

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,  
SOUTHERN BENCH, CHENNAI**

**IN**

**ORIGINAL APPLICATION NO 12/2020 (SZ)**

**Applicant(s)** : Tribunal on its own motion "SuoMotu"  
based on the News item in  
Mathrubhumi, Malayalam Newspaperdt:  
19.01.2020, "The removal of debris in  
Maradu not according to Norms –  
National Green Tribunal".

Versus

**Respondent(s)** : The Chief Secretary, Kerala& others

**REPORT FILED BY THE CHIEF ENVIRONMENTAL ENGINEER,  
REGIONAL OFFICE, ERNAKULAM FOR AND ON BEHALF OF THE  
KERALA STATE POLLUTION CONTROL BOARD IN  
COMPLIANCE WITH THE ORDER DATED 30.11.2023**



Adv. Rema Smrithi.

ADDITIONAL STANDING COUNSEL FOR THE RESPONDENT: 2

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**VOLUME 1**

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Dated this the 27<sup>th</sup> day of January 2024

**Rema Smrithi**, Advocate  
ADDITIONAL STANDING COUNSEL FOR THE RESPONDENT

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COMPLIANCE WITH THE ORDER DATED 30.11.2023**

I, Baburajan P K, 52 years, S/o. Late P.A.Kuttappan, now working as the Chief Environmental Engineer, Regional Office, Kerala State Pollution Control Board, Ernakulam. I am competent to and duly authorized to represent the Board. I know the facts and circumstances of the cases. The factual submissions made hereunder are true and correct to the best of my knowledge, information and belief. In these



  
**BABURAJAN P.K.**  
Chief Environmental Engineer

circumstances, it is just and necessary that this Hon'ble Tribunal may be pleased to accept the accompanying report on file and it is so humbly prayed in the interests of justice in this case.

1. Vide Order dated 30.11.2023 in the OA No. 12 of 2020 (SZ), Hon'ble NGT had directed Kerala State Pollution Control Board (KSPCB) to file a detailed report in terms of illustration for the calculation given by the CPCB on the Environmental Compensation (EC) for the improper management of Construction & Demolition waste, subsequent to the controlled implosion of four high-rise buildings at Maradu Municipality, Ernakulam, Kerala.

2. It is respectfully submitted that the formula adopted by CPCB for the calculation of EC is as follows:-

$$\text{Environmental Compensation} = \{0.1 \times 0.196 \times (51.14 - 0.0) + 1.0 \times 0.0067 \times (51.14 - 0.0) \times 1361 + 0.01 \times 1361\} \text{ Lakhs} = 480.94 \text{ Lakhs}$$

Where:-

Capital Cost Factor	= 0.1
Marginal Average Cost for Waste Management	= 0.196 (49 Lakhs/ 250 TPD = 0.196)
Per day waste disposed as per the Rules	= 0 tonnes
Per Day Waste Generation	= 69,606 Tonnes/1361 Days = 51.14 Tons/Day
O&M Cost Factor	= 1
Marginal Average O&M Cost	= 0.0067 (Rs.1.675 Lakhs / 250 TPD = 0.0067)
N	= 1361 days
Environmental Externality	= 0.01

It may kindly be noted that CPCB had adopted the values of Marginal Average Cost for Waste Management as 0.196 and Marginal Average O&M Cost as 0.0067. CPCB has mentioned in their calculation that these values were considered from the CPCB



  
**BABURAJAN P.K.**  
 Chief Environmental Engineer

Report in the matter of OA No. 49/2019 (WZ) since there is no C&D waste processing facility in Maradu Municipality and not even in Kochi, City. It is not found to be appropriate to adopt the same values from another report since the scenario is different in both the cases. Also the CPCB has counted the number of days as 1361 days on the assumption that no waste was disposed properly till 27.11.2023 as per the rules. But this assumption is not fully correct and hence the Board proposed to recalculate with the latest data on removal of waste.

3. It is respectfully submitted that there is no guideline for calculation of Environmental Compensation (EC) exclusively under the Construction & Demolition Waste Management Rules, 2016 prescribed by the CPCB. Hence as directed by the Hon'ble NGT, the guidelines for calculation of EC with respect to municipal solid waste were adopted. The formula for calculation of compensation is adopted from "Report of the CPCB In-house Committee on Methodology for Assessing Environmental Compensation and Action Plan to Utilize the Fund". The recalculated Environmental Compensation is as follows:

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

Where;

Waste Quantity in tons per day (TPD)

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



  
**BABURAJAN P.K.**  
 Chief Environmental Engineer

Simplifying;

$$EC \text{ (Lakhs Rs.)} = 2.4 \text{ (Waste Generation - Waste Disposed as per the Rules)} + 0.02 \text{ (Waste Generation - Waste Disposed as per the Rules)} \times N + \text{Marginal Cost of Environmental Externality} \times \text{(Waste Generation - Waste Disposed as per the Rules)} \times N$$

Where,

Waste Generation	= 69606 tonnes
Waste disposed as per rules	= 10456.5 tonnes
Marginal Cost of Environmental Externality	= 0.8
No.of days (N)	= 158 days

Therefore,

$$\text{Environmental Compensation} = 2.4(69606-10456.5) + 0.02(69600-10456.5) \times 158 + 0.8(69600-10456.5) \times 158 = \text{Rs. 7805368.02} = \text{78.05 lakhs}$$

4. It is respectfully submitted that the Board has verified locations like Madavana, Irumpanam, Palluruthy, Maalikapeedika and Varapuzha where the waste was disposed by the service provider. The demolition waste from these sites was disposed off by utilizing it for purposes like land filling, elevate the terrain for the construction of road, construction of culvert etc. The waste disposal at the sites was done under the supervision of corresponding District offices and the letter received from the District offices is attached as **Annexure 1**. As per Annexure 1, the total C&D waste disposed off as per the rules is 10456.5 tonnes. Hence, the recalculated EC is **78.05 lakhs** against the amount of 480.94 lakhs calculated by the CPCB.

5. It is respectfully submitted that the no.of days is taken as 158 days considering the no.of days from the next day of the demolition to the completion report date. It may kindly be noted that KSPCB has mainly depended on the details received from the Maradu Municipality and the reports furnished by Joint Committee appointed by the Hon'ble NGT.

It may also be noted that the agencies have resorted to dispose the waste to other facilities at different locations since there is no C&D Waste Disposal Plant available in Kerala.



  
**BABURAJAN P.K.**  
 Chief Environmental Engineer

All the facts stated above are true to the best of my knowledge, information and belief.

Date: this the 27<sup>th</sup> January 2024.



  
**BABURAJAN P.K.**  
Chief Environmental Engineer

CHIEF ENVIRONMENTAL ENGINEER

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**VOLUME 2**

**Annexures**

Sl.No	Description	Pages
1	Annexure 1	1- 7

Dated this the 27<sup>th</sup> day of January 2024

**RemaSmrithi**, Advocate  
ADDITIONAL STANDING COUNSEL FOR THE RESPONDENT



**waste removal report - maradu.pdf**

KSPCB ELOOR <esceloor@yahoo.co.in>  
Reply-To: KSPCB ELOOR <esceloor@yahoo.co.in>  
To: RO ERNAKULAM <pcbrokekm@gmail.com>

Sun, Feb 16, 2020 at 9:32 AM

As per the instruction from the CEE, inspection was conducted on 14/02/2020 and 15.02.2020 at two sites Maalikampeedika and Varapuzha under this office purview. The report as follows

**Maalikampeedika site**

Construction of a godown was progressing in the said site and the derbis is used to fill the basement and front portion of the land. Total plot area is 40 cents. Dumping has been doing here for last 1 week. Till the day of inspection, they have dumped around 160 loads in Torres. They are receiving around 10 to 11 loads per day in between 8pm to 10pm. Nearby residence is of the owner itself. There is no water bodies in and around the site. They have covered their front portion (side next to road) with green garden net. Work is near to completion.

**Varapuzha Site**

Inspected on 15.02.2020. The waste is seen stored in a land of about 1.6 acre. Land located at Valluvallykara in Kottuvally Village, Paravur taluk. The debris is used for landfilling the site. At present about 4375 tones of demolished waste are dumped in the site. The land is being filled by debris for making approach road for the bridge existing nearby.

Regards, -  
Environmental Engineer  
Kerala State Pollution Control Board  
Environmental Surveillance Centre  
Eloor Ernakulam

[Quoted text hidden]



**KERALA STATE POLLUTION CONTROL BOARD**  
 DISTRICT OFFICE I, GANDHI NAGAR, ERNAKULAM - 682 020  
 www.keralapcb.org

No: PCB/EKM/DO-1/GEN-08/2018

19.02.2020

From,

The Environmental Engineer  
 District Office -1  
 Ernakulam

To,

The Chief Environmental Engineer  
 Regional Office  
 Ernakulam

Sir,



Sub: Inspection conducted on sites at Madavana and Irumpanam as part of post demolition debris disposal monitoring - reg.

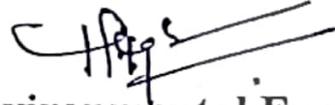
Inspected the sites on 19.02.2020. The work at the site in Madavana is to elevate the terrain for the construction of a road to a residential area of 10 houses. The road has 5 meters width and 25 meter length. About 40 loads of debris have been used for the work. The work has already been completed.

The 2nd site is at Irumpanam, where the restoration works of jetty is in progress. The land is owned by Inland Water Authority. As part of movement of ODC( Over dimensional cargo) consignments in connection with PDPP project for BPCL Kochi Refinery from Cochin port to Ambalamugal, they have demolished the jetty and excavated the land to form canal for the incoming of barge. After the completion of ODC consignments, now the jetty is being restoring through back filling of the basin. The Prompt Enterprises is supplying about 60 number of loads for this. The nearest residence keeps approximately a distance of 20-25 meters

AEI  
 817  
 22/2/2020

from the site to be back filled. The work is in progress. The Photographs of the sites are attached herewith. No pollution problems are seen during the time of inspection.

Yours faithfully,

A handwritten signature in black ink, appearing to be 'H. S.', written over two horizontal lines.

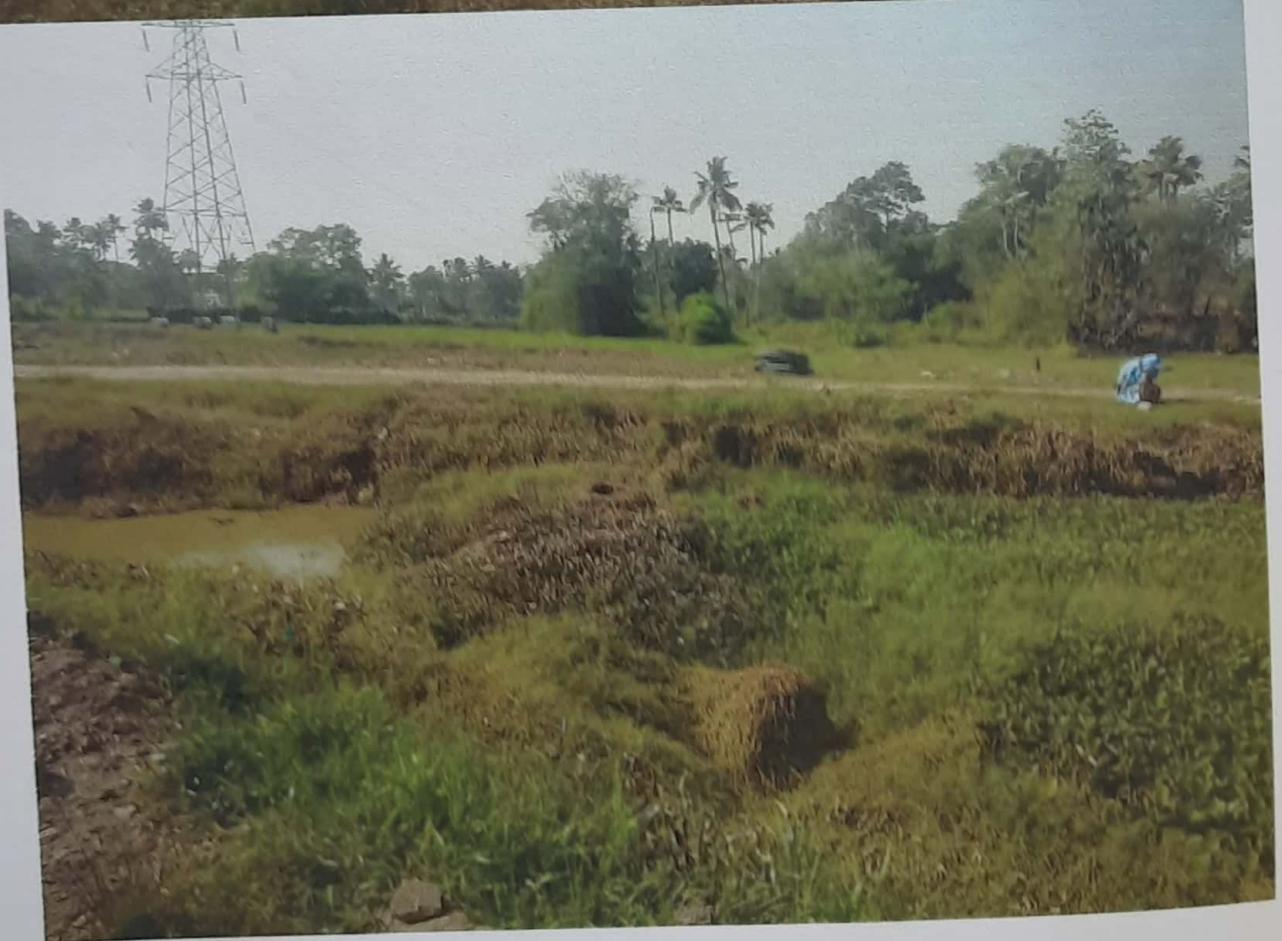
**Environmental Engineer**



Work site of <sup>4</sup> Madavana



Klok site el kuppamam







**KERALA STATE POLLUTION CONTROL BOARD**  
**DISTRICT OFFICE I, GANDHI NAGAR, ERNAKULAM - 682 020**  
 www.keralapcb.org

EE : 0484 2207789  
 Phone : 0484 2207783 - 86  
 Fax : 0484 2207782  
 e-mail : ecee@keralapcb.org

PCB/EKM/DO-1/Gen-08/2018



Dated: 11.03.2020

From,

The Environmental Engineer  
 District Office - I  
 Ernakulam

To,

The Chief Environmental Engineer  
 Regional Office  
 Ernakulam

Sub:- Inspection conducted on sites at Madavana, Irumpanam and Palluruthy as part of post demolition debris disposal monitoring – reg.

Sir,

An inspection was conducted in Madavana, Irumpanam and Palluruthy on 04/03/2020. The work at the site in Madavana is to elevate the terrain for the construction of a road to a residential area of 10 houses. The road has 5 meters width and 25 meters length. About 54 Eichers (loads) of debris have been used for the work. The work is in progress.

The 2<sup>nd</sup> site is at Irumpanam, where the restoration works of jetty is in progress. The land is owned by Inland Water Authority. As part of movement of ODC ( Over dimensional cargo) consignments in connection with PDPP project for BPCL Kochi Refinery from Cochin port to Ambalamugal, they have demolished the jetty and excavated the land to form a canal for the incoming of barge. After the completion of ODC consignments, now the jetty is being restoring through back filling of the basin.

The 3<sup>rd</sup> site is at Palluruthy, where the construction of Culvert work is in progress. The work is owned by Harbour Engineering Department, Palluruthy. About 39 Eichers (244 tonnes) of debris have been used for filling Road Embankment. The Photographs of the sites are attached herewith.

Yours faithfully,

*[Signature]*  
 ENVIRONMENTAL ENGINEER

Copy to:-

The Secretary  
 Cochin Corporation