default in this regard will result in requirement to pay compensation of Rs. 5 lakh per month per inlet into the lakes from 01.02.2020.</i></p>	<p>c) Biological nutrient removal at 248 MLD STP at KC Valley.</p>	<p>the BWSSB have installed aerating systems and has completed by 28.02.2020 at 1) HAL side and Kempapura inlet, 2) Agaram inlet 3) Koramanagala inlet, 4) Iblur inlet coming under Bellanduru Lake, 5) Northern and 6) Southern side of Varthur lake for inline treatment of sewage. Further, in addition the BWSSB is also installing artificial floating islands. It is submitted that during the rainy season, rain water of the catchment area of KC Valley flows through the Bellanduru and Varthur lakes. In the past, flooding in the low laying habitat areas have been reported during the monsoon. The State Government (BDA and BBMP) should take appropriate measures during the de-silting period so that no adverse impact on de-silting as well as flooding in habitat areas take place.</p>
<p>3</p>	<p>18.12.2019 para 28 (iii) <i>BWSSB may further ensure that treated water is not discharged into the UGD network. Action may be taken against persons responsible for having allowed this to be done earlier resulting into loss of Rs. 2 Lakhs per day i.e. Rs. 60 Lakhs per month and more than Rs. 7 Crore per year without any</i></p>	<p>Stoppage of treated water into the UGDs.</p>	<p>The BWSSB submits that the excess treated water was allowed to be discharged in the UGD network as per the conditions stipulated in the consent for operation issued to private STPs by KSPCB. After the orders of NGT, the BWSSB in consultants with KSPCB, the connections given for letting treated water to UGDs have been disconnected for 109 units (out of 496 units, in 109 units UGD connections are disconnected; there is no BWSSB UGD network near 378 units; 2 units are beyond the 110 villages limits of BBMP; 5 units addresses are repeated in the list; 1 unit address is not traceable and 1 unit does not have STP). The ACS, UDD, submits that since, treated water was allowed as</p>

<p><i>justification whatsoever.</i></p>		<p>per the conditions in the order of consent to operate, no action can be taken against the officials of BWSSB in this matter.</p> <p>In response to the above, the Member Secretary, KSPCB, reports that from the list of 109 Residential/Commercial project total quantity of sewage generated is about 11.462 MLD, out of which by utilizing treated sewage for secondary usage viz.. toilet flushing, floor washing, vehicle washing and for gardening there is an excess treated sewage of about 4.58MLD. At present BWSSB is operating 7 sewage treatment plant in Bellanduru catchment and 3 more are under stabilization. Total capacity of the 7 operating STP's is 448 MLD and 3 STP's under stabilization is about 50 MLD.</p> <p>It indicates that the volumetric load from discharge of excess treated sewage into BWSSB UGD is 1.03 %. This may be considered as small quantity. The Member secretary submits that their officers / officials are doing regular monitoring and taking actions to prevent the pollution. He has requested that in this background, no action against the officials may be taken. The NGT is requested to take a view in the above facts and circumstances.</p>
---	--	--

4	<p>18.12.2019 para 28 (iv) <i>Sources of discharge of sewage be controlled / regulated and electricity and water supplies to the defaulting establishments be stopped for enforcement of law till remedial steps are taken for compliance.</i></p>	<p>Units not have in STPs and discharging sewage directly in UGDs / SWDs and others.</p>	<p>KSPCB reports that there are 61 units identified which are not having STPs. Rs.271.5 crores are estimated to be recovered. No money has been paid by the units till date. The closure orders under section 33 (a) of Water Act are under process of issuing show cause notices to the concerned.</p>
5	<p>18.12.2019 para 28 (v) <i>Encroachments which are still continuing be removed by using force wherever necessary. If any injunction has been granted by any Court which is considered erroneous, higher forum can be moved so that law is upheld.</i></p>	<p>Encroachment from the Ambedkar Colony.</p>	<p>Regarding encroachment in Bellanduru lake (Ambedkar Colony) a Writ Petition No.50953/2019 is pending before the Hon'ble High Court of Karnataka in which an interim order has been passed on 20.11.2019. Steps are being taken to get the interim order vacated. As regards the encroachments in Varthur lake, the ADLR, Bengaluru, East taluk, has submitted a report dated 04.02.2020 stating that in the year 1875, an area of 445 acres and 14 guntas of land were shown as lake area. Subsequently, in the second settlement done in the year 1958, the area in survey no.319 remained the same as 445.14 acres. Out of which an area of 5.2 acres was granted on 21.12.1976 to a party and for this land a new survey no.477 was assigned. As a result in the survey no.319 of Ammanni Bellanduru of Varthur Hobli, the lake area remained as 439.39 acres (survey no.319). The survey carried out after the NGT order by survey and settlement department the extent of land is 439.34</p>

			acres including encroachments (at periphery) within the lake boundary. The NGT may kindly accept the report of the ADLR.																																				
6	<i>18.12.2019 para 28 (vi) Action against erring officers which has not yet been taken must be initiated forthwith as already directed. Failures of officers still in service should be duly reflected in their ACRs.</i>	Action against the erring officers.	<p>The ACS (UDD), of State Government has submitted the list of officers who were found responsible for failure in their duties to maintain the lakes. He submits that notices have been issued for initiating the action against them. The name of officers with departments are listed here under:-</p> <p>1) BBMP:-Period from 20.09.2008 to 03.05.2011</p> <table border="1"> <thead> <tr> <th>SI</th> <th>Name</th> <th>Designation</th> <th>Dept.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>J.C. Prakash Murthy</td> <td>Assistant Engineer (1.10.2008 to 30.11.2009)</td> <td>PWD</td> </tr> <tr> <td>2</td> <td>H.P. Mohan Kumar</td> <td>Assistant Executive Engineer (2.3.2009 to 3.1.2011)</td> <td>PWD</td> </tr> <tr> <td>3</td> <td>H. Chandrappa</td> <td>Assistant Engineer, K.R.Puram Sub-division (2.12.2009 to 11.7.2012)</td> <td>PWD</td> </tr> <tr> <td>4</td> <td>J.C. Prakash Murthy</td> <td>Assistant Executive Engineer (after promotion) (2.12.2009 to 7.7.2010)</td> <td>PWD</td> </tr> </tbody> </table> <p>2) BWSSB:-</p> <table border="1"> <thead> <tr> <th>SI</th> <th>Name</th> <th>Designation</th> <th>Dept.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>S.M. Basavaraju</td> <td>Chief Engineer (14.11.2006 to 8.4.2013) & (10.5.2013 to 29.3.2014)</td> <td>BWSSB</td> </tr> <tr> <td>2</td> <td>S.M. Ramakrishna</td> <td>Chief Engineer (29.3.2014 to 11.6.2014) as Chief Engineer WWM (I/c) & (11.6.2014 to 31.7.2014) as Chief Engineer WWM</td> <td>BWSSB</td> </tr> <tr> <td>3</td> <td>S.R. Roopa kumar</td> <td>Additional Chief Engineer</td> <td>BWSSB</td> </tr> </tbody> </table>	SI	Name	Designation	Dept.	1	J.C. Prakash Murthy	Assistant Engineer (1.10.2008 to 30.11.2009)	PWD	2	H.P. Mohan Kumar	Assistant Executive Engineer (2.3.2009 to 3.1.2011)	PWD	3	H. Chandrappa	Assistant Engineer, K.R.Puram Sub-division (2.12.2009 to 11.7.2012)	PWD	4	J.C. Prakash Murthy	Assistant Executive Engineer (after promotion) (2.12.2009 to 7.7.2010)	PWD	SI	Name	Designation	Dept.	1	S.M. Basavaraju	Chief Engineer (14.11.2006 to 8.4.2013) & (10.5.2013 to 29.3.2014)	BWSSB	2	S.M. Ramakrishna	Chief Engineer (29.3.2014 to 11.6.2014) as Chief Engineer WWM (I/c) & (11.6.2014 to 31.7.2014) as Chief Engineer WWM	BWSSB	3	S.R. Roopa kumar	Additional Chief Engineer	BWSSB
SI	Name	Designation	Dept.																																				
1	J.C. Prakash Murthy	Assistant Engineer (1.10.2008 to 30.11.2009)	PWD																																				
2	H.P. Mohan Kumar	Assistant Executive Engineer (2.3.2009 to 3.1.2011)	PWD																																				
3	H. Chandrappa	Assistant Engineer, K.R.Puram Sub-division (2.12.2009 to 11.7.2012)	PWD																																				
4	J.C. Prakash Murthy	Assistant Executive Engineer (after promotion) (2.12.2009 to 7.7.2010)	PWD																																				
SI	Name	Designation	Dept.																																				
1	S.M. Basavaraju	Chief Engineer (14.11.2006 to 8.4.2013) & (10.5.2013 to 29.3.2014)	BWSSB																																				
2	S.M. Ramakrishna	Chief Engineer (29.3.2014 to 11.6.2014) as Chief Engineer WWM (I/c) & (11.6.2014 to 31.7.2014) as Chief Engineer WWM	BWSSB																																				
3	S.R. Roopa kumar	Additional Chief Engineer	BWSSB																																				

				(31.10.2007 to 5.6.2008)		
			4	S.P. Rudra murthy	Additional Chief Engineer (5.6.2008 to 13.6.2012)	BWSSB
			5	V. Mahesh	Additional Chief Engineer (27.3.2013 to 10.7.2015)	BWSSB
			6	K.R. Manjunath	Additional Chief Engineer (10.7.2015 to 28.10.2016)	BWSSB
			7	B.M. Purushotham	Executive Engineer (29.10.2007 to 23.5.2008)	BWSSB
			8	C. Abdul Nazir	Executive Engineer (23.5.2008 to 4.1.2012)	BWSSB
			9	B.N. Sidda Gangaiah	Executive Engineer (4.1.2012 to 31.8.2012) & from 31.8.2012 to 15.11.2012	BWSSB
			10	C.C. Putta Mallappa	Executive Engineer (15.11.2012 to 26.8.2013)	BWSSB
			11	B.S.C. Soma Shekar	Executive Engineer (26.8.2013 to 7.6.2014)	BWSSB
			3) Bengaluru Development Authority:-			
			1	Rizwan Beig	Executive Engineer, from 2010 to 2011 & 2015 to 2016	BDA
			2	S. Mallikarjuna Swamy	Executive Engineer, from 2010 to 2011 & 2015 to 2016	BDA
			3	Ravi narayan reddy	Executive Engineer, from 2010 to 2011 & 2015 to 2016	BDA
7	<i>18.12.2019 para 28 (vii) The State PCB itself may lay down standards for phosphorus instead of waiting for notification by MoEF&CC</i>	Issue of notification by MoEF&CC and by the State Government	The KSPCB reports that the Bureau of Indian Standards has issued notification on phosphorus limits in soaps and detergents. The KSPCB has recommended to issue the notification to State Government limiting the phosphorus in soaps and detergents. The State Government yet to issue the order.			

8	<p>18.12.2019 para 28 (viii) <i>The State of Karnataka may either resolve the issue of fencing with the defence establishment or put such establishments to notice to place their objections before this Tribunal within one month of such notice after which the State of Karnataka will be at liberty to proceed with the fencing and such defence establishment will stand restrained from interfering unless otherwise directed by this Tribunal or any other authority.</i></p>	<p>Construction of diversion channel from “Y” junction and fencing of the lake area in the disputed land.</p>	<p>The defence authorities have given the permission to construct the diversion channel. As regards the fencing in the defence area, Committee has been told that this work would be taken up by the defence itself. Presently there is no threat of encroachment at this point. But the work of fencing has to be done.</p>
9	<p>18.12.2019 para 28 (ix) <i>Compensation already assessed be recovered by adopting coercive measures such as disconnection of electricity and water supplies.</i></p>	<p>Recovery of 19.85 Crores from 376 defaulting units where STP is not functioning / standard norms are not met.</p>	<p>An amount of Rs.75 Lakhs have been collected from the 14 units. Further, a Writ Petition No.4284/2020 has been filed before the Hon’ble High Court of Karnataka by M/s. Share wood Residents Association; an interim direction (26.02.2020) has been issued by the Hon’ble High Court as under:- ➤ By way of ad-interim relief, we restrain the second respondent from initiating any proceedings to recover the amounts mentioned in Annexures-F1 and F2.</p>

			<p>➤ However, notwithstanding pendency of this petition it will be always open for the second respondent (KSPCB) to issue show cause notices in terms of Annexures-F1 and F2.</p> <p>➤ Needless to add that before passing final orders on the notices at Annexures-A1 and A2 as well as G1 and G2 and show cause notices issued in terms of paragraph 9 above, an opportunity of being heard shall be granted to the petitioners.</p> <p>Further, in another Writ Petition No.3303/2020, the Hon'ble high Court has issued an interim order (12.02.2020) directing the KSPCB to issue show cause notice to the petitioner to be heard for a liability of Rs.7 Crores. Meanwhile, the electricity supply to the premises of the petitioner shall not be disconnected. The NGT may kindly take note of it to issue further direction in the subject matter.</p>
10	<p><i>18.12.2019 para 28 (x) Steps be taken expeditiously for de-silting, de-weeding. Analysis of sludge and silt may be carried out before its disposal based on the result of such analysis, the mode of disposal and protocol be determined in accordance with laid down principles under the relevant Rules.</i></p>	<p>a) De-silting of Bellanduru and Varthur lakes.</p>	<p>Tenders for both the lakes have been invited and the same are in process for issue of work orders. Even after continuous persuasion by the Committee, quarries for dumping the silt from both the lakes have not been identified so far by the Deputy Commissioner, Bengaluru Urban / BDA.</p> <p>It is stated here that the Minor Irrigation Department is laying a pipeline for lifting secondary treated sewage water from KC STP to fill 69 tanks in Anekal Taluk of Bengaluru Urban District along the boundary of Bellanduru lake of a length of 4.865 km at the depth of</p>

			<p>1.2 meter from the present surface. Out of this about 1.6 km falls in BDA occupied lake area and remaining 3.265 km falls in disputed defence area. The Karnataka Lake Conservation and Development Authority has accorded permission for laying the pipeline vide letter dated 02.03.2019. The approval from the defence authorities has not been yet obtained. The construction work is under progress. It is recommended that there shall not be any mud road / pakka road formation over the pipelines now being laid. Also, the pipeline shall not hinder the flow of water or fragment the wetlands at the inlet of Bellanduru lake. It should also take into consideration the rainy water flow during the monsoon. All actions should be taken to prevent the flooding in the habitat areas. They should redesign it accordingly. Further, BWSSB has also laid / laying UGD of a length of 2.5 km (1000 mm diameter) in the Bellanduru lake. An approval in this regard has been obtained from the Lake Development Authority vide letter dated 10.12.2015 to supply the sewage water to STPs at KC Valley.</p>
--	--	--	--

		<p>b) Sludge and silt analysis, protocol development and mode of disposal.</p>	<p>The silt / sludge samples at 5 locations (3 sub samples, at top, middle and bottom in each location) in Bellanduru lake and 4 locations (top soil and at 2 feet depth) in Varthur lake were collected and got analysed for heavy metals from CPCB. Further, more samples have been collected from Varthur lake for re-verification of the results as given by the CPCB. The results are awaited.</p> <p>The recommendations of CPCB in the matter are as under:-</p> <ul style="list-style-type: none"> • The results indicated that the sediments of Bellandur Lake (three out of five locations) has heavy metal values above response level and required to be disposed accordingly. At Varthur Lake, at all locations (5 No) the values reported for heavy metals are lesser than response levels. The disposal methods of sediments may be further evaluated based on compost quality as per Solid Waste Management Rules 2016 and Screening level values for Heavy metals. • The Guidelines for evaluation of MSW Landfills as per Solid Waste Management Rules, 2016 may be the most suitable option and technology for disposal of sediments. The Central Public Health and Environmental Engineering Organization Manual may also be referred for guidance. <p>The matter was discussed at length in the meeting of the Committee on 29.02.2020. The view of CPCB seems to</p>
--	--	--	--

			<p>be reasonable. However, after discussion, views of the KSPCB were called for and the Member secretary has submitted his views on 04.03.2020 as under:-</p> <ol style="list-style-type: none"> 1) Since there are heavy metals found which are more than the prescribed limits for the usage of the silt for the Agriculture purposes, the sludge / silt cannot be used for the agriculture purpose as a manure, as there could be chances of getting the heavy metals into the food chain. 2) There is a need to rule out the possibility of the existence of heavy metals / any other toxic substances, other than heavy metals. The list of such toxicity of the materials with threshold limits is prescribed in the Schedule II (rule 3 (1) (17) (ii)) of Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016. 3) Also as recommended by the TAC held on 27.01.2020, it is advisable to do the monitoring of the sludge at different depths and locations by making grid to find out heavy metals and other parameters as per schedule II of Hazardous and other waste (Management & Transboundary Movement) Rules, 2016 and to submit the report to Karnataka State Pollution Control Board to decide about the methodology of disposal. <p>The BDA submits that the NEERI requires 5 months for analysing the sludge and silt samples for 79 parameters after receipt of advance of Rs.65.25 Lakhs. This may</p>
--	--	--	--

			<p>delay the de-silting work.</p> <p>In view of the conflicting opinions, the NGT may kindly direct the KSPCB to get the already collected samples analysed for 79 parameters from a third party recognized source to determine the mode of disposal and protocol.</p>
11	<i>18.12.2019 para 28 (xi) The State PCB may develop a robust water quality monitoring program for monitoring of water quality of drains leading to the lakes and also undertake water quality monitoring at atleast 5 locations for each lake.</i>	Water quality monitoring in drains at 5 locations in each lake.	Samples are collected and being analysed. However, presently the sewage water is diverted through the diversion channels in both the lakes and no water enters into the lakes.
12	<i>18.12.2019 para 28 (xii) Steps may be taken to explore development of wetlands and biodiversity parks apart from other remedial action for reducing the pollution load on the recipient water bodies.</i>	Development of wetlands and biodiversity parks.	The BDA has suggested an area of 52.24 acres (East of bund 5.8 acres; near Sun city 13.85 acres; near Y-junction Mantri side 5.87 acres; near Y-junction North West corner 11.77 acres and Ambedkar nagar and nearby area 14.87 acres) in Bellanduru lake; 16.6 acres (near main let 6.9 acres; Siddapura West side 2.46 acres and near Belagere 7.24 acres) in Varthur lake for biodiversity parks. The suggested areas are at the periphery of the lakes. In such areas (biodiversity parks), silt of appropriate quantity from the lakes may

			be used for raising the appropriate heights. The biodiversity parks may be raised with the 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 suggest that no other structures should be allowed in the lake areas than as suggested by the NGT in para 28 (xii).
13	<i>18.12.2019 para 28 (xiii) C&D waste processing facility be commissioned expeditiously and steps be taken to ensure that the timeline proposed is adhered to.</i>	Construction of waste processing units to process the C&D / solid waste generated in the city.	BBMP has submitted that a work order has been issued to M/s. Rubble Revival Private Ltd., to design, finance, build, operate and transfer 750 MTPD constructions and demolition waste processing facility and transferred the land measuring 10 acres at survey number 50 of Kannur village to the company on 20.02.2020. The plant is expected to operate in twelve months' time.
14	<i>18.12.2019 para 28 (xiv) Real time water quality system be commissioned by 31.01.2020 as proposed.</i>	Installation of Real time water quality system by 30.01.2020.	Real time water quality systems have been installed at 3 locations.
15	<i>18.12.19 para 28 (xv) The issue of removing 1.5 km road laid upon the lake bed, within the boundary of Varthur lake, by dumping of C&D debris be finalized as per directions of Justice Hegde Committee in terms of para 26 above.</i>	Removing of 1.5 km road laid upon the lake bed in Varthur lake.	The Bengaluru Development Authority has proposed biodiversity parks as per para 28 (xii) of the NGT order dated 18.12.2019 (para 12 above). With this proposal the areas about 16.6 acres which falls outside the pipeline but within the outer lake boundary will not be available for water impounding. Hence, there would not be necessity of vents and anchoring as suggested by Minor Irrigation Department. Since the act of laying pipeline by the Minor Irrigation Department was without authority of Law and

			<p>non-approval of competent authority, this Committee is of the opinion that suitable fine be levied on the Minor Irrigation Department by the NGT.</p> <p>Further, no action has been taken as per para 19 (20) of the order dated 06.12.2018 by the State Government.</p>
16	<p>06.12.2018 para 19 (4) <i>No further channelization and concretization of Rajakaluves</i></p>	<p>channelization and concretization of Rajakaluves</p>	<p>The BBMP submits that concretization of SWD is avoided in all big Rajakaluves having width of more than 4.00 meters. However, due to development / construction of buildings by side of Rajakaluves, the retaining walls are unable to withstand the exterior pressure. At these points after technical verification 'U' shaped drain is being constructed, with intermediate pervious section / holes in the form of circular openings for enabling recharge of ground water. Where width of the land which is available for Rajakaluve is less than 4.0 m channelization of storm water drain is being avoided in the outskirts of the city.</p> <p>About 389.00 km has been completed with pukka retaining was against the 842 km. This year 75 km is proposed and remaining would be completed in subsequent years. The laying of "U" shaped drains construction is not convincing.</p>
17	<p>06.12.2018 para 19 (6) <i>(a) The authorities must conduct a survey in the buffer zone of the lake to identify the</i></p>	<p>(a) Survey of buffer zones of 30 meter around the lakes.</p>	<p>(a) The BBMP submits that the survey work has been completed and as a result 21 number of structure have been identified in the 30 meter buffer zone of Bellanduru lake and four structures in Varthur lake. Notices have been issued under section 308 of</p>

	<i>encroachments and appropriate exercise should be undertaken to remove them.</i>		Karnataka Municipal Corporation Act, 1976 to the encroachers.
	<i>(b)Encroachments on SWD.</i>	(b)Removal of encroachments.	(b)The BBMP submits that as on 12-02-2020 (on the Rajakaluves), 1890 cases of encroachments are removed and 736 cases are pending out of which in about 369 cases, survey work is in progress and removal of encroachments on 367 cases are in progress. The claims of BBMP have not been verified by the Committee due to time constraint.
18	06.12.2018 para 19 (7) <i>(a) That CCTVs should be installed at appropriate locations for ensuring that no C&D waste is dumped in the buffer zone area of the lake.</i>	(a) Installation of CCTVs in buffer zone.	(a) At Bellanduru lake 54 numbers of 360 degree CCTV cameras and 200 LED street lights have been installed at appropriate locations. Four numbers of watch towers are yet to be installed but work is in progress. As regard the Varthur lake 32 numbers of CCTVs and 150 LED street lights have been installed. The watch towers have not been installed.
	<i>(b)Security Guards should be deployed at the most vulnerable locations to keep</i>	(b)Deployment of Security Guards / Marshals.	(b)21 Marshals are in each lake (Bellanduru and Varthur) have been deployed with Mahindra vehicles.

	<i>vigilance on illegal dumping of debris and to prevent encroachment activities.</i>		
	<i>(c) In case anyone is found to be dumping C&D waste or debris into the lake or its buffer zone, a penalty of Rs. 5 Lakhs be imposed for each offence in terms of the Order passed by this Hon'ble Tribunal on 19.04.2017.</i>	(c) Levy of Rs.5 Lakhs for each offense.	(c) No information has been submitted by BBMP.
19	06.12.2018 para 19 (8) <i>No new facility commercial or non-commercial purpose, to be permitted within the territorial jurisdiction of Municipal Corporations of catchment area of the lake "which generates sewage, until the commissioning of the STPs except public toilets. Authorities to any project or facility within the buffer zone.</i>	No commercial or non-commercial purpose to be permitted within the territorial jurisdiction of catchment area of lake.	The BBMP submits that no new facility or expansion of existing facility permitted within the territorial jurisdiction of Municipal Corporation of catchment area of the lake until the commissioning of STPs as per Govt. Notification No. FEE 316 EPC 2015, Bengaluru, Dated. 19.01.2016. Such structures which have not installed STPs in their premises, occupancy certificates for such buildings are not been issued. No new facility or expansions of existing facility within the buffer zone as per zoning regulations 2015 of rajakaluves / SWDs are permitted.

20	<p>06.12.2018 para 19 (10) <i>Structures, between 30-75 meters of Rajakaluves, which have already been constructed prior to 07.05.2015 (Forward Foundation Judgment) but are uninhabited not to be occupied without the prior permission of the Hon'ble Tribunal and in any event not until commissioning of the STP's in order to prevent generation of more sewage.</i></p>	<p>Restrictions in the buffer of Rajakaluves.</p>	<p>As per the order of the Hon'ble Supreme Court dated 05.03.2019 in Civil Appeal No.5016/2016 and directions of the Government, the Commissioner BBMP Vide Office Order No. Addl.Dir/TP/PR/1084/2018-19, dated. 19-03-2019 has ordered to follow the buffer zoning regulation 2015 i.e., 30.00 meters for the lakes, 50.00 meters, 25.00 meters and 15.00 meters from the centre of primary drain, secondary drain and tertiary drain respectively, while giving permissions for development / re-development. For the built up areas. The Government Order No. FEE 316 EPC 2015, Bengaluru, dated. 19.01.2016, dated has been followed.</p>
21	<p>06.12.2018 para 19 (11) <i>Structures between 30 75meters of Rajakaluves, which are under construction, be restrained from constructing further without the prior permission of the Hon'ble Tribunal and in any event not until the commissioning of the STPs.</i></p>	<p>Restrained from constructing of ongoing structures.</p>	<p>No specific submission has been made by the BBMP. Except stating that no structures are permitted within the buffer zones as per the zoning regulations.</p>

22	06.12.2018 para 19 (16) <i>Post removal of waste from the Lake and from the Rajakaluves, the State ought to prepare a detailed project report with respect to disposal of the same.</i>	Post removal of waste from the lakes.	This activity has to be done once the de-silting process is over by the BDA.
----	---	---------------------------------------	--

As directed in para 29 of the NGT order dated 18.12.2019, the findings in this report is also given to the Chief Secretary, State of Karnataka.



(N.Santhosh Hegde)

Hon'ble Judge of Supreme Court of India (Retd)
 & Chairman, Monitoring Committee constituted by the National
 Green Tribunal.

Place: Bengaluru
 Date: 06-03-2020