

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

**ORIGINAL APPLICATION NO. 246 of 2024(SZ)**

Suo Moto matter in respect of news item appearing in "The Times of India" dated 06.05.2024 titled "Zinc, lead... fish in Kochi estuary are „heavy, daily intake risky".which has been transferred to Southern bench and re numbered as Application No. 246 of 2024 (SZ).

**: Applicants**

**Versus**

**National Centre for Coastal Research,  
Through its Director, Chennai and Ors.**

**: Respondents**

**REPORT FILED BY THE ENVIRONMENTAL ENGINEER, KERALA  
STATE POLLUTION CONTROL BOARD, DISTRICT OFFICE-1,  
ERNAKULAM FOR AND ON BEHALF OF THE 3rd RESPONDENT.**

**Dated this the 1<sup>st</sup> day April of 2025**



**Adv. Rema Smrithi**

**Respondent No.3**

**ADDITIONAL STANDING COUNSEL FOR THE 3<sup>rd</sup> RESPONDENT**  
**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL**  
**SOUTHERN BENCH, CHENNAI**  
**ORIGINAL APPLICATION NO. 246 of 2024(SZ)**

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**REPORT FILED BY THE ENVIRONMENTAL ENGINEER, KERALA**  
**STATE POLLUTION CONTROL BOARD, DISTRICT OFFICE-**  
**1,ERNAKULAM FOR AND ON BEHALF OF THE 3<sup>rd</sup> RESPONDENT.**

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**REPORT FILED BY THE ENVIRONMENTAL ENGINEER, KERALA STATE  
POLLUTION CONTROL BOARD, DISTRICT OFFICE-1, ERNAKULAM FOR  
AND ON BEHALF OF THE 3rd RESPONDENT.**

I, Sajeesh joy, aged 48 years, S/o V. A Joy, now working as the Environmental Engineer, Kerala State Pollution Control Board, District Office-1, Ernakulam. I am competent to and duly authorized to represent the 3<sup>rd</sup> Respondent in OA 246/2024. I know the facts and circumstances of the case. The factual submissions made here under are true and correct to the best of my knowledge, information and belief. In these circumstances, it is just and necessary that this Hon'ble Tribunal may be pleased to accept the accompanying information on file and it is so humbly prayed in the interests of justice in this case

1. It is respectfully submitted that the Hon'ble Tribunal in its own motion registered "Suo Moto" on basis of the news item titled "Zinc, lead... fish in Kochi estuary are „heavy, daily intake risk" appearing in The Times of India dated 06.05.2024. The article is regarding the report of a study conducted by CUSAT, Kochi , Kerala. The study is conducted by a National Grant –in-Aid network project, implemented by the National Center for Coastal Research (NCCR) under the Ministry of Earth Sciences (MoES), Government of India and executed by the Department of Marine Biology, Microbiology and Biochemistry at the school of Marine Sciences , CUSAT.
2. It is respectfully submitted that a national Grant-in-Aid network project, implemented by the National Centre for Coastal Research (NCCR) under the Ministry of Earth Sciences (MoES), Government of India, and executed by the Department of Marine Biology, Microbiology and Biochemistry at the School of Marine Sciences, CUSAT. The Primary objective of the MoES –NCCR project at CUSAT is to develop draft seawater quality criteria (standards) for heavy metals discharged into the Cochin coastal water. Article titled "Bioaccumulation of Heavy metals in seafood resources from the Southwest Coast of India: Human Health Risk Assessment and Importance of Seafood Security," authored by the CUSAT-NCCR research team. This article was published in Springer journal Toxicology and Environmental Health Sciences on 30 April 2024 (Coo.16, pp.217-231; ISSN 2233-7784). Study investigates heavy metal pollution in the Cochin Estuarine System (CES) and assess the potential for associated human health risks.



3. It is respectfully submitted that the Cochin estuary is a part of the Vembanad –Kol Wetlands covering an area of about 300 square kilometres which is also a Ramsar site spanning across the three districts of Kerala. The Cochin Estuary is one of the largest estuarine systems in the Southern India renowned for its exceptional biodiversity and its role as a crucial breeding and nursery habitat for various species. The lakes waterways are an important mode of transport for the trading and industrial activities related to the establishments like Cochin port authority, Cochin Shipyard Ltd, Kochi Water Metro Ltd etc. It also serves as the source of livelihood for communities who depends on fishing, shrimp farming, clam pickers, rice cultivators etc. On the whole it is a socio-economic hub supporting the livelihoods of many people. Kochi Kayal often gets influenced by the tidal variations due to which the water present has high levels of salinity. Salinity is high at the sea mouth region. As per the Environment (Protection) Rules, 1986 based on the levels of salinity, Kochi Kayal is classified under the SW I, SWIII, SW IV.
4. It is respectively submitted that CUSAT in their study report had divided the zones into Northern, Southern and Central zones. The CUSAT concludes that the heavy metal contamination such as Cu, Zn, Pb, Cd, Mn are found in the water, sediments, biota is high when compared to other coastal region of the world. The study mainly point out that the concentration of heavy metals is higher than the food and safety standards causing health risk to the human beings.
5. Subsequent to the report filed by this respondent on 02.01.2025, it is respectfully submitted that this respondent had conducted discussion with CUSAT regarding the details of study such as study area, sampling locations, standards followed, type of species taken for study, period of study, details of project, objective etc. The study by CUSAT was conducted to develop a draft sea water quality criteria (standards) for heavy metals discharged into coastal water. CUSAT conducted sampling in pre monsoon and post monsoon. CUSAT collected water samples, sediment samples and fish samples were analysed. The values of the analysis report of the fish samples were compared with food and safety standards and it was concluded that the heavy metals are accumulated in fishes are more than the permissible limits specified in international and national food safety standards. The Board had collected water and sediment samples from 9 locations of the estuary where the CUSAT had collected samples for the study. The Board's water quality analysis showed that the heavy metal concentration in water samples is well within the CPCB standards prescribed for Coastal water based on best designate use (BDU).



6. It is respectfully submitted that, the Board will conduct a detailed discussion with the CUSAT based on results (water and sediments) obtained by Board's study, for understanding other aspects in terms of pollution.
7. It is respectfully submitted that Board is not a competent authority to analyse and comment on the bio accumulation of the heavy metals in fishes and to assess the health risk of human beings. Some of the competent authorities to assess such aspect would be KUFOS under the fisheries department, NIO (National Institute of Oceanography), Central Institute of Fisheries Technology (CIFT), etc
8. It is respectfully submitted that the Board can share the results of heavy metals in the sediments, analysed by the Board to these competent authorities. The Board conducts analysis of heavy metal concentration in the sediments, once in a year and the same will also be shared to these competent authorities to assess the bio accumulation aspect of heavy metals in fishes.
9. It is respectfully submitted that the regular monitoring and risk assessment of heavy metals in seafood resources may be entrusted to such competent authorities for better findings and conclusion.

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

Dated this the 1<sup>st</sup> day of April, 2025.



A handwritten signature in black ink, appearing to be "P. H. J."

Environmental Engineer,  
Kerala State Pollution Control Board,  
District Office-1, Ernakulam.

ENVIORNMENTAL ENGINEER