

**INSPECTION REPORT OF THE JOINT COMMITTEE CONSTITUTED BY THE HON'BLE NATIONAL GREEN TRIBUNAL (SOUTHERN ZONE) IN RESPECT OF O.A NO. 90 OF 2020 (SZ) SUOMOTU ON THE BASIS OF THE NEWS PAPER REPORT PUBLISHED IN DINAMALAR NEWSPAPER CHENNAI EDITION DATED 24.06.2020, UNDER THE CAPTION "WHEN WILL THERE BE A NEW DAWN FOR KADAPPERI LAKE?".**

**ORDERS OF THE HON'BLE TRIBUNAL**

It is respectfully submitted that the Hon'ble National Green Tribunal (SZ), Chennai in its order dated 30.06.2020 in the matter of O.A.No. 90 of 2020 inter alia stated that:

"1. The above case has been Suo Motu registered by this Tribunal on the basis of the paper report published in Dinamalar – News paper Chennai edition dated 24.06.2020 under the caption "When will there be a new dawn for Kadapperi Lake?".

2. It is alleged in the paper report that there was a proposal for rejuvenating and maintaining the Kadapperi Lake in West Tambaram by the official respondents including the Public Works Department and the Tambaram Municipality. But later the work was stopped in the mid way which resulted in the lake being further polluted.

3. The lake is also known as Potheri Lake according to Government Documents. The lake was originally having an extent of 65 acres which has been reduced to 40 acres due to encroachment. Due to mixing of sewage of and plastic wastes, the water in the lake has turned green in colour. The Public Works Department turned a blind eye towards the restoration of Kadapperi Lake from the Residents Association of that area.

4. Thereafter at the instance of some of the well wisher and non Governmental Organisation, some permission was granted to repair the same and the steps were also taken to plug the sewage into the lake and some amounts were allotted for the purpose of the beautification of the lake as well. But due to North-east monsoon during last year, the restoration work had been stopped in the halfway, even before the wastage and garbage were removed completely. A proposal was submitted by the Thambaram Municipality for desilting of the lake at an estimate of Rs. 3.5 crores to the office of the Municipal Commissioner and it is pending.

5. Now, the sewage from the Tambaram Municipal area and Tambaram Railway Colony and MTC workshop gets mixed into the lake and changed the colour of the water into green due to mixing up of waste and sewage water. Heavy foul and pungent smell is emanating from the lake resembling the Cooum, which deters people from going to the lake.

10. In order to ascertain the real state of affairs, we feel it appropriate to appoint a Joint Committee comprising of a

- i. Senior Officer from Ministry of Environment, Forests and Climate Change (MoEF&CC), Regional Office, Chennai,
- ii. the District Collector, Chengalpet District,
- iii. the Superintending Engineer of Public Works Department and Water Resources Organisation who is in charge of such water body,
- iv. the Commissioner, Thambaram Municipality and
- v. a Senior Officer from Tamil Nadu Pollution Control Board of that locality

11. The Public Works Department, Water Resources Organisation will act as nodal agency for co-ordination and for providing all necessary logistics for this purpose.

12. The committee is also directed to assess the environmental compensation for the damage caused on account of any such illegal activities and fix the responsibility on the persons responsible for the same.

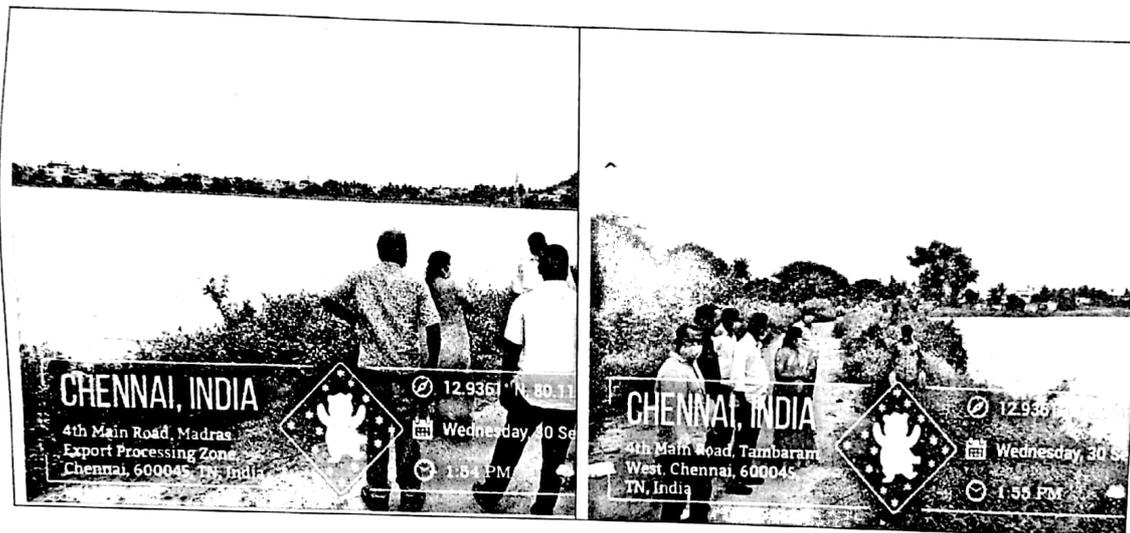
13. The committee is also directed to prepare an action plan long term as well as short term with shorter time line for the steps to be taken for protecting the water body against trespass and pollution and restore the water body to its original position.

14. If any maintenance work is required, the 6th respondent is directed to take necessary steps to maintain the water body before the monsoon so that the water storage capacity of the lake can be increased."

## 2. COMPLIANCE OF THE DIRECTION

In due compliance of the said Hon'ble National Green Tribunal direction, surface water samples from the Kadapperi Lake in Tambaram was collected on 30/09/2020 so as to ascertain the present water quality in the said water body.

**Collection of water sample to ascertain the quality of water in the Kadapperi Lake in Tambaram Taluk, Chengalpattu District.**



**Statement showing the value of the Physico chemical parameters analysed**

Sl. No	Parameters	Units	Point of Collection	TNPCCB Standards (Inland Surface Water)
			Kadapperi Lake in Tambaram	
1	pH @ 25°C	No.	7.88	5.5-9
2	Total Suspended Solids @ 105°C	mg/L	67	100
3	Total Dissolved Solids @ 180°C	mg/L	1109	2100
4	BOD @ 27°C	mg/L	23	30
5	COD	mg/L	160	250
6	Copper as Cu	mg/L	<0.033	3
7	Zinc as Zn	mg/L	0.25	1

8	Cadmium as Cd	mg/L	<0.05	2
9	Lead as Pb	mg/L	<0.07	0.1
10	Nickel as Ni	mg/L	<0.05	3
11	Total Chromium Cr	mg/L	<0.01	2
12	Hexavalent Chromium Cr <sup>6+</sup>	mg/L	<0.01	0.1
13	D.O	mg/L	4.2	5mg/l and above

**Statement showing the value of the Bacteriological parameters analysed**

Sl. No	Parameters	Units	Point of Collection Kadapperi Lake in Tambaram	Primary Water Quality Criteria for Bathing Waters prescribed by Central Pollution Control Board
1	Total Coliform	MPN/100 ml	40	500 or less.
2	Faecal Coliform	MPN/100 ml	<1.8	500 (desirable) 2500 (Maximum Permissible)

The Report of analysis of the water sample collected from the said water body reveals that the Physico chemical parameters analysed satisfy the Inland surface water standards prescribed by the Board. Furthermore the water sample collected from the Kadapperi Lake in Tambaram analysed for Bacteriological parameter Total Coliform except Faecal Coliform meets the Primary Water Quality Criteria for Bathing Waters prescribed by Central Pollution Control Board.

**3. REPORT OF THE PUBLIC WORKS DEPARTMENT:**

Kadapperi Tank is located at Survey No.154/1, Kadapperi Village, Tambaram Taluk, Chengalpattu District. Kadapperi Tank is bounded by Residences of Tambaram Municipal area in the south and western side, MTC and Residences of Tambaram Municipal area in the Eastern side, Tambaram Madras Export Processing Zone(MEPZ) in the Northern side. The said water body is under the control of the Water Resources Department. Its original ayacut was 44.25 Ha and water spread area of 24.29Ha with the storage capacity of 1.38 Mcft and with the own catchment area of 3.68 sq.km. The surplus weir is located at the left bank of the Kadapperi Tank. Due to the absence of the surplus course, surplus water spread over in the existing residential streets of Tambaram Municipal area and leads to Thiruneermalai Periya Eri and finally confluence to Adyar River at Thiruneermalai Point.

There are proposals for rehabilitation and restoration of all tanks in overall Kovalam basin (comes under Chengalpattu and Chennai District) under Comprehensive Flood Mitigation Project with an amount of Rs.2000 crore which also involves creating biodiversity parks/ tree-planting around the banks of the water body protecting the lake against the future encroachment. Detailed

Project Report has been sent to Government and after approval from the World Bank, the said project scheme will be executed.

#### **4. REPORT FROM THE COMMISSIONER, TAMBARAM MUNICIPALITY**

In due compliance of the said Hon'ble National Green Tribunal direction, the Commissioner, Tambaram Municipality furnishes the following detailed report:

1. Total Area of the Tambaram Municipality	20.72 Sq Km
2. Total Population of the Tambaram Municipality :	174787
3. The Ward No.2,4,5,6,7,8 & 9 West Tambaram areas of Tambaram Municipality is located in the vicinity of the area in question	<p><b><u>Ward No.2</u></b> 1. Dhamodharan Nagar</p> <p><b><u>Ward No.4</u></b> 1. North Kulakkarai street 2. South Kulakkarai street 3. Muthami Nagar 4. RV Garden 5. PTC Depo Drain</p> <p><b><u>Ward No.5</u></b> 1. Ranganathapuram 1<sup>st</sup> street, 2<sup>nd</sup> street 2. Gandhi road/GST road Drain</p> <p><b><u>Ward No.6</u></b> 1. Ranganathapuram 4<sup>th</sup> street, 2. Gandhi road/GST road Drain</p> <p><b><u>Ward No.7</u></b> 1. Kadharbai street,</p> <p><b><u>Ward No.8</u></b> 1. Babuji street 2. Kalyanasundaram street</p> <p><b><u>Ward No.9</u></b> 1. VOC street</p>
4. Household in the above said area of the said around lake area :	1801 Nos.
5. Total Generation of sewage in the said areas:	0.72 MLD
6. Total generation of solid waste in the said area:	2.521 MT/Day

#### **I. SOLID WASTE MANAGEMENT**

**Generation of Solid Waste in the vicinity of Kadapperi Lake (from the above said 7 wards of the Municipal area):** 2.521 MT/day (Biodegradable waste -1.260 MT and Non Biodegradable waste - 1.260 MT)

#### **Present status of collection and disposal of solid waste:**

Presently the Tambaram Municipality carries out door-to-door collection of solid waste using 3 nos of Light Commercial vehicle, 3 Battery Operated vehicles, and with 15 sanitary Workers. Out of 2.521 T/day solid waste, biodegradable solid waste is 1.260 T/day and the non biodegradable wastes is 1.260MT/day. Tambaram Municipality is having Solid waste processing facility to process the biodegradable waste generated in the Tambaram municipal area to the tune of 28 Tons/day for which Board has given authorisation vide Procs. dated 08/04/2019 valid up to 31/03/2020 and

subsequently extended up to 30/09/2020. Non biodegradable waste and non saleable waste are being sent to Kodungaiyur Dump site of Greater Chennai Corporation.

### **Action Plan for Solid Waste Management**

#### **Short Term**

1. Tambaram Municipality to carry out composting of the biodegradable waste at its Micro Compost centre (MCC) and to dispose the non biodegradable waste through the Kodungaiyur dump yard.
2. Tambaram Municipality has proposed to issue notice to the public and to the households not to dump the waste on the road sides and to issue pamphlets regarding the source segregation of the solid waste.
3. Persons dumping solid waste in the road side will be identified and fine will be imposed as per the provisions of the Local Body Act.

#### **Long Term:**

- 1 Door to Door Collection of segregated solid waste from the households of the Tambaram Municipality will be made 100%
- 2 3 nos of Light Commercial vehicle, 3 Battery Operated vehicle and with 15 sanitary Workers. will be deployed for the collection of solid waste from the said 1801 households.
- 3 Micro composting centre has been created at Amman Kovil backside compost center, Onsite site compost yard at Ranganathapuram & Moulana Nagar of Tambaram to compost the segregated Biodegradable wastes of 1.260 MT/day and non degradable waste of 1.260 MT/day will be collected and disposed through Vengadamangalam Incineration facility after obtaining necessary permission from the competent authority.

## **II. SEWAGE GENERATION AND SEWERAGE SYSTEM:**

**Generation of sewage in the vicinity of Kadapperi Lake** i.e. from the said 7204 Population in the above 7 wards: 0.72 MLD.

#### **Present method of collection and mode of disposal of sewage:**

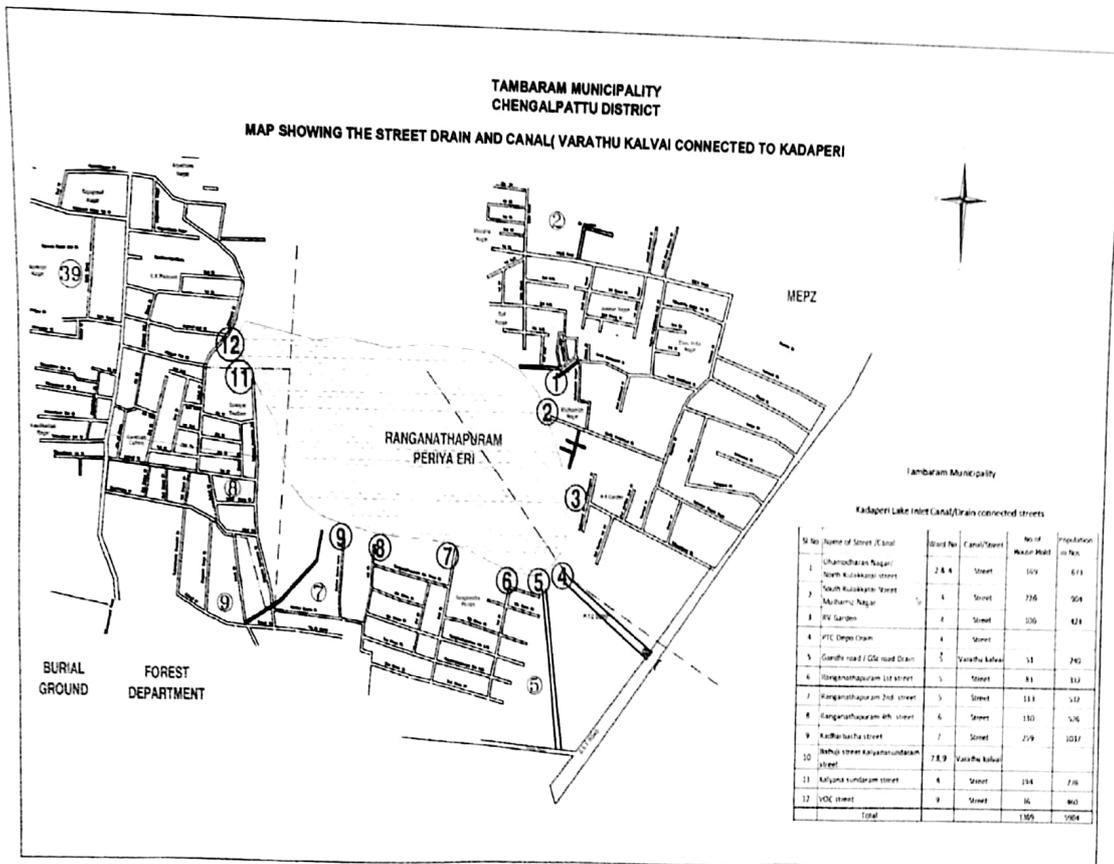
The generated waste water from households and commercial establishments in ward nos. 2,4,5,6,7,8 & 9 are disposed through individual septic tank arrangements and the In above 7 wards are having UGSS scheme and UGSS House service connection was in progress. When both these schemes are completed in another five months the flow of sewage from the said Tambaram Municipal area to Kadaperi Lake through UGSS scheme will be completely averted.

#### **Action Plan for Sewage Management**

Tambaram Municipality has proposed to complete and commission the underground sewerage system with Sewage treatment plant for handling the sewage generated from the Tambaram Municipal area within 5 months.

Details of the area from which sewage inflow to Kadaperi Lake

Sl No	Name of Street /Canal	Ward No	No of House Hold	Population in Nos
1	Dhamodharan Nagar/ North Kulakkarai street	2 & 4	169	673
2	South Kulakkarai Street Muthamiz Nagar	4	226	904
3	RV Garden	4	106	424
4	PTC Depo drain			
5	Gandhi road / GST road drain	5	53	240
6	Ranganathapuram 1st street	5	83	332
7	Ranganathapuram 2nd street	5	133	532
8	Ranganathapuram 4th street	6	130	526
9	Kadharbasha street	7,8,9	259	1037
10	Babuji street Kalyanasundaram street inlet ( Varathu Kalvai ) drain			
11	Kalyana sundaram street	8	194	776
12	VOC street	9	16	460
Total			1369	5904



## **5. JOINT INSPECTION OF THE COMMITTEE**

The members of the joint committee has constituted by the Hon'ble National Green Tribunal have carried out the inspection in the area in question- Kadapperi Lake on 30.09.2020 & 23.02.2021.



## **6. OBSERVATIONS BY THE COMMITTEE**

During the time of inspection, the committee observed the following

1. Kadaperi tank is a PWD tank. It has lost its irrigation potential long back due to agglomeration of Chennai City and its suburb over the period of time. Now, the tank serves mostly as a natural aquifer.
2. Kadaperi tank has its own catchment area in an extent of 3.68 sq.km.
3. There are 12 major storm drainage outlet and street drains, draining carrying sewage/sullage to the tune of 0.72 MLD generated from the residential and commercial areas located in the 7 wards of Tambaram Municipality into this Kadaperi tank. The tank water is being polluted due to this inflow of sewage mixed storm water from the said Tambaram Municipal area.
4. Partially treated effluent from the MTC(Chennai) Limited, Tambaram Depot and TNSTC(Villupuram) Limited, Tambaram Depot, reaches the said water body.
5. The surplus weir is located at the left bank of the Kadapperi Tank. Due to the absence of the surplus course, surplus water spread over through the existing residential streets of Tambaram Municipal area and leads to Thiruneermalai Periya Eri and finally confluence to Adyar River at Thiruneermalai Point.
6. The surplus water is drained through inadequate storm water drain. Due to this water level in the tank during monsoon period raises above the Tank bund level and spill over the bund.
7. Encroachments were noticed along a portion of the bund in the Northern side and in all sides of the water spread area of the said water body. It is ascertained that 477 encroachments were found in the year of 2009.
8. Dumping of garbage was noticed in the Western fringe of the water body.
9. Tambaram Municipality is carrying out the processing of the biodegradable waste collected from the said Municipal area and the non biodegradable waste and non saleable waste are sent to Kodungaiyur Dump site of Greater Chennai Corporation

## **7. RECOMMENDATIONS:**

**Based on the above observation, the joint committee submits the following recommendation before the Hon'ble National Green Tribunal (Southern Zone)**

01. Tambaram Municipality shall complete the UGSS scheme and UGSS House service connections in another five months to prevent the flow of sewage/sullage from Tambaram Municipal area into the Tambaram Kadapperi Eri.
02. Tambaram Municipality shall levy fine on the violators disposing sewage into the Tambaram Kadapperi Eri under local body acts.
03. Tambaram Municipality shall ensure 100% collection of solid waste being generated within its jurisdiction with proper segregation, door to door collection, processing and disposal of the same by complying with the provisions of the Solid Waste Management Rules 2016 within six months and shall ensure that no dumping of solid waste happens in the Kadaperi Lake by deploying security guards.
04. Tambaram Municipality shall carry out composting of the biodegradable waste at Micro Compost centers and dispose the non biodegradable waste through the proposed Vengadamangalam Incineration facility within 6 months.
05. Tambaram Municipality shall regularly monitor the collection of solid waste from the said area to avoid dumping of solid waste into the lake and shall levy fine on the violators dumping the solid waste in the water body.
06. Tambaram Municipality shall create awareness among the public with the help of associations in the local body area for proper segregation and collection of solid waste.
07. PWD with the help of Revenue Authorities shall make fresh survey to identify the exact number of encroachment in the said water body within six months and after shall carry out necessary steps to evict them.
08. PWD shall revamp the weir and strengthening of the bunds in the said water body for smooth flow of surplus water and create biodiversity parks/ tree-planting around the banks of the water body, so as to protect the lake against the future encroachment within six months by obtaining necessary funds from the Government
09. TNPCB shall take necessary action to prevent discharge of treated/untreated trade effluent from the MTC and TNSTC bus depots into the said water body within three months.

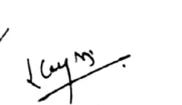
  
**Commissioner,  
Tambaram  
Municipality**

  
**District  
Environmental  
Engineer,  
Tamil Nadu  
Pollution  
Control Board,  
Maraimalai  
Nagar**

  
**Scientist-D  
Ministry of  
Environment,  
Forests and  
Climate  
Change,  
Regional  
Office,  
Chennai**

  
**Revenue  
Divisional  
Officer,  
Tambaram,  
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**Superintending  
Engineer of  
Public Works  
Department  
and Water  
Resources  
Department**

  
**District  
Collector,  
Chengalpattu  
District**