

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

ORIGINAL APPLICATION NO. 26 OF 2013 (SZ)

With

ORIGINAL APPLICATION NO. 27 of 2013 (SZ)

With

ORIGINAL APPLICATION NO. 28 of 2013 (SZ)

With

APPEAL NO. 51 of 2012 (SZ)

With

APPEAL NO. 86 of 2017 (SZ)

IN THE MATTER OF

Janajagrithi Samithi ... Applicant(s)

Versus

The Union of India and Ors. ...Respondent(s)

With

CSI St. Luke's Church ... Applicant(s)

Versus

The Union of India and Ors. ...Respondent(s)

With

Ballibettu Alide Deasthana ... Applicant(s)

Versus

The Union of India and Ors. ...Respondent(s)

With

Janajagrithi Samithi ... Appellant(s)

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PLACE: BENGALURU
DATE: MARCH 30, 2022



S. Suresh
30/3/2022
DEPONENT

S. SURESH
REGIONAL DIRECTOR
CENTRAL POLLUTION CONTROL BOARD
REGIONAL DIRECTORATE (SOUTH)
MIN. OF ENV, FORESTS & CC, GOVT. OF INDIA
BENGALURU - 560 079. MOB : 9480672128

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REPORT OF THE JOINT COMMITTEE FILED BY CENTRAL POLLUTION CONTROL BOARD (CPCB) WITH REGARD TO HON'BLE TRIBUNAL ORDER DATED 17/09/2021

I, S. Suresh, Son of Sh S.R. Sathyanarayana, Hindu, aged about 59 years, having office at the Regional Directorate, Central Pollution Control Board, 1st& 2nd Floors, Nisarga Bhavan, A-Block, Thimmaiah Main Road, 7th D Cross, Shivanagar, Bengaluru – 560 079 do hereby solemnly affirm and sincerely state as follows:

2. That I am presently working as Scientist 'E' & Regional Director, Regional Directorate (South), Central Pollution Control Board (hereafter called as CPCB), Bengaluru and have been authorized to file the present report. I am fully conversant with the facts of the case and hence, competent and authorized to depose and swear the present report as under:

3. That the Hon'ble National Green Tribunal (Southern Zone), Chennai in O A 26 of 2013 (SZ), 27 of 2013 (SZ), 28 of 2013 (SZ), 51 of 2012 (SZ) and Appeal No. 86 of 2017 through ordered dated November 17th, 2021 directed the Joint Committee to provide their opinion on the statement of objections filed by the Project proponent and submit their further report making their comment/opinion on the objections raised by the project proponent for their findings in the subsequent report filed on the questions of certain studies conducted for assessing the compensation. Accordingly, the Joint Committee reviewed the statement of objections along with the documents furnished. The report of the Joint Committee is enclosed at Annexure.

Signed and verified on this on March 30, 2022 at Bengaluru.

**COUNSEL FOR
CPCB**



S. Suresh
30/3/2022
DEPONENT

S. SURESH
REGIONAL DIRECTOR
CENTRAL POLLUTION CONTROL BOARD
REGIONAL DIRECTORATE (SOUTH)
MIN. OF ENV, FORESTS & CC, GOVT. OF INDIA
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**Report of the Joint Committee in compliance of order dated 17/11/2021 in the matter of
OA 26 of 2013 (SZ), 27 of 2013 (SZ), 28 of 2013 (SZ), 51 of 2012 (SZ), 86 of 2017 (SZ)
Janajagrithi Samithi vs The Union of India & Ors in the Hon'ble NGT, South Zone,
Chennai**

1. Background

1.1 Order dated 14/03/2019 of the Hon'ble NGT

The Original Applications 26 of 2013 (SZ), 27 of 2013 (SZ), 28 of 2013 (SZ), 51 of 2012 (SZ) and Appeal No. 86/2017 were filed by Janajagrithi Samithi vs The Union of India & Ors in the Hon'ble National Green Tribunal (NGT), South Zone, Chennai. The matter is related to environmental damage caused due to operation of 2 X 600 MW thermal power plant operated by M/s Udupi Power Corporation Ltd (UPCL) at Yelluru Village, Udupi District, Karnataka.

The Hon'ble NGT (SZ) through order dated 14/03/2019 directed the following:

“to explore such measures and steps that would mitigate the harm already caused in addition to ensuring that the plant operates strictly within the environmental norms. We thus invoke the “Polluter Pays” principle under Section 20 of the National Green Tribunal Act, 2010 and hold M/s Udupi Power Corporation Ltd., Project Proponent, liable to pay Environmental Compensation (EC) which shall be assessed by a Committee of Experts.CPCB shall be the nodal agency to coordinating amongst the Members for taking up task”.

“The Committee shall assess the environmental damages on account of the environmental violations in the area of fly ash management, ash pond, ambient air quality, fugitive emissions etc. which undoubtedly has caused severe damage to the environment and the ecology of the area and submit its report within three months”.

1.2 Committee report 15/07/2019 and orders dated 14/10/2019 and 01/06/2020 of the Hon'ble NGT

In compliance to the above order, a joint committee was constituted and report was submitted to the Hon'ble NGT dated 15/07/2019. The said committee estimated Environmental Compensation (EC) of Rs. 4.89 Crores, following the methodology that was developed by

CPCB in compliance of directions of the Hon'ble NGT-PB in O.A. 593/2017 (WP Civil No 375/2012), Paryavaran Suraksha Samiti Vs Union of India.

The report of the aforesaid committee was taken up by Hon'ble NGT on 14/10/2019. It is mentioned in the Order dated 14/10/2019 that the Project Proponent filed their two compliance affidavits. In one affidavit it is stated that Project Proponent have complied with the direction to pay interim compensation of Rs. 5 crores with a prayer to return 11 lakhs which is in excess of the compensation now fixed by the Committee. The other affidavit deals with the recommendations made by the Committee for implementation where Project Proponent have stated that they are in the process of compliance.

It is mentioned in the Order dated 14/10/2019 the applicant submitted a memo to the Hon'ble NGT stating that the compensation assessed is not proper; the Committee has not considered a statutory violations in respect of emission norms which a thermal power plant has to comply with and that one of the Member suggested by the Tribunal was not present when the Committee inspected and submitted its report. The applicant also questioned the expertise of a member from IISc in the committee.

1.3 Order dated 14/03/2019 of the Hon'ble NGT

The Hon'ble NGT by order dated 01/06/2020 constituted the joint committee comprising of Dr. Krishna Raj, Professor of Economics, Centre for Economic Studies and Policy (CESP), Institute for Social and Economic Change (ISEC), Bangalore, Dr. R. Srikanth, Professor & Dean, School of Natural Sciences and Engineering, National Institute of Advanced Studies (NIAS), Bangalore and Senior Scientist from CPCB for revisiting the compensation fixed by the earlier committee.

1.4 Joint Committee report dated 02/03/2021 and order dated 17/11/2021 of the Hon'ble NGT

The committee members from NIAS and ISEC estimated the compensation as Rs. 70, 04, 10,828/- (Rupees Seventy crores four lakhs ten thousand and eight hundred twenty eight only) for the damage caused to health of the people. The estimation was based on data of total number of patients who received treatment in the Government health centres in 15 villages located within 10 km radius of M/s UPCL for air pollution related diseases between October 2010 and

March 2020, furnished by District Health and Family Welfare Office, Udupi District and the estimated cost of illness (health expenditure) borne by the people living in the 10-km radius around the UPCL TPP. These estimates of the cost of illness were worked out by Dr. Vijayalakshmi S (Research Assistant appointed by CPCB)* under the supervision of the Committee member from ISEC. For this purpose the Committee obtained the data about the number of patients reported due to Asthma, Acute Respiratory Infection, Bronchitis, Cancer and Gastroenteritis, Diarrhoea, Renal Diseases, Cancer (to cover water related diseases). The compensation calculations were as below:

- a) *Damage H asthma = 1204 patients who received treatment X Rs. 8280 = Rs. 99.65 Lakhs*
- b) *Damage H ARI = 24,201 patients who received treatment X Rs. 4248 = Rs.1028.06 Lakhs*
- c) *Damage H bronchitis = 9446 patients who received treatment X Rs. 60000 = Rs. 5667.60 Lakhs*
- d) *Damage H cancer = 174 patients who received treatment X Rs. 1,20,000 = Rs. 208.80 Lakhs*

Total Damage H = Rs. 7004.11 Lakhs

The joint committee report signed by the committee members from NIAS and ISEC was filed with the Hon'ble NGT on 02/03/2021. However, the committee member from CPCB mentioned the difference of opinion in respect of following points:

- Attributing all air related illness cases to the power plant
- Source of cost-of-illness factors used
- Overlap of compliance based compensation and health impact based compensation

The Project proponent - M/s Udupi Power Corporation Ltd also filed the statement of objections on the estimation of compensation in the joint committee report.

The Hon'ble NGT vide order dt 17/11/2021 directed the joint committee as follow:

“The joint Committee is directed to go through the objections filed and submit their further report making their comment/opinion on the objections raised by the project proponent for their findings in the subsequent report filed on the questions of certain studies conducted by them for assessing the compensation.”

“The committee is also directed to file their further report on the basis of the objections filed by the project proponent for their report dt 02/03/2021, e-filed on the same date.”

“In this case, the CPCB had a dissenting opinion regarding the assessment of compensation made by the members. The committee members including the CPCB are directed to sit together and evaluate the compensation aspect and to file a detailed report when they are submitting the further report as directed by this Tribunal after considering the objections rose by the Project proponent as well.”

2. Fresh Report of Joint Committee in compliance of order dated 17/11/2021 of Hon’ble NGT

The joint committee members reviewed the objections filed by the project proponent in the statement of objections dated 05/07/2021 and 22/11/2021 and their responses are as below.

2.1 Combined response of joint committee members from NIAS and ISEC

CPCB convened a meeting with expert members from NIAS and ISEC on 08/03/2022 in the context of difference of opinion mentioned in the last report dated 02/03/2021. The expert members from NIAS and ISEC provided their final response on the objections of the project proponent dated 09/03/2022 which is reproduced verbatim as below:

“Further Report in the matter of OA 26 of 2013 (SZ), 27 of 2013 (SZ), 28 of 2013 (SZ), 51 of 2012 (SZ), 86 of 2017 (SZ) Janajagrithi Samithi vs The Union of India & Others in the Hon’ble NGT, South Zone, Chennai

On 01 June 2020, the Hon’ble NGT reconstituted the expert committee related to the above matter and appointed a Joint Committee comprising of a Senior Scientist from CPCB, Dr. Krishna Raj, Professor of Economics, Centre for Economic Studies and Policy (CESP), Institute for Social and Economic Change (ISEC), Bangalore and Dr. R. Srikanth, Professor & Dean, School of Natural Sciences and Engineering, National Institute of Advanced Studies (NIAS), Bangalore to determine the environmental compensation (EC) to be paid by M/S Udupi Power Corporation Ltd (UPCL) and submit a report.

The reconstituted joint Committee estimated the EC after a detailed study of the damage caused to Agricultural / Horticultural Crops and Health of the people in the villages located within a 10 km radius of M/s UPCL as per the policy finalized by the Central Pollution Control Board (CPCB) on 04 September 2019 in compliance with

the directions of the Hon'ble NGT in O.A. 739 of 2018 i.e. 'Mechanism for Assessment of damage of Air Quality, Public Health, and Agricultural production loss'.

The data on temporal changes in the area of cultivation, agriculture crop yield, horticulture crop yield, and animal husbandry in the villages located around the UPCL Thermal Power Plant (TPP) were collected from the Agriculture Department, the Horticultural Department, the Animal Husbandry & Veterinary Services department in Udupi district, and the Department of Economics and Statistics. However, the departments reported that there was no significant change in crop yield or animal death in the surrounding villages, the committee considered only the impact on health for estimation of EC.

Following extensive data collection from the District Administration through the good offices of CPCB, site visits, and discussions, the expert members of the joint Committee from NIAS and ISEC estimated an EC of Rs. 70, 04, 10,828/- (Rupees Seventy crores four lakhs ten thousand and eight hundred twenty-eight only) for the damage caused to the health of the people living in a 10-km radius around the UPCL TPP. This estimation was based on the data related to the total number of patients who received treatment in the Government Primary Health Centers (PHCs) in 15 villages located within a 10 km radius of M/s UPCL for respiratory diseases between October 2010 and March 2020. This health data furnished by the District Health and Family Welfare Office, Udupi District, and the cost of illness method, a proven scientific method, was used to determine the cost of illness (health expenditure) borne by the people living in the 10-km radius around the UPCL TPP for the period between October 2010 and March 2020. This methodology to determine the cost of illness was used by the joint Committee member Prof Krishna Raj, ISEC with the assistance of Dr. Vijayalakshmi S, a Research Assistant for the joint Committee.

The joint Committee report was signed by the two expert members from NIAS and ISEC and submitted to the Hon'ble NGT on 02 March 2021 through the CPCB. However, the joint Committee member from CPCB did not agree with the two experts in this regard. Subsequently, the Project proponent - M/s Udupi Power Corporation Ltd filed their statement(s) of objections on the estimation of EC in the joint committee report. The Hon'ble NGT vide order dated 17 November 2021 directed the joint Committee as follows:

“The joint Committee is directed to go through the objections filed and submit their further report making their comment/opinion on the objections raised by the project proponent for their findings in the subsequent report filed on the questions of certain studies conducted by them for assessing the compensation.”

“The committee is also directed to file their further report on the basis of the objections filed by the project proponent for their report dated 02/03/2021, e-filed on the same date.”

“In this case, the CPCB had a dissenting opinion regarding the assessment of compensation made by the members. The committee members including the CPCB are directed to sit together and evaluate the compensation aspect and to file a detailed report when they are submitting the further report as directed by this Tribunal after considering the objections rose by the Project proponent as well.”

The Hon’ble NGT has reiterated its aforesaid direction to the Jt. Committee in its Order date 7 February 2022. This further report is filed by the Jt. Committee after email discussions with due consideration to a draft report circulated by CPCB on email on 4 March 2022.

The Hon’ble NGT vide its Order dated 14 March 2019 has already held (vide para 140) that *“There is no reason to doubt that this is a case of serial violations where the violator has been given a free run.”* In the same Order (vide para 145), the Hon’ble NGT has invoked the ‘Polluter Pays’ principle under Section 20 of the National Green Tribunal Act, 2010 and has declared that *“M/s. Udupi Power Corporation Ltd., the Respondent No. 5, project proponent, liable to pay Environmental Compensation,”* which shall be assessed by a Committee of Experts.

We emphasize that the aforesaid Environmental Compensation (EC) determined by the Jt. Committee members from NIAS and ISEC and submitted to the Hon’ble NGT on 2 March 2021 is based on sound scientific and economic principles backed by the authentic health-related data collected by CPCB through the District Administration of Udupi district from several PHCs falling within a 10-km radius of the UPCL Thermal Power Plant (TPP).

The joint Committee report submitted to the Hon'ble NGT on 02 March 2021 is also in line with the Final report submitted by the State of Karnataka to the Hon'ble NGT in February 2022. This independent Study entitled, 'Environmental Carrying Capacity Study for the expansion of 2 x 600 MW Udupi Power Plant,' was conducted by the Environmental Management and Policy Research Institute (EMPRI) under the directions of the Hon'ble NGT in this matter. After conducting a field survey of 387 families across 36 villages within a radius of 10 Kms from the UPCL TPP, EMPRI, a research institute established by the State of Karnataka, has concluded (on page v) that:

“Several villagers in the core and buffer zone (identified for the purpose of the study) of the UPCL have expressed their concern on the air, water, and soil pollution by UPCL operations. They also opined that their health has been adversely affected and most of them expressed their opinion against UPCL or any other major industry in the region. The villagers perceived and were concerned about their health, reduction in the agricultural, horticultural, fishing, and dairy farming activities, which have reduced drastically after the setting up of the thermal power plant due to coal dust and fly ash”.

As per the EMPRI report (page 158), 54.25% of people surveyed in the area around the UPCL TPP believe that *“people are suffering from multiple health problems and 39 percent expressed that people suffered from respiratory problems.”* The report (on page 159) states that *“there is a drastic increase in skin, bronchial, cancer and heart-related diseases. This complaint is also supported by the concerned Primary Health Centres (PHC) data in the region”.*

Therefore, we deny all the allegations and/or objections made by the Answering Respondent/ Project proponent (“UPCL”) against our well-considered report quantifying the EC to be paid by UPCL. While we offer the following specific clarifications to explain the basis for the determination of the EC in our report submitted to the Hon'ble NGT on 02 March 2021 (“Report”), any observation/objection against our report by UPCL that is not specifically denied, shall not be construed as an admission by the joint Committee.

1. The baseless objections raised by UPCL on the methodology of estimation of environmental compensation lack any merit as we, the experts took cognizance of

the methodologies available in the academic and policy circles including the CPCB methodology to estimate the environmental compensation. The CPCB methodology itself mandates that in certain cases, “*the Environmental Compensation may be levied based on a detailed investigation by Expert Institutions / Organizations.*” Therefore, to determine the EC, the joint Committee decided to consider health data to assess the impact of airborne diseases inflicted on the people in the villages surrounding the UPCL Thermal Power Plant (“UPCL TPP”).

2. The cost of illness method in Economics is widely used to estimate environmental compensation. Further, Dr. Vijayalakshmi S under the supervision of Prof Krishna Raj of ISEC estimated the cost of illness due to airborne pollution-related diseases during the two months’ research assistantship granted by the CPCB (as per the Hon’ble NGT’s directions) for working on the joint Committee report under the guidance of Prof Krishna Raj. She estimated the cost of illness for airborne pollution-related diseases in Bengaluru based on the primary data collected by her during her PhD research under the guidance and supervision of Prof Krishna Raj. The University of Mysore has already awarded Dr. Vijayalakshmi S, the degree of Doctor of Philosophy (PhD) in Economics based on the research conducted by her applying *inter alia*, the cost of illness approach used to determine the environmental compensation to be paid by UPCL. Therefore, the research methodology used by Dr. Vijayalakshmi S under the guidance and supervision of Prof Krishna Raj has already been reviewed by the University of Mysore through independent examiners before awarding her the degree of Doctor of Philosophy in Economics.
3. Further, the fundamental morbidity data for the determination of the EC in our report was derived from the health statistics (with respect to airborne and waterborne pollution-related diseases) recorded by the State Government’s Primary Health Centers (PHCs) located in the villages surrounding the UPCL TPP. These statistics were provided by the Udupi District Health Officer on the specific request of CPCB (and the Expert Committee) as explained in the Report submitted to Hon’ble NGT on 2 March 2021. This data was then analyzed in conjunction with the proven ‘Cost of Illness’ methodology.
4. After analyzing the village-wise health statistics recorded by the State Government’s PHCs in 33 villages located within a radius of 20 km around the UPCL TPP to CPCB/Expert Committee, it was found that the airborne pollution-

related diseases have increased significantly in the 15 villages located within a 10 km radius from the UPCL power plant, while the prevalence of air borne pollution diseases is decreasing with increasing distances from UPCL in the remaining 18 villages. This demonstrates the impact of UPCL's operations on the health of the villagers living within a 10 km radius of the UPCL TPP in the Udupi district of Karnataka.

5. The Cost of Illness of Asthma, ARI, Bronchitis, and Cancer used to determine the EC in our report submitted to the Hon'ble NGT are **Rs. 8,280, Rs. 4,248, Rs. 60,000 and Rs. 1,20,000 respectively** for the period between October 2010 and March 2020 (excluding the period of construction of the plant). The total number of people afflicted with various airborne disease were 35025. The total estimated EC was Rs 70.04 Crores. If the total amount of EC is separated equally among the 10 years, it would be of Rs 7 Crores per annum. These estimates of the cost of illness (health expenditure) for Bengaluru were derived by Dr. Vijayalakshmi S under the guidance of Prof Krishna Raj during the period of two months she was engaged by CPCB as a RA to assist the Expert Committee. These estimates of Cost of Illness can be reasonably extended to the 15 villages within a 10 km radius of the UPCL power plant since the villagers living around the UPCL TPP can access the health care facilities anywhere in their own State, including the city of Bengaluru when they suffer from chronic/acute diseases like Asthma, ARI, Bronchitis, and Cancer.
6. The Expert Committee has now rebutted all the objections filed by UPCL to our Report submitted to the Hon'ble NGT on 2 March 2021. The Expert Committee stands by the assessment of the Environmental Compensation to be paid by UPCL based on the significant increase in airborne pollution-related diseases recorded by the State Government's PHCs in 15 villages located within a 10 km radius from the UPCLTPP in the Udupi district of Karnataka.

The State of Karnataka has now filed their final report that is under the consideration of the Hon'ble NGT. These independent findings by an environmental research institute established by the Government of Karnataka are also in line with the findings of our Report regarding the higher prevalence of air pollution-related diseases within a 10-km radius of the UPCL TPP. However, the findings of our Report and the Environmental Compensation determined by the

Expert Committee are specific to the facts and circumstances of the UPCL TPP and cannot be extended to other Thermal Power Plants in India.

In view of the above, we hereby submit our further report after holding discussions with the CPCB on 8 March 2022 and after considering the objections raised by the Project proponent as directed by the Hon'ble NGT. We respectfully request the Hon'ble Tribunal to consider our further report along with our Report on Environmental Compensation (submitted to the Hon'ble NGT on 2 March 2021) and decide the matter in their wisdom."

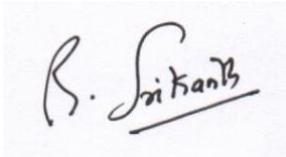
2.2 Meeting to discuss the points of difference of opinion in the last report

A meeting of the Joint Committee through VC was convened on 08/03/2022 in the context of difference of opinion of CPCB mentioned in the last report dated 02/03/2021. The meeting was also attended by Division Head IPC-II, CPCB and Regional Director, CPCB Bangalore. The Expert members from NIAS and ISEC explained the various points discussed during the meeting as follows:

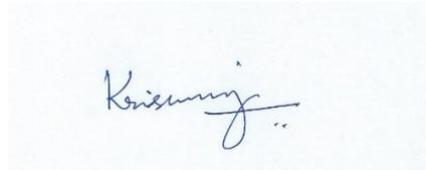
- **Attributing all air related illness cases to the power plant:** This was decided as the UPCL TPP is the main industrial pollution source in this area. The Experts estimated the compensation on the basis of the patient data provided by the Udupi District Health Officer on the specific request of CPCB and the cost of illness method that is widely used to estimate environmental compensation as explained in Section 2.1 of this joint report.
- **Cost-of-illness factors used for compensation estimation:** The estimates of the cost of illness used in the Report submitted to the Hon'ble NGT on 2 March 2021 were developed by Dr. Vijayalakshmi S (Research Assistant appointed by CPCB)*under the supervision of the Committee member from ISEC as explained in Section 2.1 of this joint report. The Expert members also explained that they have estimated the Environmental Compensation for the period of operation of plant from October 2010 and March 2020 (excluding the period of construction of the UPCL TPP).
- **Overlap of compensations estimated based on the non-compliance in the past and based on the health impacts:** Violation of environmental norms happened in the past due to which a number of complaints were filed. The past air quality data is primarily

based on monitoring done by UPCL, and there is no ambient air quality monitoring station of KSPCB/CPCB in the area affected by UPCL to corroborate the data submitted by UPCL to KSPCB.

3. It is submitted that Hon'ble NGT may issue further directions as deemed fit.



(DR. R. SRIKANTH)
NIAS



(DR. KRISHNA RAJ)
ISEC



(SOWMYA D)
CPCB

*Note: Dr. Vijayalakshmi S (Research Assistant) was appointed for two months @ Rs 25000/- per month to assist the committee.