BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

ORIGINAL APPLICATION NO.164 OF 2017 (SZ)

In the matter of:

Thiru.M.Dhamotharan	:	Applicant(s)
	Vs	
	:	
The Secretary to Government, E&F Department, Government of Tamil Nadu & 5 others		Respondent(s)

ACTION TAKEN REPORT AS PER THE ORDER OF THE HON'BLE NGT(SZ), CHENNAI DATED 10.06.2021

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ACTION TAKEN REPORT SUBMITTED BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, SOUTHERN ZONE, CHENNAI IN THE MATTER OF ORIGINAL APPLICATION NO. 164 OF 2017 (SZ), M. DHAMOTHARAN Vs THE SECRETARY TO GOVERNMENT, ENVIRONMENT & FOREST DEPARTMENT, GOVERNMENT OF TAMILANDU, AS PER ORDER DATED 10.06.2021.

Background

In the matter of Original application No. 164 of 2017, Thiru.M.Dhamotharan Vs The Secretary to Government, E&F Department, Government of Tamil Nadu, Chennai and 5 others Hon'ble NGT Southern Zone has passed an order dated 13/12/2019 to constitute a committee comprising of the following members namely District Collector, Tiruppur, Senior Scientist/representative of regional office of Central Pollution Control Board, Tamil Nadu State Pollution Control Board, Commissioner, Tiruppur Municipal Corporation, Senior Engineer of Public Works Department (PWD) Water Treatment Organisation, one scientist from NEERI and Indian Institute of Technology (IIT) Chennai.

In compliance to Hon'ble NGT order, Tamilnadu Pollution Control Board constituted the committee. The Committee has carried out the field visit to the area in question which is a subject matter in O.A. No 164 of 2017 during February 04th& 05th, 2020 and already detailed report of the committee was filed before Hon'ble NGT.

In the latest hearing of the Hon'ble NGT on 10.06.2021 has passed an order that "

"7.....,,,, Pollution Control Board also did not file any report regarding the quality of the water in the lake after certain improvements have been made on the basis of the recommendations made by the Committee which was discussed by this Tribunal in earlier orders.

9. So considering the circumstances, we direct the Committee, Pollution Control Board, Public Works Department and Tiruppur Corporation to come with proper action taken plan with shorter time line to remedy the situation permanently and also provide effective short-term measures to achieve the purpose till the expected projects are put to operations.

10. The District Collector, Tiruppur is also directed to coordinate with the stakeholders and come with proper action plan as to how the water bodies within their jurisdiction including this can be rejuvenated and restore the ecosystem as before and make the water body free from pollution and encroachments.

12. The respective officials are directed to submit the reports as directed by this Tribunal on or before 24.08.2021 by e-filling 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. "

Based on the Hon'ble NGT order dated a meeting was convened on 26.07.2021 under the chairman ship of the district collector and discussed regarding the short term measures to be taken by PWD & Tiruppur City Municipal Corporation and to submit the action taken report by the concerned departments.

Samples were collected by Tamilnadu Pollution Control Board at various locations in the stretch of Nallaru odai & Nanjarayan Lake on 24.06.2021, 20.07.2021 & 05.08.2021. The Report of action taken by Tamilnadu Pollution Control Board in this regard is attached vide **ANNEXURE – I.**

In continuation to the meeting The Tiruppur city municipal corporation Commissioner has submitted a report regarding the feasibility of short term measures to prevent the inflow of sewage into Nallaru odai and thereby to Nanjarayan Lake. The Report of action taken by Tiruppur city municipal corporation in this regard is attached vide **ANNEXURE – II.**

The District Collector Tiruppur has convened a follow-up meeting on 18.08.2021 with concerned departments regarding the short term measures and report submission to the Hon'ble NGT. In the meeting, cost benefit analysis of the various short term measures suggested by the Commissioner, Tiruppur City Municipal Corporation were analyzed. After analyzing the cost and time estimation it was found that all the alternatives will take minimum 1 year completion time. After all the deliberations, it has been decided that the speeding up of construction and completion of the underground drainage system and sewage treatment plant works by reducing the project completion time by 6 months.

Also, the District collector has instructed the District Environmental Engineer, Tiruppur North & Environmental Engineer flying squad to be more vigilant so as to avoid any illegal discharge from industries and advised to increase the frequency of regular monitoring to avoid any inflow of industrial effluent in to Nallaru odai.

Dr.S. Vineeth
District Collector
Tiruppur

Annexure-I

ACTION TAKEN REPORT OF TAMILNADU POLLUTION CONTROL BOARD

1. Monitoring of Nanjarayan Lake

The Tamilnadu Pollution Control Board has collected Water samples in Nanjarayan Lake on 24.06.2021, 20.07.2021 & 05.08.2021. The Report of analysis and the inference of the sample collected are as follows

1.1 Report of analysis of Water samples Collected on 24.06.2021 in Nanajarayan Lake

Point of collection	Inside the Lake (in the South East Corner
pH (Num)	8.324
Total suspended solids mg/l	4
Total Dissolved Solids mg/l	1196
Chloride (asCL) mg/l	644
Sulfate (as SO4) mg/l	52
COD mg/l	88
BOD 3 days at 27° C mg/l	3
Total Residual Chlorine mg/l	<1.0
Phosphate (as P) mg/l	*
TKN mg/l	8
Nitrate (as No._3N) mg/l	2.9
Sulfide mg/l	<1.0
Phenolic Compounds mg/l	<0.0005
Total Hardness mg/l	300
% Sodium	78

1.2 Report of analysis of Water samples Collected on 20.07.2021 in Nanajarayan Lake

Point of collection	Northeast Corner in Nanjarayan Lake	Southeast Corner in Nanjarayan Lake
pH (Num)	6.92	6.79
Total suspended solids mg/l	12	8
Total Dissolved Solids mg/l	2032	2120
Chloride (asCL) mg/l	519	617
Sulfate (as SO4) mg/l	435	455
COD mg/l	320	400
BOD 3 days at 27° C mg/l	34	38
Phosphate mg/l	*	*
Ammonical Nitrogen mg/l	18	18
TKN mg/l	20	25
Nitrite (as No._3N) mg/l	0.459	0.455
Nitrate (as No._3N) mg/l	0.553	1.08
Sulfide mg/l	4.8	8
Phenolic Compounds mg/l	<0.0005	<0.0005
% Sodium	52	62

Electrical Conductivity mg/l	2874	3019
Total Iron mg/l	0.0181	0.0214
Total Chromium mg/l	<0.05	<0.05
Copper mg/l	0.0613	0.0572
Zinc mg/l	0.2366	0.2157
Lead mg/l	0.2704	0.2744
Cadmium mg/l	0.1608	0.142
Cyanide mg/l	0.018	0.021
DO mg/l	8	15 *
SAR mg/l	5.83965	6.5288
Manganese mg/l	2.9795	3.137

1.3 Report of analysis of Water samples Collected on 05.08.2021 in Nanajarayan Lake

Point of collection	**Northeast Corner in Nanjarayan Lake**	**Southeast Corner in Nanjarayan Lake**
pH (Num)	8.302	8.443
Total suspended solids mg/l	48	68
Total Dissolved Solids mg/l	1644	1508
Chloride (asCL) mg/l	663	529
Sulfate (as SO4) mg/l	320	344
COD mg/l	360	440
BOD 3 days at 27° C mg/l	13	13
Phosphate mg/l		
Ammonical Nitrogen mg/l	1.1	BDL(DL:1.0)
TKN mg/l	24	24
Nitrite (as No._3N) mg/l	1.7	1.2
Nitrate (as No._3N) mg/l	0.42	0.36
Sulfide mg/l	<1.0	<1.0
Phenolic Compounds mg/l	<0.0005	<0.0005
% Sodium	64	60
Electrical Conductivity mg/l	2819	2762
Total Iron mg/l	0.21	1.09
Total Chromium mg/l	0.032	0.037
Copper mg/l	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)
Zinc mg/l	0.01	0.017
Lead mg/l	0.074	BLQ(LOQ:0.005)
Cadmium mg/l	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)
Cyanide mg/l	BDL(DL:1.0)	BDL(DL:1.0)
DO mg/l	Nil	Nil
SAR mg/l	6.8	5.9
Manganese mg/l	0.102	0.099
Boron mg/l	0.112	0.125

1.4 Report of analysis of Fecal coliform and Total Coliform in the Water samples Collected on 20.07.2021 & 05.08.2021 in Nanajarayan Lake

Date of collection	Parameters	Northeast Corner in Nanjarayan Lake	Southeast Corner in Nanjarayan Lake
20.07.2021	Faecal Coliform MPN/100ml	21	17
	Total Coliform MPN/100ml	70	63
05.08.2021	Faecal Coliform MPN/100ml	<2	<2
	Total Coliform MPN/100ml	140	90

It was observed from the analysis result of samples taken in different months that, there is variation in the parameters in the same locations where samples were collected. This may be due to seasonal change, Time of sample collected and other factors. From the above results of water samples collected from Nanjarayan Lake following inference are made

a) The presence of Total Coliform (60 – 140 MPN/100ml) and Fecal Coliform (17 – 21 MPN/100ml) indicates the inception of Domestic sewage into Nanjarayan Lake.
b) However the concentration of Boron (0.112 – 0.125 mg/L), Sodium Adsorption Ratio (SAR) (5.19-6.8) found well within the limit of irrigation water quality.
c) The concentration of TDS (1196 – 2120 mg/L), Chloride (519 – 663 mg/L), Sulphate (52 – 455 mg/L).

2. Monitoring of Nallaru Odai

The Nallaru odai is a Tributary of Noyyal River. In its run Nallaru feeds two PWD tanks namely Thamaraikulam in Avinashi and Sarkar Periyapalayam tank also known as Nanjarayan tank in the outskirts of Tiruppur city after which it surplus into Noyyal River.

Since the Nallaru Odai is the major feeding source of Nanjarayan tank other than the surface runoff it has been taken as a part of study. The Tamilnadu Pollution Control Board has collected Water samples on various locations in the stretch of Nallaru odai on 24.06.2021, 20.07.2021 & 05.08.2021. The Report of analysis and the inference of the sample collected are as follows

2.1 Report of analysis of Water samples Collected on 24.06.2021 in Nallaru odai

Parameters	Thirumurugan Poondi Bridge	Athupalayam Bridge	Angeripalayam (vengamedu Bridge)	Pitchamp alayam (Perumanallur road) Bridge	JV tapes Road Bridge	Bridge Near Angeripalayam CETP Bridge (Up stream)	Nallathupalayam Bridge	Velliyampalayam Bridge
pH (Num)	6.868	6.582	6.228	6.195	6.332	6.309	6.687	6.186
Total suspended solids mg/l	4	4	4	4	4	4	8	4
Total Dissolved Solids mg/l	1344	1032	1380	1088	1644	824	428	128
Chloride (as CL) mg/l	471	308	346	317	490	250	131	38
Sulfate (as SO4) mg/l	373	149	301	378	613	132	81	31

COD mg/l	104	96	1120	800	960	1440	24	32
BOD 3 days at 27°C mg/l	11	9	8	8	8	8	3	2
Total Residual Chlorine mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Phosphate mg/l	*	*	*	*	*	*	*	*
TKN mg/l	20	24	31	9	32	28	8	9
Nitrate (as No._3N)	4.3	4.6	3.4	3.8	4.2	3.4	3.3	3
Sulfide mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Phenolic Compounds mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Hardness mg/l	160	150	130	210	300	190	110	10
% Sodium	69	67	65	66	70	55	45	19

2.2 Report of analysis of Water samples Collected on 20.07.2021 in Nallaru odai

Parameters	Thirumurugan Poondi Bridge	Athupalayam Bridge	Angeripalayam (vengamedu Bridge)	Pitchampalayam (Perumanallur road) Bridge	JV tapes Road Bridge	Bridge Near Angeripalayam CETP Bridge (Up stream)	Nallathupalayam Bridge	Before check Dam near Nanjarayan Lake	Velliyampalayam Bridge
pH (Num)	5.683	6.033	6.058	5.982	6.201	6.181	6.334	6.888	7.986
Total suspended solids mg/l	8	4	16	36	8	4	8	8	16
Total Dissolved Solids mg/l	740	624	920	1148	1308	1344	1416	1668	1996
Chloride (asCL) mg/l	167	118	186	314	323	314	343	431	617
Sulfate (as SO4) mg/l	59	48	88	166	57	167	210	290	240
COD mg/l	560	64	240	480	160	400	320	240	320
BOD 3 days at 27° C mg/l	68	5	23	47	16	41	41	24	36
Phosphate mg/l	*	*	*	*	*	*	*	*	*
Ammonical Nitrogen mg/l	16	10	26	<5.0	<5.0	<5.0	23	<5.0	<5.0
TKN mg/l	20	13.5	40	19	15	18	25	<5.0	5.6
Nitrite (as No._3N) mg/l	0.469	0.304	0.868	0.581	0.554	0.623	0.430	1.68	0.241
Nitrate (as No._3N) mg/l	1.18	0.45	0.805	0.805	0.639	0.639	0.537	1.84	1.14
Sulfide mg/l	6.4	<1.0	8	3	6.4	4.8	3	1.6	4.8
Phenolic Compounds mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
% Sodium	40	21	40	47	71	31	52	42	43
Electrical Conductivity mg/l	928	715	1197	1589	1613	1798	1935	2295	2835

Total Iron mg/l	1.216	0.471	2.39	2.547	0.566	0.587	0.429	0.576	1.016
Total Chromium mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Copper mg/l	0.0414	0.0843	0.0897	0.0162	0.0376	0.0471	0.0117	0.0475	0.0384
Zinc mg/l	0.1798	0.2348	0.2168	0.2143	0.1686	0.2105	0.1819	0.2472	0.1791
Lead mg/l	0.1473	0.2027	0.1928	0.198	0.2117	0.1919	0.2278	0.2459	0.2275
Cadmium mg/l	0.017	0.1467	0.1273	0.1233	0.1178	0.1049	0.089	0.1336	0.1109
Cyanide mg/l	0.025	0.026	0.026	0.023	0.029	0.028	0.021	0.021	0.026
DO mg/l	-	0.5	-	-	-	-	-	-	-
SAR mg/l	2.16	1.097	3.9469	4.4776	8.82413	2.9276	4.6696	4.1963	4.8491
Manganese mg/l	1.617	2.635	1.868	1.9655	1.987	1.717	1.7695	3.367	1.8555

2.3 Report of analysis of Water samples Collected on 05.08.2021 in Nallaru odai

Parameters	**Thirumurugan Poondi Bridge**	**Athupalayam Bridge**	**Angeripalayam (vengamedu Bridge)**	**Pitchampalayam (Perumanallur road) Bridge**	**JV tapes Road Bridge**	**Bridge Near Angeripalayam CETP Bridge (Up stream)**	**Nallathupalayam Bridge**	**Before check Dam near Nanjarayan Lake**	**Velliyampalayam Bridge**
pH (Num)	6.687	6.885	7.146	7.215	7.372	5.369	7.52	2.452	7.701
Total suspended solids mg/l	208	128	132	56	60	68	52	64	24
Total Dissolved Solids mg/l	248	508	732	792	1076	856	1748	1424	1964
Chloride (asCL) mg/l	67	154	192	250	375	314	625	596	433
Sulfate (as SO4) mg/l	90	122	89	181	289	274	411	278	377
COD mg/l	240	72	160	120	200	440	360	240	280
BOD 3 days at 27° C mg/l	11	8	12	10	9	8	7	7	14
phosphate mg/l	-	-	-	-	-	-	-	-	-
Ammonical Nitrogen mg/l	1.6	1.1	1.1	1.6	1.1	1.1	BDL(DL:1.0)	BDL(DL:1.0)	1.1
TKN mg/l	11	12	30	22	30	32	24	1.6	3.2
Nitrite (as No._3N) mg/l	1.1	1.5	0.11	0.12	0.23	0.33	0.14	0.09	0.64
Nitrate (as No._3N) mg/l	0.01	0.19	0.57	0.74	0.52	0.17	0.94	0.9	1.05
Sulfide mg/l	1.6	1.6	4.8	<1.0	6.4	1.6	1.6	3.2	1.6
Phenolic Compounds mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
% Sodium	16	26	45	45	55	52	62	58	56
Electrical Conductivity mg/l	299	753	1206	1408	2122	2207	3093	2778	7730
Total Iron mg/l	1.01	0.03	1.24	1.39	0.44	0.17	0.94	0.9	1.05

Total Chromium mg/l	0.038	0.034	0.029	0.041	0.029	0.032	0.025	0.029	0.031
Copper mg/l	0.008	0.007	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)	0.009	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)
Zinc mg/l	0.008	0.019	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)	0.009	BLQ(LOQ:0.005)	0.017	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)
Lead mg/l	0.047	0.025	0.028	0.079	0.016	14.705	0.014	0.014	0.01
Cadmium mg/l	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)
Cyanide mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
DO mg/l	Nil	Nil	Nil	Nil	Nil	8.1	10.5	Nil	Nil
SAR mg/l	0.5	1	2.8	2.8	4.4	4.1	6.3	5.4	4.9
Manganese mg/l	0.112	0.053	0.091	0.066	0.084	0.081	0.091	0.031	0.019
Boron as B mg/l	0.132	0.109	0.151	0.090	0.111	0.116	0.113	0.162	0.168

2.4 Report of analysis of Fecal coliform and Total Coliform in the Water samples Collected on 20.07.2021 and 05.08.2021

Date of sampling	Parameters	Thirumurugan Poondi Bridge	Athupalayam Bridge	Angeripalayam (vengamedu Bridge)	Pitchampalayam (Perumanallur road) Bridge	JV tapes Road Bridge	Bridge Near Angeripalayam CETP Bridge (Up stream)	Nallathupalayam Bridge	Before check Dam near Nanjarayan Lake	Velliyampalayam Bridge
20.07.2021	**Faecal Coliform MPN/100ml**	610	550	11000	21000	2300	1700	43000	1700	2100
	Total Coliform MPN/100ml	1400	1200	26000	46000	5800	3900	94000	4300	4100
05.08.2021	**Faecal Coliform MPN/100ml**	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Total Coliform MPN/100ml	130	170	280	170	220	140	220	80	350

It was observed from the analysis result of samples taken in different months that, there is variation in the parameters in the same locations where samples were collected. This may be due to seasonal change, Time of sample collected and other factors. From the above result of Water samples collected following inference are made

a) The Total Dissolved solids are (128-1996 mg/L) this shows there is very lesser possibilities of intrusion of dyeing effluent in to Nallaru Odai stretch.

b) The concentration of Chloride (38 – 625 mg/L) and Sulfate (31 – 613 mg/L) in entire stretches of Nallaru odai which might be due sediments of earlier effluent discharge before achieving Zero Liquid Discharge System.

c) The concentration of BOD (2 – 68 mg/L), COD (24 – 1440 mg/L)

d) Total Coliform (TC of 80 – 94000MPN/100 ml) & Fecal Coliform (FC of 550 – 43000 MPN/100 ml) in samples confirms discharge of domestic waste into Nallar Odai.

3. The observation on Nallar odai & Nanjarayan Lake:

3.1 Nallar odai:

a) During inspections there was considerable normal flow noticed in the Nallaru odai. No coloured flow was noticed in the Nallaru odai. In the banks of Nallaru odai dumping of Municipal solid waste was noticed.

b) In few stretches of Nallaru odai it is covered with Seemai karuvelam" Prosopis Juliflora", Water Hyacinth" Eichornia Crossipes and other bushes.

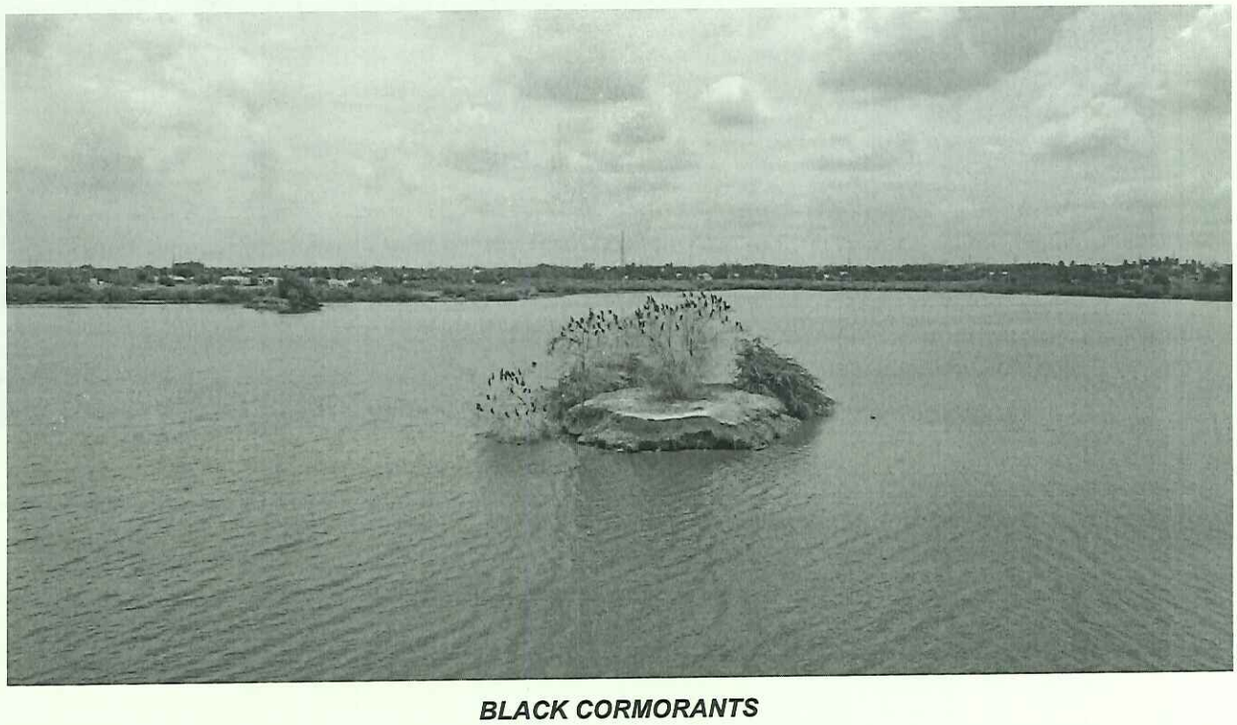
c) The Nallaru odai flow was found diverted to baby canal which was constructed for the purpose of taking the sewage load to SewageTreatment Plant (STP). During visit the ATP was not in operation and no flow was found entering into STP. The PWD Baby canal drains into Nanjarayan Lake outlet weir and flows into Nallar odai which ultimately drains to the Noyyal River.

3.2 Nanjaryan Lake:

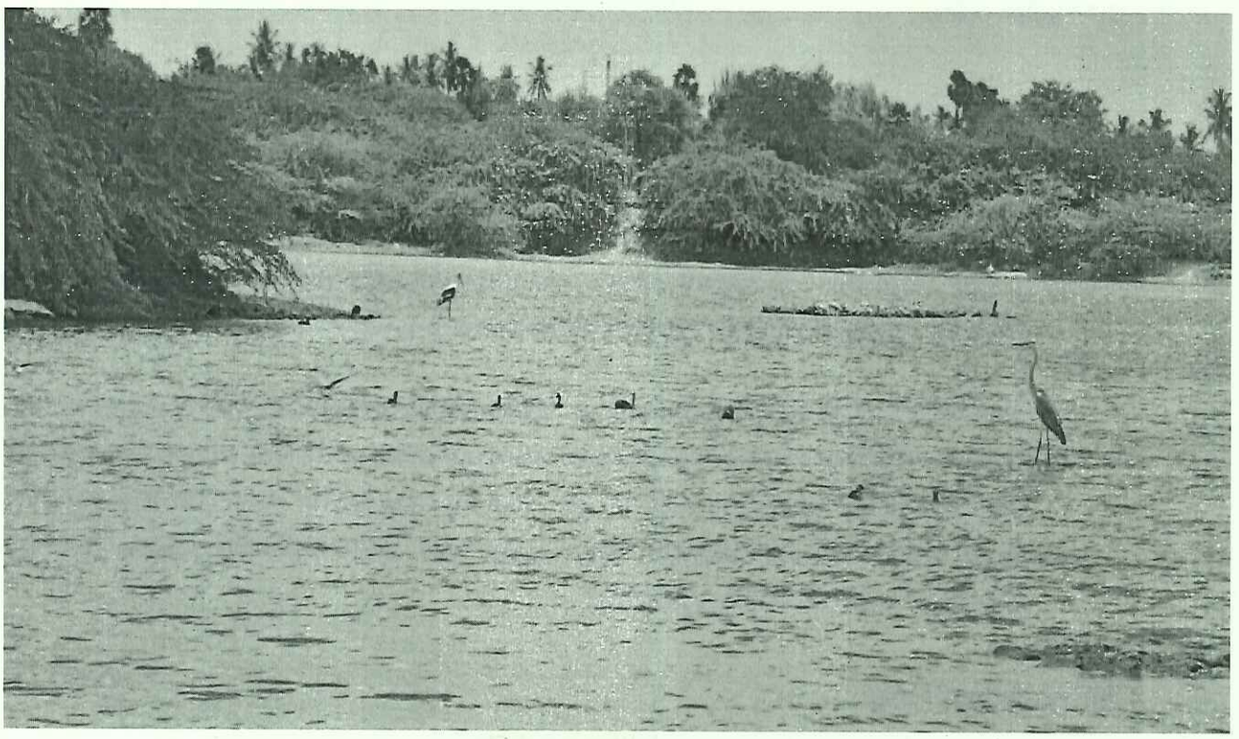
a) During inspection it was observed that lean flow over the check dam constructed across the Nallaru Odai was flowing in to the Nanjarayan Lake, The colour of the water in the Lake was found natural and no odour experienced near the Lake.

b) Various local Birds and Birds from the foreign country were found visiting to the Nanjarayan Lake (Photos attached). Patches of water holding area of the Nanjarayan Lake is covered with Seemai karuvelam" Prosopis Juliflora" and Water Hyacinth" Eichornia Crossipes"

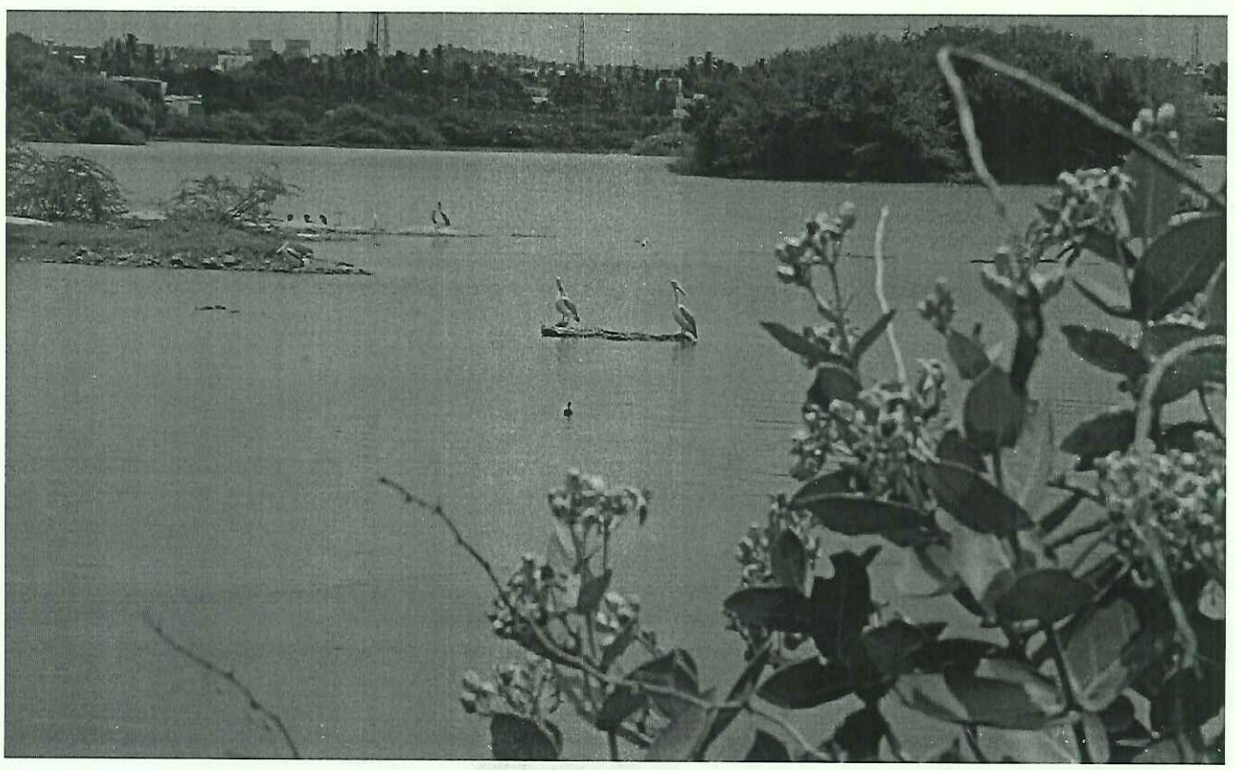
The recent photographs taken in Nanjarayan Lake



BLACK CORMORANTS

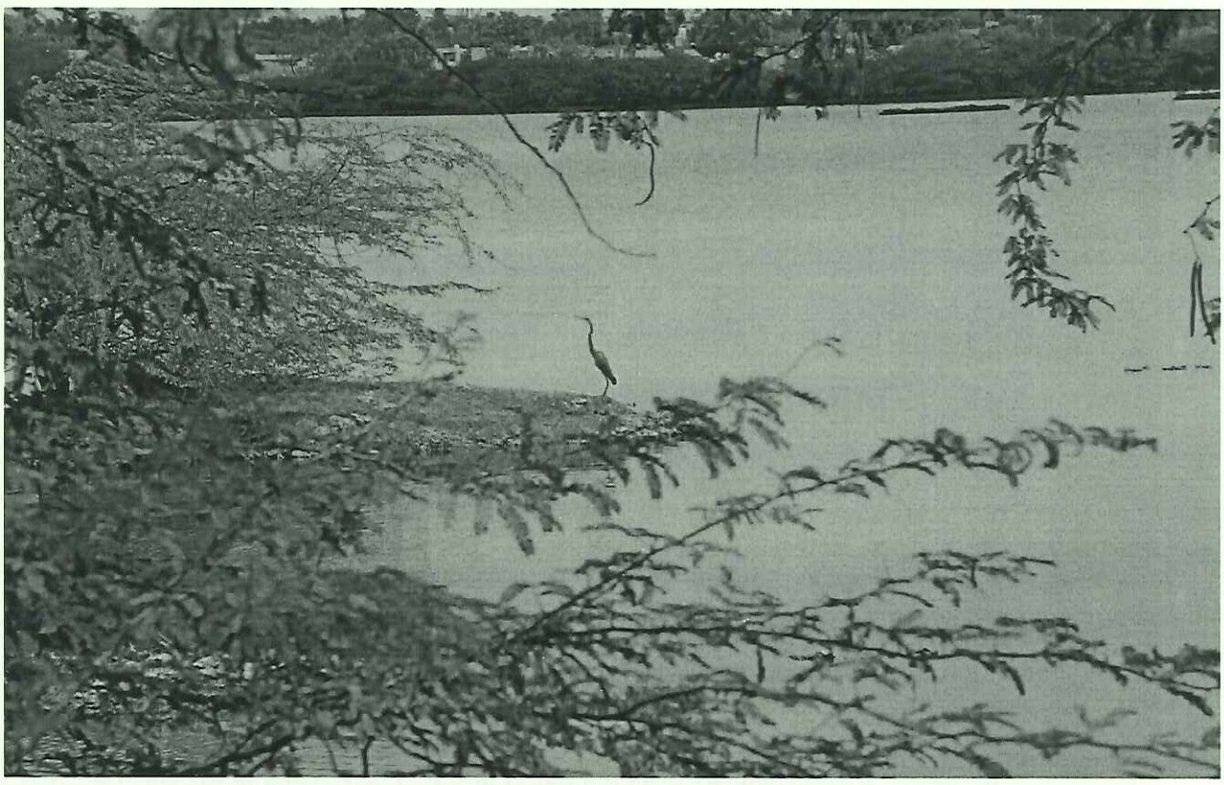


PAINTED STORK AND GREY HERON



PELICAN

POND HERON



SNAKE BIRD OR DARTER

2. CONCLUSION:

1. As per the instruction of TNPCB the CETP's have installed 14 numbers of CCTV cameras and 3 numbers of Online TDS meters along the stretch of Nallaru odai. The Tamilnadu Pollution Control Board has instructed the CETP's to connect the CCTV's and TDS meters through online portal so as to have a centralized monitor system and to ensure that there is no discharge of industrial effluent into the Nallaru odai.

Sl. No	Reference Number	Location of CCTV
1	1- CCTV	U/s of KTM dyeing (East Facing)
2	2- CCTV	D/s of KTM Dyeing (East Facing)
3	3- CCTV	D/s of Sri Valli Process (East Facing)
4	4- CCTV	D/s of Sri Valli Process (West Facing)
5	5- CCTV	D/s of Angeripalayam Bridge (East Facing)
6	6- CCTV	U/s of SVP Knit process (South Facing)
7	7- CCTV	D/s of SVP Knit process (East Facing)
8	8- CCTV	D/s of SVP Knit process (West Facing)
9	9- CCTV	D/s of SVP Knit process boiler (East Facing)
10	10- CCTV	U/s of Welcome Dyers (West facing)
11	11- CCTV	U/s of Nagsai Colours (West Facing)
12	12- CCTV	U/s of Nagsai Colours (East Facing)
13	13- CCTV	Angeripalayam CETP Aeration Tank (West Facing)

Sl. No	Reference Number	Location of Online TDS meter
1	1- TDS	TDS Meter (U/s of KTM Dyeing)
2	2- TDS	TDS Meter -D/s of Park Members (Poomparai Bridge)
3	3- TDS	TDS Meter - in D/s of Angeripalayam CETP

2. Frequency of regular monitoring of Industries and Nallaru Odai by The District Environmental Engineer, Tiruppur North & Environmental Engineer flying squad is being increased in order to avoid and prevent any illegal inflow of industrial effluent in to Nallaru odai.

3. The Manholes of Angeripalayam CETP located in the Nallaru odai to be strengthened and the CETP shall explore the modern mechanism to monitor and avoid if there is any leakage/seepage from the Manholes.

4. The Tiruppur City Municipal Corporation has to take up project to install Under Ground Drainage system with STP to treat the sewage which flows through the drains from the uncovered area especially contributing to the Nallaru Odai.
5. Apart from the sewage, necessary steps to be taken by the local bodies to avoid the dumping of municipal solid waste in and along the Nallaru Odai, to remove the encroachments along Nallar Odai by concerned departments.
6. The Thirumuruganpoondi Town Panchayat shall take necessary action to avoid inflow of sewage in to Nallaru Odai.
7. The Water hyacinth and bushes along the stretch of Nallaru odai and in & around Nanjarayan Lake shall be cleared.
8. The sediments in Nallaru Odai and Nanjarayan Lake shall be de-silted.

21/8/18

M.Saravanakumar
District Environmental Engineer
TNPCB, Tiruppur North

Annexure-II

ACTION TAKEN REPORT OF TIRUPPUR CITY MUNICIPAL CORPORATION

MUNICIPAL ADMINSTRATION AND WATER SUPPLY DEPARTMENT

From:
Thiru.Kranthi Kumar Pati. I.A.S.,
Commissioner,
Tiruppur City Municipal Corporation
Tiruppur.

To:
The District Collector,
Tiruppur.

Roc.No.E3/2723/2019 Dated: 18 .08.2021.

Sir,

Sub: National Green Tribunal – Southern Zone -Chennai – Original application No. 164 of 2017(SZ) – Pollution to Nanjarayan Lake -Domestic sewage – Tirupur Corporation – Remedial measures – reg

Ref: 1. NGT (SZ) direction dated 10.06.2021

2. Our Lr.No. E3/2723/2019 dated 30.06.2021.

3. Minutes of the Co-ordination committee meeting held on 26.07.2021.

I am to state that in continuation of the coordination meeting held on 26.7.2021 on the subject referred , I have inspected the 1.5 mld STP site and alignment of the canal leading to STP on 02.08.2021.The possible options are explored and a detailed report is enclosed herewith for your perusal.

Kranthi Kumar Pati 18.8.21.

Commissioner,
Tiruppur City Municipal Corporation.

L.B. 18/8/21

Encl: Detailed Report.

PROPOSAL TO STOP FLOW OF SEWAGE INTO NANJARAYAN LAKE AT SARKARPERIYAPALAYAM

Tirupur (also spelled as Tiruppur) was recognized as a Grade III Municipality by the Government of TamilNadu in the year 1917. The Municipality was subsequently classified as a Selection Grade Municipality in 1972 and subsequently was constituted as a Special Grade Municipality in 1983. Tiruppur Municipality has been upgraded into Tiruppur City Municipal Corporation with effect from 01.01.2008. Tirupur City Municipal Corporation was formed by annexing adjoining other local bodies such as Nallur and Velampalayam (Municipalities), Andipalayam, Chettipalayam, Mannarai, Murugampalayam, Muthanampalayam, Nerupherichal, Thottipalayam, Veerapandi, (Village Panchayats). The total area of the Corporation is 159.35 Sq.km. The extended Corporation area is effective from October 2011, after the local body elections. The population as per 2011 census is 877778 and is divided into 60 administrative wards.

The whole Municipal Corporation has been divided into 17 sewerage zones for providing under ground sewerage system. Of which zone 1 to 4 was already covered under the sewage project executed by New Tirupur Area Development Corporation Limited (NTADCL) during the year 2005 . These zones covers about 60% of the erstwhile municipal area. The collected sewage is being treated in a 15 mld STP expandable to 30 mld established at Sarkarperiyapalayam.

Govt of Tamilnadu has approved to implement an underground sewerage scheme to added areas of Tirupur Corporation vide G.O MS.No. 50 MA&WS (MA2) Dept dated 21.05.2018 at a cost of Rs. 636.40 Cr. Currently sewage from part of the wards 4,5,6,19,20,29 and 30 which comes under sewerage zone 5,6 and 7 discharges into Nallar river at 5 locations..These zones are covered under the scope of the package 1 of the ongoing project for which work order has been issued on 10.07.2020. These are the added areas of Tirupur City Municipal Corporation ie part of Velampalayam Municipality, Chettipalayam, Thottipalayam , Neruppericha1 and Mannarai Village panchayats.A map showing the above said areas is shown below

The population which contributes sewage through the above said 5 locations is about 1.50 Lakhs. The identified locations are Poomparai, PN road, J V Tapes,Kanjampalayam, and Nallathupalayam Out of this the habitats are located on both the sides of the river course.Adopting a percapita water supply of 118 lpcd the expected sewage through these 5

locations is about 14.16 mld. Considering the present duration of supply ie once in 5 days the expected sewage discharge works out to 2.92 mld say 3.0 mld.

Currently under ground sewerage system covering the above said areas are under progress. The expected time for completion of the project is year 2023. Meantime as per the directions of the NGT the possible options available to stop the discharge of sewage into Nallar river and to treat the sewage before letting into the Nallar river are as follows: The following options are proposed subject to the condition that there should not be any mixing of industrial effluent with the domestic sewage.

Option 1:

The length of the river stretch over which the zone 5,6 and part 0f 7 are covered is about 9 km.It is proposed to collect the sewage in a ground level sump of capacity 25000 lit and then pumped to the existing STP at Sarkarperiyapalayam located at about 10 km through 200 mm dia GRP pumping main.

The cost of the proposal works out as follows:

1.	Cost of collection system :	
	200 mm dia CI pipe – 4000 m	: 3.07 Cr.
	400 mm dia CI pipe – 5000 m	: 11.88 Cr.
2.	Cost of manholes 200 Nos.	: 2.0 cr.
3.	Cost of sump cum pump house	: 1.50 Cr.
4.	Cost of Electro mechanical items	: 1.0 Cr.
5.	Cost of Pumping main 200 dia -10 Km	: 7.69 cr
6.	Restoration charges for 6 km	: 3.0 Cr.
7.	Strengthening the channels	: 1.0 cr
8.	Misc items& Screens	: 2.86 cr
	Total	: 34 .0 cr.

The time required to complete the project is not less than 2 years.

Monthly treatment charges @ Rs. 21.68 per KL would be Rs. 19.51 lakhs per month apart from the EB charges + salary of O&M staff.

Option 2 :

The discharge from the 5 locations can be made to pass through a slow sand filter before discharge into the Nallar river since most of the flow is sullage water and most of the houses are provided with septic tanks. Hence the sullage water can be treated in a filter media. This arrangement is suitable only if the discharge contains sullage water. We have to ensure that no dyeing effluents are discharged through these channels. This has to be ensured by TNPCB.The size of the Chamber required to house the filter media is 3 m x 6 m with baffle wall arrangement. Depth of chamber varies according to the location. Screens to be installed at the intercepting point.

1. Cost of construction of chamber : 5 x 2 x 0.15 =1.5 Cr.
2. Cost of media : = 0.60 Cr.
3. Cost of screens : = 0.2 cr.
4. Rejuvenation of collection points = 0.1 Cr.
5. Outlet arrangements to the river = 0.2 Cr
6. Misc items = 0.40 Cr

Total = 2.6 Cr.

Daily maintenance has to be done to keep the system functional.The average monthly maintenance cost would be Rs.10 Lakhs.It will require minimum one year time to complete the works as detailed below.

Sl.No.	Description	Time required
1	Preparation and approval of estimates	1 month
2	Floating of Tender,getting environmental clearances	1 month
3	Finalisation of Tender and issue of work order	1 month
4	Construction of Filter Chamber	3 months
5	Procurement and laying of slow sand filter media	3 months
6	Procurement and Fixing of filter nozzles	2 months
7	Commissioning	1 month

Option 3:

Under this option the sewage is allowed to flow in the river upto the entry point to the Nanjarayan Lake and then diverted to existing 1.5 mld STP constructed and maintained by PWD which is currently non functional. The system is a conventional system with special blocks and power for performing aeration. Ozone is used as disinfectant. About 8 nos. of 1.5 HP aerators are used in the system.

The civil structures of the STP are in good condition. But all the electro mechanical items need to be replaced with a new one.The approximate cost that would be required to replace the EMI are about 2.0 Cr.These items are custom made and requires time to procure the same. The original manufacturers need to be identified through PWD.There will be a recurring cost for the O&M of the plant. The approximate cost would be about Rs. 50 lakhs per annum.

In order to bring the system into operable condition it may require a year time.

The infrastructures proposed under Option 1 and 2 would become Redundant after completion of the ongoing UGSS works.

CONCLUSION:

The STP site and the connected canal alignment has been visited on 02.08.2021.The velocity of flow in the canal leading to the STP has been verified and found to be 0.45 m/sec at a place where the actual depth of flow is 0.61m and the canal width is 0.52m.The estimated flow in the canal is found to be 12.33 mld. The flow is found to be uniform throughout the day. Again the depth of flow in a 800 mm dia existing RCC culvert in the alignment of the canal has been measured and found to be 0.35 m. The flow works out to 8.54 mld.This flow is not matching with the estimated domestic sewage discharge (3 mld) and also not matching with the capacity of the existing STP(1.5 mld) .Hence it is evident that the major contributor for the flow in the river is industrial effluent.

Samples of sewage has been collected on 02.08.2021 at various locations such as Nallathupalayam Bridge, Vengamedu Bride westside, Kanjampalayam west side, Pichampalayam burial ground (Bridge eastside), J V Tapes (Bridge East & West side) , Athupalayam bridge (East and West Side) and Kanjampalayam bridge (East side) , PN Road Bridge (Eat & West Side) ,along the Nallaru river and tested in the lab AWE CARE Private Limited, Erode. The tested results indicates that the BOD in the sewage sample ranges from 36 to 98 mg/lit. NTADCL is collecting the domestic sewage samples and testing the samples regularly and maintain a record. The range of values is 180 to 200 mg/lit. Hence the

parameters reported by the lab is not matching with the actual sewage parameters met with in the field.Hence it goes without saying that the flow in the Nallaru river is predominantly other than domestic sewage.

The existing plant is not suitable to treat flow containing sewage and industrial effluent.The technology adopted for the existing plant is not suitable to treat this mixed flow. A CETP is required to treat this mixed flow.

Summary of Options discussed above: Est Date of completion

Sl.No.	Options	Construction cost (Rs. In Cr)	Annual O&M cost (Rs. In Cr)	Limitations	Expected period of completion
1	Collecting the sewage and conveying to existing STP at Sarkarperiyapalayam	34.00	2.34	Only domestic sewage can be treated. TNPCB has to ensure that no industrial effluenet is discharged at the collection point.	August 2023
2	Trap the sewage and treat it at the point of discharge into river through filter beds	2.60	1.20	Only domestic sewage can be treated. TNPCB has to ensure that no industrial effluent is discharged at the collection point.	August 2022

3.	Revamping of existing 1.5 MLD STP constructed by PWD	2.00	0.50	The capacity of existing STP (1.5 mld) is insufficient since the inflow is more than 10 mld.There should not be any mixing of industrial effluent.	August 2022

1). All the above options require at least 1 Year to Complete and start operations. i.e treatment can begin only after August 2022.

2). UGSS Scheme currently under implementation by Tiruppur City Municipal Corporation. Which was earlier scheduled for completion in June 2023 is now being implemented in mission mode. Tiruppur City Municipal Corporation is expecting his to be functional by December 2022.

3). Once UGSS project is completed the above discussed options for treatment of sewage will be redundant as the project covers in totality the area from where sewage is being discharged into Nallaru / Nanjarayan Lake.

4). Tiruppur City Municipal Corporation is in dire financial stress owing to poor tax collection and additional expenditure resulting from Covid 19 pandemic. It is currently not feasible to undertake any of the proposed works from its general funds. It will require special grant from government to undertake any project proposed in short term solutions.

5).As per our calculation only 3 MLD out of 12.33 MLD inflows into the lake is domestic sewage. Rest is expected to be mixed waste including industrial discharge. Options proposed by Tiruppur City Municipal Corporation will not be suitable unless this discharge is treated through CETP beforehand.

18.8.21

Commissioner

Tiruppur City Municipal Corporation

18/8/21

Annexure – III

Item No.17:

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

Original Application No.164 of 2017 (SZ)

(Through Video Conference)

IN THE MATTER OF:

M. Dhamotharan Tiruppur

...Applicant(s)

Versus

The Secretary to Government,
Environment & Forest Department,
Chennai and Ors.

...Respondent(s)

Date of hearing: 10.06.2021.

CORAM:

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

HON'BLE DR. K. SATYAGOPAL, EXPERT MEMBER

For Applicant(s): Mr. Kamlesh

For Respondent(s): Dr. V.R. Thirunarayanan for R1, R2, R4 & R5.
Mr. C. Kasirajan through Ms. Ashwini for R3
Mr. P. Srinivas for R6

ORDER

1. As per order dated 16.02.2021, this Tribunal had considered the reply submitted by the Public Works Department and Water Resources Department signed on 15.02.2021 and received on 16.02.2021 which was

extracted in para 4 of the order and thereafter passed the following order:

5. It is seen from the report that they have now entrusted the study regarding the rejuvenation of Nanjarayan Lake to the National Environmental Engineering Research Institute (NEERI), Chennai and the NEERI is expected to inspect the lake in question on 17.02.2021 and on the basis of the results, further action will be planned.

6. It may be mentioned here that they did not mention anything about the work to be done for maintaining the STP which is non functional since long time. Even as per order dated 23.11.2020, this Tribunal had directed the Chief Secretary, State of Tamil Nadu and the Principal Secretaries of Municipal Administration and Public Works Department and Irrigation to look into the issue and provide necessary assistance for the purpose of implementing the recommendations of the committee by providing necessary logistics and fund for this purpose and also for making the STP functional at the earliest.

7. Inspite of that, nothing has been mentioned regarding the action taken for making the STP functional, except stating that they require some fund and request has been sent to the Government and for which two more months time is required. The non-functioning of the STP itself is a black mark on the part of the concerned department as now untreated sewage is being discharged into the lake which causes pollution to the lake water.

8. Further, this Tribunal has directed the committee also to suggest the methods by which the quality of the water in the lake and storm water drain can be improved further so as to make it potable. The revenue department was also directed to file a detailed report regarding the extent of the Nallaru Odai and the lake and if there is any encroachment to the same, what are all the steps taken by them to remove the encroachment so as to make the Nallaru Odai to carry the storm water in rainy season which acts as a inlet of excess storm water into the lake. If there is no possibility of removing the encroachment for any reason (this may not be an excuse for not removing unauthorized encroachment), then what are all the alternative methods by which the sewage as well as the storm water can be diverted from the available Nallaru Odai after proper treatment into the lake.

9. Except the Public Works Department (PWD), others have not filed any report as directed.

10.So under such circumstances, we direct the committee, Tamil Nadu Pollution Control Board, local bodies and respective departments to come with a detailed action taken report on the basis of the directions given earlier by this Tribunal.

11.The Chief Secretary, State of Tamil Nadu as well as the Principal Secretaries of Municipal Administration and Public Works Department and Irrigation are also directed to look into the issue and then submit independent reports as to what is the nature of steps taken from their side to implement the direction of this Tribunal so as to make the lake pollution and encroachment free.

12.The above mentioned authorities are directed to submit their respective reports to this Tribunal on or before 24.03.2021 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.

13.The Registry is directed to communicate this order to the members of the committee, official respondents and concerned department and also to the Chief Secretary as well as Principal Secretaries as mentioned above by email immediately so as to enable them to comply with the direction and also for filing respective reports as directed.

2. The case was originally posted to 24.03.2021 for consideration of further reports. Thereafter it was adjourned from time to time and lastly it was adjourned to today by notification dated 29.04.2021.

3. When the matter came up for hearing today Mr. Kamlesh represented the applicant. Dr. V.R. Thirunarayanan represented respondents 1, 2, 4 & 5, Mr. C. Kasirajan through Ms. Ashwini represented 3rd respondent and Mr. P. Srinivas represented 6th respondent.

4. We have received the action taken report submitted by the Joint Committee dated nil, e-filed on 25.03.2021 and received on 26.03.2021 which reads as follows:

ACTION TAKEN REPORT OF JOINT COMMITTEE SUBMITTED BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, SOUTHERN ZONE, CHENNAIIN THE MATTER OF ORIGINAL APPLICATION NO. 164 OF 2017 (SZ), M. DHAMOTHARAN Vs THE SECRETARY TO GOVERNMENT, ENVIRONMENT & FOREST DEPARTMENT, GOVERNMENT OF TAMILANDU; AS PER ORDER DATED 16thFEBRUARY, 2021

1. Background

In the matter of Original application No. 164 of 2017, Thiru. D.Dhamotharan Vs The Secretary to Government, E&F Department, Government of Tamil Nadu, Chennai and 5 others has passed an order dated 13/12/2019 to constitute a committee comprising of the following members namely District Collector, Tiruppur, Senior Scientist/representative of regional office of CPCB, Tamil Nadu State Pollution Control Board, Commissioner, Tiruppur Municipal Corporation, Senior Engineer of Public Works Department (PWD) Water Treatment Organization, one scientist from NEERI and Indian Institute of Technology (IIT) Chennai.

In compliance to Hon'ble NGT order, Tamil Nadu Pollution Control Board constituted the committee. The Committee has carried out the field visit to

the area in question which is a subject matter in O.A. No 164 of 2017 during February 04th& 05th, 2020 and already detailed report of the committee was filed before Hon'ble NGT

The Hon'ble NGT heard the case on 23.11.2020 and passed an order that "

4. It is seen from the report that though ETPs & CETPs in the area are functioning but it is not to its optimal level. That shows that the effluents from the industrial estates are not being fully diverted to the ETPs and CETPs for the purpose of treatment. Further, it is seen from the report that there are certain gaps found regarding the salt actually recovered by the CETP and stock/disposal shown by them. The housekeeping of these treatment plants are also not in proper condition and that will have to be improved. Further, it will be seen from the report that Nallaru Odai and the Baby canal and also some portion of the Nanjarayan Lake showed untreated sewage being discharged and also the water contains some heavy metals which according to the committee was due to discharge of domestic and untreated sewage and also the possibility of industrial effluents being discharged into the baby canal and odai which ultimately reaches the lake.

5. It is also seen from the report that STP has been constructed by the Public Works Department (PWD) to improve the water quality of the lake. But, it was not made functional and due to the non functioning of the STP, machineries are being rusted and requires large scale maintenance. Since the STP is not made functional, sewage collected from that area is being discharged into the odai without treatment which reaches the lake. Inspite of finding that there are violations, they have not taken any steps to assess environmental compensation and also for violation of the Solid Waste Management Rules, 2016 as has been directed by the Principal Bench of National Green Tribunal in O.A. No.606 of 2018 and other similar matters of this nature.

6. So under such circumstances, we feel that the committee can be directed to come with a further report rectifying the above aspects and also direct the concerned departments to whom directions have been given by the committee for improving the situation to come with an action plan for implementing those recommendations so as to make the Nanjarayan Lake free from pollution.

7. The committee is also directed to give further suggestions regarding the methods by which the quality of the water in the river can be improved further so as to make it potable.

8. The Revenue Department is also directed to submit a detailed report regarding the extent of the Nallaru Odai and the lake and if there is any encroachment to the same, what are all the steps taken by them to remove the encroachment so as to make the Nallaru Odai to carry the storm water in rainy season which act as a inlet of excess storm water into the lake. If there is no possibility of removing the encroachment for any reason, then what are all the alternative methods by which the sewage as well as the storm water can be diverted from the available Nallaru Odai after proper treatment into the lake.

In compliance to Hon'ble NGT The Committee met on January 05, 2021 and reviewed status of measures taken to improve the water quality of Nanjarayan Lake. During the meeting the representatives of the PWD, Tirupur City Municipal Corporation and TNPCB are

directed to submit the individual action taken report as directed by the NGT. On the same day site inspection was carried out by the committee members to visualise the measures taken to prevent the pollution Nallaru Odai. Due to delay in receiving action plan of respective department the committee requested Hon'ble NGT to permit some more time submission of the report. The Hon'ble NGT heard the case on 16.02 .2021 and passed an order (Annexure -1) that;

".....Para 8.Further, this Tribunal has directed the committee also fo suggest the methods by which the pea/icy of the water in he lake and storm water drain can be improved fudher so as to make it potable. The revenue department was also directed to file a detailed report regarding the extent of the Nallaru Odai and the lake and if there is any encroachment 7o the same, what are all the steps taken by hem to remove the encroachment so as to make the Nallaru Odai to carry the storm I/vales in rainy season which acts as a inlet of excess s7orm water into the lake. If there is no possibilitj/ of removing the encroachment for any reason (this may not be an excuse for no7 removing unauthorized encroachment), then what are all the alternative methods by which the sewage as well as the storm vrafer can be diverted from the available Nallaru Odai after proper treatment into the lake".

"Para 9. Except the Public Works Department (PWD), others have not filed any report as directed".

"Para 10. So under such circumstances, we direct the committee, Tamil Nadu Pollution Control Board, local bodies and respective departments to come with a detailed action taken report on the basis of the directions given earlier by this Tribunal".

"Para 11. The Chief Secretary, State of Tamil Nadu as we// as the Principal Secretaries of Municipal Administration and Public Works Department and Irrigation are also directed to look into the issue and then submit independent reports as 7o what is the natnre of steps taken from their side to implement the direction of this Tribunal so as to make the lake pollution and encroachment free".

"Para 12. The above mentioned authorities are directed to submit their respective reports of this Tribunal on or before 24.03.2021 bj/ 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"

2. ***Status of Action taken to improve the water quality of Nallaru Odai and Nanjarayan Lake;***

In Compliance to above mentioned order of NGT, the committee reviewed the following w.r.t suggestions of Committee to improve the Water Quality;

(a) ***Rejuvenation of Nallaru Odai : Action taken by Tiruppur City Municipal Corporation.***

The Tiruppur City Municipal Corporation has been accorded with administrative approval for providing underground sewerage system to uncovered areas of Tirupur city Municipal Corporation at a cost of Rs.

525.92 Cr. The project has been taken up under AMRUT 2017-20 programmes with financial assistance from Asian Development Bank. The project has been divided into 4 packages and agencies for execution of the works have been fixed. Necessary agreement has also been executed with the contractors. Out of 4 packages, package 1,2 and 3 relates to establishment of sewage collection system and package 4 covers Sewage Treatment Plants (STP) of capacity 20 MLD and 36 MLD. The Tiruppur Corporation authority has informed that the collection system works are already started and the works are expected to be completed by June 2023.The detailed Rroject report preRared by Tiruppur City Municipal Corporation on above mentioned activities is attached as (Annexure-2).

(b) *Operation of STP Constructed by PWD to Improve the water Quality of Lake:*

PWD has informed that they have sent a new proposal to the government for maintenance of the sewage treatment plant and requested time of two more months to get the maintenance fund from the government for operating the STP.

(c) *Rejuvenation of Nanjarayan Lake : Action taken by The Public Works Department (PWD)*

The Public Works Department and Water Resources Department have already submitted a report signed on 15.02.2021 before Hon'ble NGT. Further The Public Works Department have collected samples from Nanjarayan lake in so-ordination with National Environmental Engineering Research Institute, Chennai and the results are awaited. It was informed by the PWD that based on the results further necessary actions will be planned accordingly.

(d) *Monitoring of CETP and Their Member units: Action taken report of Tamil Nadu Pollution Control Board.*

As per the suggestions of joint committee 2 CETPs namely M/s. Angeripalayam CETP LTD., and M/s. Park CETP PVT LTD taken following measures under the supervision of Tamil Nadu Pollution Control Board;

i. ***Measures taken by Angeripalayam CETP:*** *As per the suggestions of the committee, CETP has taken the following actions to monitor the water quality in Nallaru Odai.*

- ***Installation of online TDS monitoring station:*** *Angeripalayam CETP has installed online TDS monitoring station-3 Nos in the Nallaru Odai, one at the downstream of Park CETP member units and another at downstream of Angeripalayam CETP and its member units. Also one online TDS monitoring station installed in the storm water drain inside the premises of Angeripalyam CETP (Refer Photo Below)*
- ***Installation of Surveillance CCTV camera.***

Angeripalayam CETP has installed 6nos of surveillance CCTV cameras to monitor the pipe line and manhole for leakages if any in six following locations:

S.No	CCTV Location Number	Installed Location of the CCTV
1	3-CCTV	D/s of Sri Valli Process (East facing)
2	4-CCTV	D/s of Sri Valli Process (West facing)
3	10-CCTV	U/s of welcome Dyers (West facing)
4	11-CCTV	U/s of Nagsai Colours (West facing)
5	12-CCTV	U/s of Nagsai Colours (East facing)
6	13-CCTV	Angeripalayam CETP Aeration Tank (West facing)

- ***Regular Daily monitoring of the Effluent Collection to Manhole and pipe line conveyance system:*** *The Angeripalayam CETP has engaged 23 persons for monitoring the effluent manholes and pipeline conveyance system located in the Nallaru Odai round the clock. The system is being practiced on daily basis and records being maintained.*

  Further, the CETP is monitoring the member units effluent flow by comparing both the Electro Magnetic Flow Meter readings located in the individual member unit premises and in the CETP premises so as to avoid any difference and to ensure100% effluent pumped from member units reaches the CETP without leakages/overflow .

  Proper time schedule is being maintained by the CETP with a SCADA system for pumping of effluent from member units with allotted time to the pipeline conveyance system so as to avoid overflow in manholes.

  Regular and Periodical maintenance for the cleaning and revamping works are carried out to avoid the leakages, blockages and overflow in the effluent collection and conveyance system.

  The effluent conveyance manholes are cleaned / Jet cleaned on weekly basis as per the requirement.
- *The following Improvement works are carried out inside the premises of Angeripalayam CETP.*

  - *The CETP has provided online monitoring system (pH, EC, TDS) in the Storm Water drain located within the CETP premises.*
  - *The CETP has removed the solar evaporation pans area of 1884 Sq.M as per the instructions of committee and the details of the same are as mentioned below:*

a) *The CETP has removed the salt from these solar evaporation pans which was noticed by the committee during earlier inspection and the same is stored safely under covered shed.*

b) *The CETP has converted the solar evaporation pans area I part of 466.sq.M as chemical sludge storage shed.*

c) *The CETP has converted the solar evaporation pans area II part of 466.sq.M as Bio sludge storage shed.*

d) *The CETP has converted the solar evaporation pans area III part of 466.sq.M as Multiple Effect Evaporator -III Clean In Place Drain tank*

e) *Balance 486 Sq.m area of solar evaporation pan is utilized as bio sludge drying yard with polycarbonate roofing (Construction under progress).*

ii. ***Measures taken by Park CETP:*** *As per the Suggestions of the joint committee, M/s Park CETP has taken the following actions to monitor the water quality in Nallaru Odai.*

There are 4 number of member units in park CETP. The CETP has only pressurized pipeline for conveyance effluent, hence there no manhole effluent conveyance system.

- *Installation of online TDS: Park CETP has installed online TDS monitoring station in Nallaru Odai in the upstream of Park CETP member units.*

S.NO	Reference Number	Location of online TDS meter
1	1-TDS	1. TDS Meter (U/s of Karthikai Textile Mills)
2	2-TDS	2. TDS-Meter-D/s of park members (Poomparai Bridge)

- ***Installation of CCTV camera:** Seven Surveillance CCTV (Closed Circuit Tele Vision) cameras were provided to monitor the river for anunauthorized / illegal discharge if any.*

The Surveillance CCTV Camera were installed following locations to focus Nallaru Odai,

- *Upstream of Member unit of Park CETP -Karthikai Textile Mills -1 No.*
- *In front of Entrance gate of Karthikai Textile Mills -1*
- *No. Angeripalayam Road Bridge in the eastern side -1 No. SVP Knit Processors Southern side compound wall -1 No.*
- *SVP Knit Processors compound wall (Near Diesel Generator room)-2 Nos.(one facing East and the other facing West*
- *End of SVP knit Processors Compound wall — 1 No.*

In the downstream of Park CETP an online TDS meter was already provided by Angeripalayam CETP. This is common for both CETPs. This point is downstream and boundary of Park CETP and its member units.

Park CETP management had made arrangement for monitoring the effluent pipeline conveyance system located in the Nallaru Odai round the clock. The system is being practiced on daily basis and records being maintained.

Further, the CETP is monitoring the member units effluent flow by comparing both the Electro Magnetic Flow Meter readings located in the individual member unit premises and in the CETP premises so as to avoid any difference and to ensure 100% effluent pumped from member units reaches the CETP without leakages/overflow .

Proper time schedule is being maintained by the CETP for pumping of effluent from each of their member units with allotted time to the pipeline conveyance system.

Regular and Periodical maintenance for the cleaning and revamping works are carried out to avoid the leakages and blockages in the effluent conveyance system.

S.No	CCTV Location Number	Installed Location of the CCTV
1	1-CCTV	U/s of Karthikai Textile Mills (East facing)
2	2-CCTV	D/s of Karthikai Textile Mills (East facing)
3	3-CCTV	U/s of Sri Valli Process (East facing)
4	4-CCTV	D/s of Sri Valli Process (West facing)
5	5-CCTV	D/s of Angeripalayam Bridge (East facing)
6	6-CCTV	U/s of SVP Knit Process (South facing)
7	7-CCTV	D/s of SVP Knit Process (East facing)

8	*8-CCTV*	*D/s of SVP Knit Process (West facing)*
9	*9-CCTV*	*D/s of SVP Knit Process boiler shed (East facing)*
10	*10-CCTV*	*U/s of welcome Dyers (West facing)*
11	*11-CCTV*	*U/s of Nagsai Colours (West facing)*
12	*12-CCTV*	*U/s of Nagsai Colours (East facing)*
13	*13-CCTV*	*Angeripalayam CETP Aeration Tank (West facing)*

Recent Paper articles on improvement of water quality of Nanjarayan Lake:

The actions being taken from the concerned departments for the continuous improvement of the lake. Recent articles in the Dinamalar news paper dailies is indicating the quality of water in the Nanjarayan Lake is getting improved day by day. It was known from the newspaper dailies that the exotic birds from other countries are coming to Nanjarayan Lake for their reproduction. The public has also requested for upgrading the lake as bird sanctuary as the detail of birds visiting the lake has already been documented. (Photos attached).

In one of the article it was learnt that rare bird Gadwall (Karuval vathu) has visited the Nanjarayan Lake recently (Photos attached).

From other article, it was known that 150 rare bird species from other countries are visiting the lake regularly for their reproduction (Photos a2ached) which indicates the improvement of water quality due to stoppage of entry of industrial effluent into Nallaru Odai.

3. ***Conclusion of committee :***

a. *The Tiruppur Municipal Corporation has taken up project to install Under Ground Drainage system to uncovered area and to install STPs.*

b. *The STP constructed by PWD near to Nanjarayan Lake is found non functional and also found no progress made to operate.*

G. *PWD has taken steps for assessment of quantity and quality accumulated silt of lake with National Environmental Engineering Research Institute, however no steps have been taken to delineate the water tank area, construction of bund, fencing to protect the water body from human inception etc.,*

d. *Two CETPS are taken measures as per the suggestion of the committee, however close monitoring is required to ensure illegal discharge of any effluent from conveyance line and from the premises of thèse two CETPs.*

Signature of Committee Members

5. The Public Works Department has also filed reply with certain annexure signed by the officer, who had filed the same on 19.03.2021, e-filed on

22.03.2021 and received on the same date which reads as follows:

Reply by Public Works Department/Water Resources Department
Executive Engineer
Bhavanisagar Dam Division
Bhavanisagar

1. *The above case posted for consideration of the report by the Joint Committee constituted by this Tribunal with observations and recommendations pertaining to the above division for which the reply is submitted as follows:*

a) *Rejuvenation of Nallaru Odai*

- *To take steps to rejuvenate the Nallaru Odai by evacuating the encroachments as per Re-survey records of Tamil Nadu Government.*
  Initiatives have been taken to evacuate the encroachments on the Nallaru Odai. List of encroachments was received from Tahsildar of Tirupur North Taluk vide letter dated 20.04.2018. About 147 Nos. of encroachments was identified and listed. Further, notices have been issued to the encroachers through public works department. (Annexure 1) Mean time the encroachers requested for alternate place for housing. After considering their representation the encroachment list has been forwarded to Tamil Nadu Slum Clearance Board in Tirupur vide Executive Engineer Bhavaniugar Dam Division Letter dated 01.07.2019 (Annexure-Ii) for consideration to allot alternative tenements in their ongoing projects. At this juncture after getting allotment for alternate dwellings the encroachments will be evicted and cleared.
- *To take Regular maintenance of Nallaru Odai Desilting and renovating the side walls of Odai.*
  To desilt, clean the jungle and construct retaining walls in Nallaru Odai an estimate is prepared at project cost of 23.75 crores. The proposal envisages primarily removing the jungles and vegetations, removal of sediments, construction of drainage inlets on the banks & construction of retaining walls at vulnerable location.
  This estimate of proposed work is being forward to the Government of Tamil Nadu through the Public Works Department for Administrative sanction which is in the process. After getting Administrative sanction from the Government of Tamil Nadu necessary action may be taken up complete the work within a year.

6. It is also seen from the annexure addressing letter to the Chief Engineer, WRD, Coimbatore Region seeking for certain financial assistance and sanction vide their letter dated 16.03.2021.

7. It is also seen from the report that there are certain improvement made but the present status of the lake, water quality of the lake is yet to be

ascertained on the basis of the further study to be conducted. The progress of the work is not moving as expected, even regarding the encroachment to be removed from Nallaru Odai and also regarding the implementation of underground sewage system by Tiruppur Corporation and restoring the disfunctional STP operated by PWD near the lake are yet to accomplished. As regards the underground sewage system is concerned, it was mentioned that it will be fully operational by June, 2023. There is nothing mentioned in the report as to what are the short term measures that have been adopted by the Tiruppur Corporation to remedy the situation of preventing the untreated sewage reaching the lake. PWD also did not come with any clear action taken plan as to how they are going to maintain this lake by proper maintenance and de-siltng the same, which work has not been done for a quite long time. Unless such steps are quickened, it cannot be said that the efforts taken by the Tribunal to stimulate and motivate the local bodies who are sleeping over their rights and duties could not be accomplished as expected. Even, if the application is closed by giving direction to complete the same within a time frame, this Tribunal opines that unless some more monitoring is done for some more time to put this in action, they will not rise to the occasion and complete the same within the time fixed by this Tribunal. This Tribunal cannot wait for these things to be completed for a longer period as projected by the Corporation, namely, June, 2023. Pollution

Control Board also did not file any report regarding the quality of the water in the lake after certain improvements have been made on the basis of the recommendations made by the Committee which was discussed by this Tribunal in earlier orders.

8. Unless steps are taken at the higher level, namely, Secretary level to see that such projects are implemented within a short time, by providing technical and financial assistance on priority basis the ecosystem restoration as expected could not be achieved.

9. So considering the circumstances, we direct the Committee, Pollution Control Board, Public Works Department and Tiruppur Corporation to come with proper action taken plan with shorter time line to remedy the situation permanently and also provide effective short-term measures to achieve the purpose till the expected projects are put to operations.

10. The District Collector, Tiruppur is also directed to coordinate with the stakeholders and come with proper action plan as to how the water bodies within their jurisdiction including this can be rejuvenated and restore the ecosystem as before and make the water body free from pollution and encroachments.

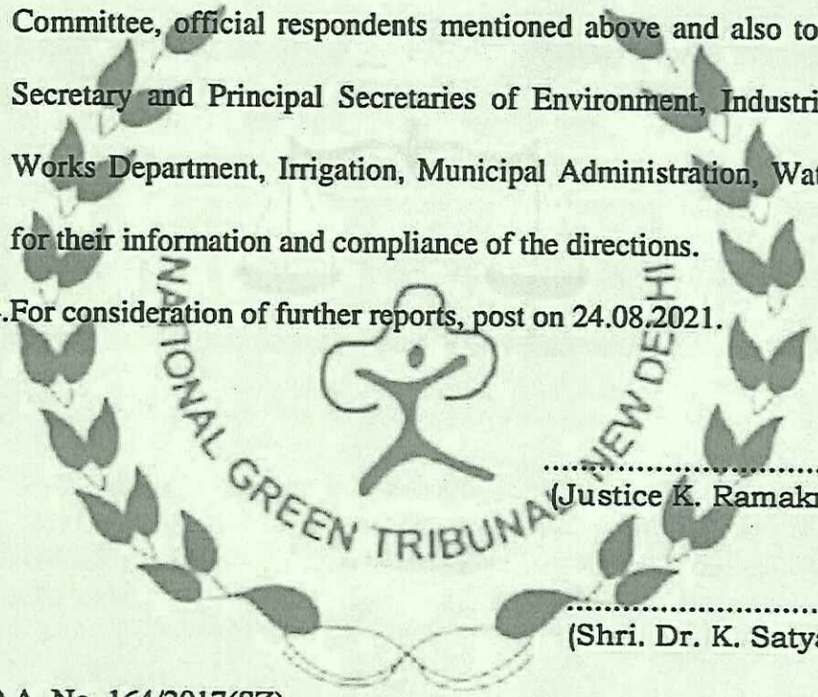
11. The Chief Secretary in coordination with the Principal Secretaries of Environment, Industries, Public Works Department, Irrigation, Municipal Administration, Water Supply to come with a proper action plan and monitoring system to implement the schemes said to be evolved by the

officials mentioned above in an effective manner with a shorter time lines before the next hearing date.

12. The respective officials are directed to submit the reports as directed by this Tribunal on or before 24.08.2021 by e-filling 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.

13. The Registry is directed to communicate this order to the members of the Committee, official respondents mentioned above and also to the Chief Secretary and Principal Secretaries of Environment, Industries, Public Works Department, Irrigation, Municipal Administration, Water Supply for their information and compliance of the directions.

14. For consideration of further reports, post on 24.08.2021.



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

.....E.M.
(Shri. Dr. K. Satyagopal)

O.A. No. 164/2017(SZ)
10th June, 2021. (AM)