

**BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application no. 76/2019

State of Kerala & Others : Respondent(s)

**Report filed by the Chief Environmental Engineer , Kerala State Pollution Control Board ,
Regional office , Thiruvananthapuram, on behalf of the Joint committee in Original
Application No. 76/2019.**

Adv.Jogy Scaria,

ADDITIONAL STANDING COUNSEL



A handwritten signature in blue ink, consisting of a stylized 'S' followed by a horizontal line.

**BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application no. 76/2019

State of Kerala & Others : Respondent(s)

VOLUME 1

Index

SL NO	Description	Pages
1	Report filed by the Chief Environmental Engineer, Kerala State Pollution Control Board, Regional Office, Thiruvananthapuram on behalf of the Joint committee.	1-5

Dated this the 18th day of September 2019.

Jogy Scaria, Advocate
Additional Standing Counsel



**BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application no. 76/2019

State of Kerala & Others : Respondent(s)

VOLUME 2

Index

SL NO	Description	Pages
1	Annexure 1 - Copy of the NGT Order dated 19.07.2019	1-4
2	Annexure 2 - Copy of Nomination letter No. F.Tech/39/NGT(Kerala) RDS/2019-20/770 from Regional Director, CPCB dated 25.07.2019	5
3	Annexure 3 - Copy of the Proceedings No. PCB/HO/EE4/NGT/76/2019 dated 25.07.2019	6

Dated this the 18th day of September 2019.

Jogy Scaria, Advocate
Additional Standing Counsel



A handwritten signature in blue ink, consisting of a stylized 'S' followed by a horizontal line.

**BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application no. 76/2019

State of Kerala & Others : Respondent(s)

**Report filed by the Chief Environmental Engineer , Kerala State Pollution Control Board ,
Regional office , Thiruvananthapuram, on behalf of the Joint committee in Original
Application No. 76/2019.**

I, Sindhu Radhakrishnan, Aged 50 years D/o, Sri R. Radhakrishnan Nair, Chief Environmental Engineer, Regional office, Kerala state Pollution Control Board, Thiruvananthapuram, am conversant with the facts of this case and do humbly submit as follows:

Background

The issue for consideration in the O.A No.76/2019 is the illegal mining done by M/s. Indian Rare Earths Limited (IREL) and M/s. Kerala Minerals & Metals Limited (KMML) along the coastal area of Chavara, Kollam District in Kerala. As per the direction of the National Green Tribunal, a preliminary study report, on the erosions along the Neendakara, Kayamkulam coastal stretch and the contribution of beach sand extraction on the extent of vulnerability, prepared by National Centre for Earth Science Studies (NCESS) has been submitted.

The NCESS has conducted the study along 22Km long coastal stretch extending from Neendakara inlet to the Kayamkulam inlet for a period of one month during February, March 2019.

The Honorable NGT has accepted the findings in the report submitted by NCESS that "the severe erosion is attributed to the unsustainable mining practices that have been going on along the coast. The Honourable Court has noted in the Order dtd. 19-07-2019, that M/s IREL and M/s KMML had mined excess quantity during the period 2001-2010 and 2010-2019.



The Honorable Court vide the above order dtd.19-7-2019, constituted a Joint Committee with representation from Central Pollution Control Board and State Pollution Control Board to determine the amount of compensation to be recovered for damage to the environment by unsustainable illegal mining and the committee to file report within two months. Copy of this order is produced herewith as **Annexure (1)**".

Accordingly the Joint Committee has been constituted with Dr. Deepesh V., Scientist B of Central Pollution Control Board, Regional Directorate, Bengaluru and Smt. Sindhu Radhakrishnan, Chief Environmental Engineer, Regional Office, Kerala State Pollution Control Board, Thiruvananthapuram as members. (Copy of these orders are produced herewith as **Annexure (2 and 3)**).

Site Visit

In order to ascertain the ground realities the joint committee supported by Environmental Engineer and Assistant Environmental Engineer District office, Kerala State Pollution control Board , Kollam conducted a site visit along the coast of Alappad and Panmana Panchayat on 22/08/2019. The team visited the present beach mining sites of M/s IREL and M/s KMML. The Alappad Panchayat office was also visited to gather information about the Environmental damages caused due to beach sand mining.

At Vellanathuruth in Alappad Panchayat about 1Km length has been allotted to M/s. IREL for beach mining. It is located in 16th ward of Alappad Panchayat. Except for this stretch of land of about 1 KM, the entire beach stretch of Alappad Panchayat is reported to have sea wall protection and hence there is no beach formation.

During the time of visit, two officers from M/s. IREL were present at the site. Beach mining was not seen done. It was reported to be stopped for the past 6 months after the direction by Chief Minister of Kerala on account of the complaints in that Area.

During the visit it was noticed that beach mining was being done in the site of M/s. KMML in Panmana village. The site is just to the south of IREL site, in the northern part of Panmana Village. About 50 temporary mining staff were employed in transferring the heaped sand into lorries. Two front loading earth movers were seen at the site.



The mining staff are reported to be from the displaced families, who have sold their land to the KMML. Large heaps of left over sand could be seen near this beach which were not utilized for refilling the mined areas.

Sand Mining is done by the Companies in 2 ways.

1) **Beach mining**:- Where the sand deposited on the beaches are scraped off every day. The waves will be depositing the sand continuously on the beach according to various factors mentioned in NCESS report such as wind velocity, season etc.

2) **Inland mining**:- The land from the beach up to 100m is permitted to be mined for the heavy minerals. The mining is done in the sanctioned locations by excavating the sand up to 3 to 7m using earth excavators.

The sand from both cases are then transported to the mineral extraction plant where the heavy minerals are separated by gravity separation using hydro cyclones. For this process the sand is passed through a series of gravity separators along with water. The heavier particles are collected as raw material for further purification & separation. The lighter particles are collected at the plant itself which are to be utilized for refilling excavated area.

TS canal is flowing to the South East of this mining area. It is separated from the sea by the beach and inland mining area at the South end of Vellanathuruth and North of Panmana Panchayat. In some places the land had dwindled to a meager 50 m. Mining activities at beach front and in the inland in proximity to the sea and TS Canal may have devoured the land over a period of time.

As per NCESS reports prepared for assessing the most suitable volume of sand that can be mined from the Beach and control /remedial measures that are to be complied with for continuing the mining without causing harm for the environment, they should return the left over sand, which is more than 70% of the collected sand, to the Beach itself. This total removal of sand from the beach is a major reason for the beach erosion. In the report it is also advised not to beach mine during monsoon season when the sea erosion is greater.



Observations

1. During the site visit it was noticed that both companies are reluctant to return the sand to the beach claiming that it would be washed off with the waves and it may affect further deposition of black sand.
2. In case of inland mining sand was found to be reused for refilling the land in Vellanathurth area. However, in Ponmanna area where KMML is mining, old left over sand dumps are still seen.
3. As per the NCESS reports beach area to the tune of 400 m has been lost due to beach mining. Loss of beach area in Vellanathurth, Ponmanna and Kovilhottam are evident in the historic satellite image from Google Earth.
4. Due to the unsustainable mining practices, there are environmental damages/ degradation to the area with respect to the following
 - Loss of natural plantation
 - Loss of natural beach and it's recreational value
 - Loss of traditional fishing
 - Loss of natural coastal protection
 - Loss of habitat and properties
 - Loss of natural water way
5. Damage to the environment has to be assessed with respect to the above and a methodology has been finalized. However, the valuation of environmental components/ entities/ other externalities and lost opportunities of land use is under progress.
6. Data from the companies and from the local bodies is also awaited for the final damage calculation and assessment.



In this regard it is humbly submitted on behalf of the joint committee, that an extension of one month is required to complete the process of damage assessment as the valuation of environmental components/ entities/ other externalities and lost opportunities of land use is under progress. A detailed report after assessing environmental damage will be submitted within one month.

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

Dated this the 18th day of September 2019



CHIEF ENVIRONMENTAL ENGINEER

Solemnly affirmed and signed by the deponent who is known to me on this the 18th day of September 2019.



**BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application no. 76/2019

State of Kerala & Others : Respondent(s)

VERIFICATION

I, Sindhu Radhakrishnan, aged 50 years, D/o Sri. R. Radhakrishnan Nair, Chief Environmental Engineer, Kerala State Pollution Control Board, Regional Office, Thiruvananthapuram, do hereby verify on this the 18th day of September 2019, that all what is stated above are true and correct to the best of my knowledge information and belief.



Sindhu Radhakrishnan

Chief Environmental Engineer

Item No. 06

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No.76/2019

News item published in "Indian Express" Authored by Vishnu Varma

Titled

"17-year-old's video gets Kerala talking of impact of sand mining"

Date of hearing: 19.07.2019

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

For Applicant(s): NONE

For Respondent (s): Mr. Nishe Rajen Shonker, Advocate for Kerala
Mr. Jogy Scaria, Advocate for KSPCB

ORDER

1. The issue for consideration is the alleged unscientific mining by Centre Rare Earths Limited and Kerala Minerals and Metal Limited along the coastal area of Kollam in Kerala. Vide order dated 29.03.2019, a report was directed to be furnished on the factual aspects by the District Magistrate, Kollam and the State Pollution Control Board (SPCB).
2. Accordingly, such a report has been furnished vide e-mail dated 17.07.2019, though the report is of April 2019. Findings in the report are as follows:



A handwritten signature in blue ink, consisting of a stylized cursive script.

"7. Conclusions and Recommendations:

A preliminary study on the erosion along the Neendakara-Kayamkulam coastal stretch and the contribution of beach sand extraction on the extent of vulnerability was carried out during February-March 2019. The present study, even though carried out within a short period has utilised all the relevant data needed for assessing the present status / stability of the coast. The field data collected as part of this study along with the archived data with CESSAICCESS and other secondary data collected from various sources have been synthesized and integrated to have a comprehensive understanding of the present state. The salient conclusions are as below:

The long-term shoreline changes computed from the aerial photograph/satellite imageries for the period 1968-2019 shows severe erosion of the mining sites of IREL and KMML. The shoreline retreats are to the extent of 425 m, 382 m and 142 m respectively at Vellanathuruthu (IREL mining site), Ponmana (KMML mining site) and Kovilthottam (IREL mining site). During the period of 2000-2019 the shoreline has receded by 243 m, 227 m and 57 m respectively at Vellanathuruthu, Ponmana and Kovilthottam mining sites.

Critical examination of the shift in nearshore depth contours during the 19 year period of 2000 to 2019 utilising bathymetric charts prepared by CESSAICCESS in 2000, 2010 and 2019 has revealed that there has been a shoreward shift in isobaths particularly the shallow water isobaths of 2-10 m. The extent of deepening of the nearshore areas is more pronounced off Ponmana and Vellanathuruthu indicating severe erosion in the nearshore areas.

perusal of the mining data provided by the two public sector companies M/s. IREL and KMML conclusively show that the mining volumes during the last two decades viz-2000 -2010 and 2010 -2019 have been considerably higher than the sustainable mining quantity recommended by CESS/NCESS. The severe erosion is attributed to the unsustainable mining practices that have been going on along this coast."

(emphasis added)



A handwritten signature in blue ink, consisting of a stylized, cursive script.

3. Thus, the report shows that mining volumes have far exceeded the sustainable mining quantity proposed. The excess quantity is noted as follows:

"Table 11 Excess quantity mined by IREL and KMML during the period of 2001-2010 and 2010-2019

PSUs	Mining quantities for 9 years (m ³)	Average mining quantity (m ³ /year)	Permissible quantity (m ³ /year)	Excess quantity mined for 9 years (m ³)
2001-2010				
KMML	*8,73,997	*1,09,250	1,50,000 m ³	5,46,573 m ³
IREL	9,13,326	1,01,481	(2,69,998 MT)	(9,83,824 MT)
Total	17,87,323	1,98,591		
2010-2019				
KMML	9,98,297	1,09,811	#74,500 m ³ (1,34,099 MT)	3,17,797 m ³ (5,72,030 MT)
IREL	6,53,219	7,25,80	##48,600 m ³ (87,479 MT)	2,15,819 m ³ (3,88,471 MT)
Total	16,41,516	1,82,391	1,23,100 m ³ (2,21,578 MT)	5,33,616 m ³ (9,60,501 MT)
Note:				
1. Lengths of mining sites of KMML and IREL are 1060 m and 1500 m respectively with a total mining length of 2560 m				
2. *KMML has not given the mining quantity for 2001-2002				
3. #Recommended volume as per NCESS report submitted to KMML (Hameed et al., 2013)				
4. ## Recommended volume as per NCESS report submitted to IREL (Kurian et al., 2012)				

4. In view of above, we constitute a joint Committee with representatives from the Central Pollution Control Board (CPCB) and the State Pollution Control Board (SPCB) to determine the amount of compensation to be recovered for damage to the environment by unsustainable illegal mining. Such a report may be furnished within two months by e-mail at judicial-ngt@gov.in. It is open to the concerned regulatory authorities to recover the compensation by following due procedure of law.



[Handwritten signature]

A copy of this order be sent to the CPCB and the SPCB by e-mail for compliance.

List for further consideration on 16.12.2019.

Adarsh Kumar Goel, CP

S.P. Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM





Annexure 2

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

No. F.Tech/39/NGT(Kerala)/RDS/2019-20/ 770

Legal matter/ Time bound
25th July, 2019

To

✓ The Member Secretary
Kerala State Pollution Control Board
Pattom P.O., Thiruvananthapuram.

Sub: Honourable NGT order dated 19-07-2019 in the matter of OA 76 of 2019: Constitution of joint committee and follow up actions.

Sir,

With reference to above, honourable NGT Principal Bench has constituted a joint committee to look into the matter of determining compensation to be recovered for damage to the environment by unsustainable, illegal mining by Indian Rare Earth Ltd. (IREL) and Kerala Minerals and Metals Ltd. (KMML) along the Neendakara-Kayamkulam coastal stretch of Kerala.

In this respect, Dr. Deepesh V, Scientist 'B' (9611128895/deepesh.valsan@gmail.com), CPCB, Regional Directorate, Bengaluru, is nominated to represent CPCB in the joint committee. Accordingly, nominate a representative from KSPCB to the joint committee. NGT has directed the joint committee to complete the exercise and submit report within two months (before 18th September, 2019). In this regard it is requested to expedite the matter and to arrange committee meetings to deliberate on the determination of compensation.

Yours faithfully

S. Suresh
(S.Suresh)

Regional Director

Encl: NGT order dated 19-07-2019

Copy to:

1. The District Environmental Engineer, KSPCB, Kollam.
2. Divisional Head, IPC-II, CPCB, Delhi.
3. Dr. Deepesh V, Scientist B, CPCB, RDS, Bengaluru.

क्षेत्रीय निदेशालय (दक्षिण) : निसर्ग भवन, ए-ब्लॉक, प्रथम एवं द्वितीय तल, तिमैया रोड, 7-डी मेन, शिवनगर, बंगलूरु - ५६० ०७९.

Regional Directorate (South) : "Nisarga Bhawan", A-Block, 1st & 2nd Floors, Thimmaiah Road, 7th D - Main, Shivanagar, Bengaluru - 560 079.

दूरभाष / Telephone : 080-23233739, 23233827, 23233996, 23233600, 23232559, 23226002, 23222539, Fax : 080-23234059

ई-मेल / E-mail : cpcbso@yahoo.com, zobangalore.cpcb@nic.in

प्रधान कार्यालय : परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली- ११० ०३२.

Head Office : Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032.

दूरभाष / Telephone : 011-43102030, Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल / E-mail : cpcb@nic.in वेबसाइट / Website : www.cpcb.nic.in



PROCEEDINGS

Sub:- Order dated 19/07/2019 in O.A. No. 76/2019 regarding unscientific mining by Rare Earths Limited and KMML in Kollam, Kerala –Committee constituted, Members nominations - Sanctioned – orders issued.

KERALA STATE POLLUTION CONTROL BOARD

No. PCB/HO/EE4/NGT/76/ 2019.

Dated:25.07.2019

Read: Order dated 19/07/2019 in O.A. No. 76/2019 of the Hon'ble NGT

ORDER

The Hon'ble NGT has vide Order read (1) above constituted a Joint Committee with representatives from Central Pollution Control Board and State Pollution Control Board to determine the amount of compensation to be recovered for damage to the Environment by unsustainable illegal mining by IREL and KMML. The following officers are nominated to the Joint Committee.

1. The Chief Environmental Engineer, Regional Office, Thiruvananthapuram-
Representative of State Pollution Control Board
2. Officer from Central Pollution Control Board- To be nominated by Central Pollution Control Board

The above Committee shall assess the damage to the Environment caused by unsustainable illegal mining as mentioned in the Hon'ble NGT Order read above. The Committee will also determine the amount of compensation to be recovered for the above damage and prepare a report. The report shall be furnished within two months i.e., 19/09/2019 to the Hon'ble NGT.

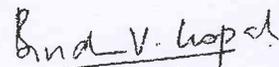
Sd/-

MEMBER SECRETARY

To

The Committee Members

FORWARDED/ BY ORDER



ENVIRONMENTAL ENGINEER-4

