

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL**  
**SOUTHERN ZONE, CHENNAI**  
**ORIGINAL APPLICATION No. 259 of 2017 (SZ)**

**IN THE MATTER OF:**

Lawyers' Environmental Awareness  
Forum (LEAF)

Applicant(s)

Versus

The State of Kerala & others

Respondent(s)

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**SOUTHERN ZONE, CHENNAI**

**ORIGINAL APPLICATION No. 259 of 2017 (SZ)**

**REPORT OF THE COMMITTEE CONSTITUTED IN THE MATTER OF**  
**O.A NO. 259 OF 2017, LAWYERS' ENVIRONMENTAL AWARENESS**  
**FORUM (LEAF) VERSUS THE STATE OF KERALA & OTHERS**  
**SUBMITTED BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,**  
**SOUTH ZONE, CHENNAI, AS PER ORDER DATED 19/03/2020.**  
**IN THE ABOVE APPLICATION**

Adv. **Rema Smrithi.**

ADDITIONAL STANDING COUNSEL FOR THE RESPONDENT:

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**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL**

**SOUTHERN ZONE, CHENNAI**

**ORIGINAL APPLICATION No. 259 of 2017 (SZ)**

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**IN THE ABOVE APPLICATION**

Adv. **Rema Smrithi.**

ADDITIONAL STANDING COUNSEL FOR THE RESPONDENT:

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**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL**

**SOUTHERN ZONE, CHENNAI**

**ORIGINAL APPLICATION No. 259 of 2017 (SZ)**

**Applicant(s) : Lawyers' Environmental  
Awareness Forum (LEAF)**

**Respondent(s) : The State of Kerala & others**

**REPORT FILED BY THE COMMITTEE CONSTITUTED IN THE  
MATTER OF O.A NO. 259 OF 2017, LAWYERS' ENVIRONMENTAL  
AWARENESS FORUM (LEAF) VERSUS THE STATE OF KERALA  
& OTHERS SUBMITTED BEFORE THE HON'BLE NATIONAL GREEN  
TRIBUNAL, SOUTH ZONE, CHENNAI, AS PER ORDER  
DATED 06/01/2020**

The Committee constituted as per the order dated 06/01/2020 in the matter of O.A No. 259 of 2017, Lawyers' Environmental Awareness Forum (LEAF) Versus the State of Kerala & Others before The Hon'ble National Green Tribunal, South Zone, Chennai, as per order dated 19/03/2020 hereby submit the following:

1. The petitioner in the O. A. No. 259/2017 (SZ) is an organisation constituted with members of Lawyer community known as Lawyers Environmental Awareness Forum (LEAF). The issue raised by the petitioner, in this case, is regarding the anticipated air pollution that would likely to be caused in the State of Kerala due to vehicular emission and other air emissions. It is further mentioned that if the same situation continues, then it will be worse than Delhi in respect of air pollution. Based on the grievances made by the petitioner, the Hon'ble NGT vide order dated January 6, 2020, directed to Constitute a Committee consisting Central Pollution Control Board (CPCB), MoEFCC, Regional Office, Chennai

Motor Vehicle Department of Kerala, Kerala State Pollution Control Board (KSPCB). IIT – Chennai and NEERI, Chennai for the consideration of the following Terms of References:

- a. The question of ambient air quality in the State of Kerala, especially in the cities viz., Thiruvananthapuram, Kollam, Kochi, Alappuzha, Kozhikode, Thrissur, Calicut, Kasarkode and Kannur and sources of pollution and also long term and short term steps to be evolved for the purpose of reducing pollution index and improve ambient air quality in the State of Kerala.
  - b. Frame necessary timeline for implementing the directions given in VARDHMAN KAUSHIK case in respect of banning of old vehicles and switch over to alternate clean fuel vehicles, including CNG and electric vehicles and
  - c. Submit a report to this Tribunal within a period of three months. The Kerala State Pollution Control Board was engaged as the nodal agency for this purpose.
2. It is respectfully submitted that, in compliance with the above directives, a committee was constituted consisting of the following officials
1. Dr. M.T Karuppiah  
Scientist 'D',  
MoEF& CC,  
Regional Office, Chennai
  2. Dr. S Prabhu  
Scientist 'C'  
Regional Office (South Zone)  
MoEF& CC Regional Office, Bengaluru
  3. Smt. Poornima B M  
Scientist 'D'  
Regional Directorate -South (Bengaluru)  
Central Pollution Control Board
  4. Dr. Deepesh. V  
Scientist 'C'  
Regional Directorate -South (Bengaluru)  
Central Pollution Control Board
  5. Dr. R. Sivacoumar,  
Sr. Principal Scientist  
CSIR- NEERI Zonal Centre

CSIR Complex, TTTI, Chennai.

6. Sri. Bijumon K  
Regional Transport Officer  
Enforcement Division, Thiruvananthapuram
7. Smt. Bindhu Radhakrishnan  
Senior Environmental Engineer  
Kerala State Pollution Control Board  
Thiruvananthapuram
3. It is submitted that a member from IIT – Chennai was to be nominated, as per the NGT order but it was informed that their experts are currently engaged in the other committees formed by NGT in some other cases and they are unable to nominate the experts and requested to be excused till the experts complete the work in connection with other committees constituted. The communication in this regard is enclosed as **Annexure R2(A)**.
4. It is respectfully submitted that the first meeting of the Committee was held at the Head Office of the KSPCB, Thiruvananthapuram on February 27, 2020. The minutes of the meeting is provided herewith and marked as **Annexure R2(B)**. The second meeting of the committee was proposed to be conducted in the 3<sup>rd</sup> week of March 2020. But soon after, lockdown due to Covid-19 was declared and hence the meeting could not be conducted and the report could not be prepared. As the case was posted on 04/06/2020, a time extension was sought for filing the report and was granted by the Hon'ble NGT.
5. It is submitted the O.A No. 76 of 2017(SZ), O.A No.260 of 2017 were heard along with O.A no. 259 of 2017. The Hon'ble NGT has observed that since the consolidated report has been called for in O.A no. 259 of 2017 and 260 of 2017, it is not possible to dispose of case effectively. The court has directed the Committee to conduct the study and submit the consolidated report considering all the allegations and directions given in all these cases and submit an action plan for remedying the situation including phasing out of the old diesel vehicles in the State and also the remedial measures for converting the same with green and clean fuel technology. The committee, as well as the State Government, are directed to file the

report as well as the status report to the Tribunal on or before 07.10.2020.

6. It is submitted that in the present situation Covid-19 pandemic, the second meeting of the committee could be held only on 08.09.2020 through Google meet. In the joint committee meetings, CPCB representative have insisted for source apportionment study and emission inventory studies as per the conceptual guidelines prepared by CPCB. All other members were of the opinion to submit a report based on the present ambient air quality data and not to commit on source apportionment as modelling studies are not being preferred as it has many constraints to defend. All these comments are recorded in the minutes of 2<sup>nd</sup> joint committee meeting and the minutes of the meeting is produced herewith and marked as **Annexure R2(C)**.
7. It is submitted that the committee decided to file a report before the Hon'ble NGT based on the data available with the KSPCB from the existing manual ambient monitoring stations under National Air Monitoring Programme, State Air Monitoring Programme and Continuous Ambient Air Quality Monitoring Stations collected immediately before, after, and during the lockdown. Accordingly, the report was prepared on the present air quality status and then circulated among all the committee members. Copy of the report is produced herewith and marked as **Annexure R2(D)**.
8. It is respectfully submitted that Board had established 35 manual air quality monitoring stations and 9 CAAQMS across the State. The parameters SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> are being monitored in all manual monitoring stations and monitoring of PM<sub>2.5</sub> is started in certain stations. In CAAQMS SO<sub>2</sub>, NH<sub>3</sub>, CO, O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, etc are being monitored. In this study air quality data from 23 manual stations and 8 CAAQMS in the 8 cities (Thiruvananthapuram, Kollam, Alappuzha, Kochi, Thrissur, Kozhikkode, Kannur, and Kasaragod) in Kerala during the pre lockdown (1<sup>st</sup> March 2020 to 23<sup>rd</sup> March 2020 ), lockdown (23<sup>rd</sup> March 2020 to 31<sup>st</sup> May 2020) and post lockdown (1<sup>st</sup> June 2020 to 30<sup>th</sup> June 2020 ) periods

were analysed. It may kindly be noted that the districts named Calicut and Kozhikkode are one and the same.

9. It is respectfully submitted that the State Pollution Control Board issue consents to industrial units only after implementing adequate pollution control measures & compliance with the prevailing Rules. Periodical inspections are being conducted by the Board in industries and the pollution control measures adopted by them are being verified. The Board ensures connectivity of the Online Continuous Emission Monitoring System (OCEMS) of industries with the Board's portal. Adequate actions are also being taken to rectify the same, Non-compliance, if any, noticed by Board.
10. The district wise ambient air quality status as per the study is depicted as below:
  - a. In Thiruvananthapuram, the data from two CAAQMS and four manual ambient air quality monitoring stations were analysed. the concentration of SO<sub>2</sub> and NO<sub>x</sub> are found to be below the prescribed standard limit as of 80 µg/m<sup>3</sup>. The 24 hours concentration of RSPM and SPM are found to be within the prescribed standard limit of 100µg/m<sup>3</sup> and 60µg/m<sup>3</sup> respectively in the district.
  - b. In Kollam, data from one CAAQMS and two manual ambient air quality monitoring stations were analysed. It is observed that all the measured parameters in the manual and continuous monitoring stations are well within the prescribed limits.
  - c. In Alappuzha, data from two manual ambient air quality monitoring stations were analysed and observed that all the parameters are well within the prescribed limits.
  - d. In Kochi, data from seven manual ambient air quality monitoring stations and three CAAQMS and have been

analysed and parameters are well within the prescribed limit for manual ambient air quality monitoring stations. In the case of the Vytilla CAAQM Station some exceedance in NO<sub>x</sub>, PM, and CO is noticed. Even then the monthly average value of NO<sub>x</sub> and PM is within the prescribed limit and only CO exceeded the limit.

- e. In Thrissur, data from two manual ambient air quality monitoring stations have been analysed and observed that all the measured parameters in the manual monitoring stations are well within the prescribed limits.
- f. In Kozhikode (Calicut), data from one CAAQMS and two manual ambient air quality monitoring stations have been analysed and all the measured parameters in the manual and continuous monitoring stations are well within the prescribed limits.
- g. In Kannur, data from one CAAQMS and one manual ambient air quality monitoring stations were analysed and observed that all the measured parameters in the manual and monitoring stations were well within the prescribed limit.
- h. In Kasaragod, data from two manual ambient air quality monitoring stations were analysed and observed that all the parameters are well within the prescribed limits.

11. It is respectfully submitted that the overall result of the analysis reveals that in all the eight cities the concentration of RSPM, SPM, SO<sub>2</sub>, and NO<sub>x</sub> were found to be within the prescribed standard limit in all the 22 manual monitoring stations. In the case of seven numbers of CAAQM stations, all parameters are within the prescribed standards and in the case of CAAQMS at Vytilla the parameters namely NO<sub>x</sub>, CO, and PM showed exceedance for a few days.

12. It is respectfully submitted that the data analysis it is noted that, as a result of stringent restrictions on travelling, industry functioning, and shutting down of non-essential activities air quality improvement is noted during lockdown period all over the State. The air quality parameters have not risen beyond the standard rates and an increase is seen for particulate matter but that too falls within limits and hence the situation is not alarming and Hon'ble NGT may kindly be noted that none of the cities in Kerala are included in non-attainment cities.
13. It is humbly submitted that the guidelines to implement the phasing out of the old vehicles and replacing the same with alternate greener and clean fuel efficiency vehicles are policy decisions of the State Govt the State Govt is also respondent, in this case, these policy decisions have to come up from the State Govt itself.
14. It is respectfully submitted that, in view of the result as shown in the report, the air quality of the mentioned district in Kerala is well within the prescribed limits. However, this may be shifted/ varied due to Vehicular Emissions, Burning of biomass, crop residues, and Solid waste, Dust emission from roads, Construction and Demolition Waste, Industrial Emission, etc. But the air quality can be maintained well by adopting the following short term and long term measures.

<b>Short term steps suggested for improving Air Quality</b>		
<b>SL. NO.</b>	<b>ACTION</b>	<b>IMPLEMENTING AGENCY</b>
<b>1</b>	Launching extensive awareness drive against polluting vehicles	Motor Vehicle Department
<b>2</b>	Ensuring strict action against visibly polluting vehicles	Motor Vehicle Department
<b>3</b>	Steps to prevent parking of vehicles in non designated areas.	Motor Vehicle Department /State Police- Traffic
<b>4</b>	Introducing wet/Mechanized vacuum sweeping of roads.	Local Self-Government Department
<b>5</b>	Controlling dust pollution at construction sites by providing an appropriate covering system	Local Self-Government Department
<b>6</b>	Ensuring carriage of construction material in closed/covered vessels.	Police Department

<b>Long term steps suggested for improving Air Quality</b>		
<b>SL. NO.</b>	<b>ACTION</b>	<b>IMPLEMENTING AGENCY</b>
<b>1</b>	Retrofitting of diesel vehicles with particulate filters	Motor Vehicle Department
<b>2</b>	Installation of the vapour recovery system in fuelling stations	Petroleum and Explosives Safety Organization ( <b>PESO</b> ) / Pollution Control Board
<b>3</b>	Promoting battery operated vehicles	Motor Vehicle Department
<b>4</b>	Banning of old diesel vehicles in a phased manner	Motor Vehicle Department
<b>5</b>	Undertaking Greening of open areas	Local Self-Government Department/ Public Works Department
<b>6</b>	Creation of green buffers along the traffic corridors.	Local Self-Government Department/ Public Works Department
<b>7</b>	Development of a proper system for ensuring garbage/municipal solid waste/biomass/leaves connection and disposal and to avoid open burning.	Local Self-Government Department
<b>8</b>	Promoting the use of LPG only and to avoid the use of kerosene/ firewood in restaurants/dhabas/roadside eateries.	Local Self-Government Department
<b>9</b>	Introduce water fountains at major traffic intersection, wherever feasible	State Highway Authority of Kerala (SHAK)/ National Highways Authority of India/Public Works Department (PWD)
<b>10</b>	Take steps for blacktopping/pavement of road shoulders to avoid road dust	Public Works Department (PWD)
<b>11</b>	Prepare an action plan for public transport on CNG mode.	Motor Vehicle Department
<b>12</b>	Ensure the proper collection of solid waste ( biomass)	Local Self-Government Department (LSGD)
<b>13</b>	Ensure strict enforcement of the ban on burning of agricultural waste and crop residues	Agriculture Department
<b>14</b>	Ensure strict action against industrial units not complying with standards.	Pollution Control Board

15	Ensure DG sets meeting the standards only be allowed to operate	Department of Electrical Inspectorate/Pollution Control Board (KSPCB)
16	Undertake road widening and improvement of infrastructure for decongestion of road	Public Works Department (PWD)

15. It is respectfully submitted that the concentration of all the pollutant parameters measured in 29 stations out of 30 stations in eight cities during the period 1<sup>st</sup> March 2020 to 30<sup>th</sup> June 2020 is well within the limit with low-level concentration of pollutants. Only in one CAAQMS at Vyttila exceedance of the pollutant CO was observed for a short period. In view of in Air Quality status prevailing in these districts, the State Government shall co-ordinate all the concerned departments to implement the above suggested short term and long term measures in order to maintain the good air quality of the State. The Hon'ble NGT may be pleased to issue a favorable order accordingly.



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