

**BEFORE THE HONORABLE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI**

Original Application No. 173/2021 (sz)

In the matter on its own motion – SUOMOTU based on

The news item in the Mathrubhumi Malayalam news paper,

Chennai Edition dated 05.07.2021, “30 crore worth quarry,

Fine is merely 4-5 crore”

: Applicant

Vs

The Principal Secretary to Govt. of Kerala, Department of

Environment, Room No. 406, 4th floor, Annex II,

Govt. Secretariat, Thiruvananthapuram – 695001 and others : Respondent(s)

**REPORT FILED ON BEHALF OF THE 4TH RESPONDENT IN THE ABOVE
APPLICATION.**

Adv. Rema Smrithi V K

Standing Council

NGT South Zone

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Dated this the 17th day of August, 2022

Adv. Rema Smrithi V K
Standing Council
NGT South Zone

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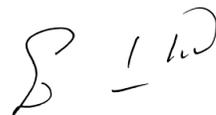
Environment, Room No. 406, 4th floor, Annex II,

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**Report submitted by the Environmental Engineer, Kerala State Pollution Control
Board, District Office, Idukki on behalf of the 4th respondent in the above
application.**

I, Eby Varghese, aged 51 years, S/o. T.V. Varghese, working as Environmental Engineer, Kerala State Pollution Control Board, District Office, Idukki do solemnly affirm and State as follows:-

1. This report is submitted in continuation to the report submitted on 08.12.2021. The issues for consideration in the O.A. 173/2021 is regarding illegal quarrying done in connection with the road widening in Gap Road. Gap Road is a part of the Kochi-



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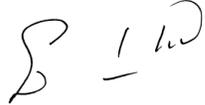
Dhanushkodi National Highway (NH 85) passing through Devikulam and Udumbanchola Taluk in Idukki District.

2. As per the order of the Hon'ble NGT in O.A. 173/2021, a Joint Committee has been constituted consisting of the Sub Collector Devikulam, an officer from the Mining & Geology Department and an officer from the Kerala State Pollution Control Board.

3. It is most respectfully submitted that, for road widening work, Consent to Establish / Consent to Operate from the Pollution Control Board is not required. As directed by the Hon'ble Tribunal, this respondent has completed the Environmental Damage Assessment with the documents received from various departments and based on the data collected from the website of different departments/agencies. Some of the data received from various departments are incomplete or not suitable for the Environmental Damage Assessment. Some of the departments have not responded to the request letter from District Office of the Board. Hence it is most humbly submitted that the Environmental Damage Assessment calculation furnished hereunder is based on the available information and documents.

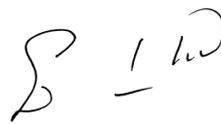
4. As per paragraphs 8 and 9 of the order of the Hon'ble NGT dated 10.08.2021, the committee was directed to ascertain the following.

- a. Whether the person who had been involved in such things had received any environmental clearance and other permission.
- b. What is the quantity of minor minerals that has been extracted illegally, value of the same and extent of damage caused on account of such illegal quarrying.
- c. Assess the Environmental damage caused and identify the person who was responsible for the same.


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- d. Apply the principle of fixing Environmental Compensation as directed by Hon'ble Supreme Court in the case of tree cutting, namely assess the value of the mineral illegally extracted at Present Market Value and the damage caused on account of such illegal quarrying , the amount required for restoring the same to its original position.
5. The Joint Committee had submitted a detailed report on O.A. 173/2021, and as per paragraph one of the report, for road widening work in the Gap Road area blasting was done for a length of 2.50 Kilometer approximately. The alignment of the road is fixed at 7.50 metre from the center to either sides, but it is found that in many places the road width exceeded the said 7.50 metre from the center.
6. As per paragraph one of the Joint Committee report, the work was awarded to M/s. Dinesh Chandra Agarwal Infracon Pvt Ltd., Ahmedabad in the year 2017. M/s. Greenworth Infrastructure Pvt. Ltd, Alinchuvadu, Edappally, Kochi is the sub-contractor, who carried out the construction work. As per the paragraph 5 of the Joint Committee report, M/s. Greenworth Infrastructure Pvt. Ltd, Alinchuvadu, Edappally, Kochi is responsible for the Environmental Damage.
7. As per paragraph one of the Joint Committee report, cultivation in an area of around 17 hectare 24 ares 66 square metre area was once destroyed due to landslides. As per paragraph 5 of the report, there is illegal extraction of around 251289.33 cubic metre of rock, which is equivalent to 628223.33 metric tonne (as one cubic meter of granite (building stone) weigh 2.5 metric tonne).



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8. Calculation for Environmental Damage Assessment

The Environmental Compensation and damage has been calculated as per the order dated 26/02/2020 in OA 360/2015 of the Hon'ble NGT following the "Direct Compensation Based on the Market Value of Extraction Adjusted for Ecological Damages" approach.

Direct Compensation is based on the market value of extraction, adjusted for ecological damages:

A scale for calculation of the compensation to be charged has been worked out as provided in the Table No. 01. The compensation to be charged is based on three distinct criteria:

Exceedance Factor (EF): This criterion captures the extent of illegal mining that has taken place. It is introduced in order to bring in a notion of balance that the amount of penalty that is charged to any party is in proportion to the extent of illegal extraction of material at the first stage.

Risk Factor (RF): This criterion reflects the severity of the ecological damages at the field site in question. It is an attempt to capture the fact that there is likely to be substantial variation in the ecological conditions and resultant damages across sites where illegal mining takes place. It is reasonable therefore to introduce a risk factor that accounts for the extent of severity of damages using a four-point scale of mild, moderate, significant and severe risk.

Deterrence Factor (DF): This criterion is an attempt to capture the fact that ecological damages tend to display non-linearities and can increase in unexpected ways. Thus, the greater the extent of extraction (as reflected in the relative magnitude of the illegally extracted amount), the greater is the likelihood that this may have cumulative impact over time, which may not be observable at the time of assessment (as reflected in the RF). Given that the scale should also have a deterrence effect, this criterion is introduced to

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proxy for these non-linear aspects till such time that more site specific data becomes available to carry out a comprehensive Net Present Value (NPV).

Table No. 01				
Permitted Quantity (in MT or m ³)	Total Extraction (in MT or m ³)	Excess Extraction (in MT or m ³)	Exceedance in Extraction	Compensation Charge (in Rs.)
X	Y	Z=Y-X	Z/X	D x (1+RF+DF) Where D= Z x Market Value of the material per MT or m ³
				DF = 0.3 if Z/X = 0.11 to 0.40 DF = 0.6 if Z/X = 0.41 to 0.70 DF = 1 if Z/X >= 0.71
				RF = 0.25, 0.50, 0.75, 1.00 (as per table 3)

Note:

- Market Value of the material per (MT or m³) will be based on applicable market price of the mined material.
- Risk Level to take value as per the severity of the impacts of illegal mining case, as below:

Table No. 02				
Severity of Impact	Mild	Moderate	Significant	Severe
Risk Level	1	2	3	4

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c) Risk Factor (RF) to take value as per the Risk Level of the mining case, as below:

Table No. 03				
Risk Level	1	2	3	4
Risk Factor	0.25	0.50	0.75	1

9. Compensation Charge is calculated using the formula “**D (1+RF+DF)**”

Where,

- D is the cost of illegally extracted material
- Rf is the risk factor which accounts the environmental damage and the value is taken depending upon the severity condition.
- Df is the deterrence factor

9.1. Cost of Illegally Extracted Material

$D = Z * \text{Market value of the material}$

- Z - Quantity of illegally extracted material.

$$Z = Y - X$$

- X - Permitted quantity of rock extracted, is nil.
- Y - Total quantity of rock extracted,

$$Y = 2, 51,289.33 \text{ m}^3 \text{ (This value is obtained from the paragraph 5 of the Joint$$

Committee report)

Hence, $Z = Y - X$

$$Z = 251289.33 \text{ m}^3$$

- Taking the market value of material as Rs.1412.6/- per cubic meter and rounding to Rs. 1450/-(This is derived based on enquires with crusher units).

$$D = 2, 51,289.33 \times 1450$$

$$= \underline{36, 43, 69,528.50/-}$$

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9.2. Deterrence Factor

$$\text{Exceedance in extraction} = \frac{Z}{X}$$

(In this case exceedance in extraction is taken as 100%)

$$Df = 1, \text{ if } \frac{Z}{X} \geq 0.71$$

9.3. Risk Factor

Taking severity level as Moderate, $Rf = 0.5$

$$\begin{aligned} \text{Compensation Charge} &= D (1+Rf + Df) \\ &= 36, 43, 69,528.50 (1+0.5+1) \\ &= \underline{91, 09, 23,821.25/-} \end{aligned}$$

10. Total interim Environmental Damage Assessed

The total interim Environmental Damage Assessed due to illegal quarrying in Gap road Devikulam, Idukki District is Rs. 910923821.25/- (Rupees Ninety one crore nine lakh twenty three thousand eight hundred and twenty one point two five only).

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



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