

Item No.1 to 5:-

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

(Through Video Conference)

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:

Janajagriti Samithi

A Society Registered under the
Karnataka Societies Registration Act, 1957
Having its Registered Office at Nandikur 574 138.
Udupi Taluk & District
Represented by its Executive President
Sri Balakrishnan S. Shetty.

... Applicant(s)

Versus

Union of India

Represented by the Secretary
Ministry of Environment & Forests
Paryavaran Bhavan
CGO Complex, Lodhi Road,
New Delhi - 110 003 and Ors.

...Respondent(s)

With

CSI Saint Luke's Church

Santhoor Village, Pillar Post
Udupi Taluk and District
Represented by its Pastor
Robison Barnabas and Anr.

... Applicant(s)

Versus

Union of India

Represented by the Secretary
Ministry of Environment & Forests,
Paryavaran Bhavan
CGO Complex, Lodhi Road,
New Delhi - 110 003 and Ors.

...Respondent(s)

With

Bellibettu Alade Devasthanam
Yellur, Dakshina Kannada,
Represented by its Archaka
Sri. B. Balakrishnan Bhat and Ors.

... Applicant(s)

Versus

Union of India
Represented by the Secretary
Ministry of Environment & Forests,
Paryavaran Bhavan
CGO Complex, Lodhi Road,
New Delhi - 110 003 and Ors.

...Respondent(s)

With

Janajagrithi Samithi
Through its Member
Shri Harishcandra Shetty
Nandikur - 574 138
Udupi District, Karnataka.

... Appellant(s)

Versus

Union of India
Through the Secretary
Ministry of Environment & Forests,
CGO Complex, Lodhi Road,
New Delhi - 110 003 and Ors.

...Respondent(s)

With

Janajagrithi Samithi
Represented by its Secretary
Jayanth Kumar
S/o. Late Krishna Murthy Rao
Nadikur - 574 238
Udupi District, Karnataka.

... Appellant(s)

Versus

Union of India
Through the Secretary
Ministry of Environment & Forests,
Paryavaran Bhavan
CGO Complex, Lodhi Road,
New Delhi - 110 003 and Ors.

...Respondent(s)

O.A. No. 26 of 2013

For Applicant (s): Mr. A. Yogeshwaran.

For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
Mr. Rajath Jonathan Shaw for R2.
Mr. M.R. Gokul Krishnan for R3.
Mr. Vijay Narayanan, Senior Counsel along with
Mr. P.N. Rajeshwara for R5
Mr. Thirunavukarasu for CPCB.

O.A. No. 27 of 2013

For Applicant(s): Mr. A. Yogeshwaran.

For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
Mr. Rajath Jonathan Shaw for R2.
Mr. M.R. Gokul Krishnan for R3.
Mr. Vijay Narayanan, Senior Counsel along with
Mr. P.N. Rajeshwara for R5.

O.A. No. 28 of 2013

For Applicant(s): Mr. A. Yogeshwaran.

For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
Mr. Rajath Jonathan Shaw for R2 & R7.
Mr. M.R. Gokul Krishnan for R3.
Mr. Vijay Narayanan, Senior Counsel along with
Mr. P.N. Rajeshwara for R5.

Appeal No. 51 of 2012

For Appellant(s): Mr. A. Yogeshwaran.

For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
Mr. Rajath Jonathan Shaw for R2 & R7.
Mr. M.R. Gokul Krishnan for R3.
Mr. Vijay Narayanan, Senior Counsel along with
Mr. P.N. Rajeshwara for R5.

Appeal No. 86 of 2017

For Appellant(s): Mr. A. Yogeshwaran.

For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
Mr. Rajath Jonathan Shaw for R2 & R4.
Mr. M.R. Gokul Krishnan for R3.
Mr. Vijay Narayanan, Senior Counsel along with
Mr. P.N. Rajeshwara for R5.

Date of Judgment: 31st May 2022.

CORAM:

HON'BLE Mr. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER

HON'BLE Dr. SATYAGOPAL KORLAPATI, EXPERT MEMBER

HON'BLE Dr. VIJAY KULKARNI, EXPERT MEMBER

ORDER

Judgment pronounced through Video Conference. All these original applications and appeals are disposed of with directions vide separate Common Judgment.

Pending interlocutory application, if any, shall stand disposed of.

Sd/-

Justice K. Ramakrishnan, JM

Sd/-

Dr. Satyagopal Korlapati, EM

Sd/-

Dr. Vijay Kulkarni, EM

O.A. Nos.26 to 28/2013 (SZ),
Appeal No.51/2012, 86/2017 (SZ)
31st May 2022. Mn.

NGT

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For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
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Mr. M.R. Gokul Krishnan for R3.
Mr. Vijay Narayanan, Senior Counsel along with
Mr. P.N. Rajeshwara for R5
Mr. Thirunavukarasu for CPCB.

O.A. No. 27 of 2013

For Applicant(s): Mr. A. Yogeshwaran.

For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
Mr. Rajath Jonathan Shaw for R2.
Mr. M.R. Gokul Krishnan for R3.
Mr. Vijay Narayanan, Senior Counsel along with
Mr. P.N. Rajeshwara for R5.

O.A. No. 28 of 2013

For Applicant(s): Mr. A. Yogeshwaran.

For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
Mr. Rajath Jonathan Shaw for R2 & R7.
Mr. M.R. Gokul Krishnan for R3.
Mr. Vijay Narayanan, Senior Counsel along with
Mr. P.N. Rajeshwara for R5.

Appeal No. 51 of 2012

For Appellant(s): Mr. A. Yogeshwaran.

For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
Mr. Rajath Jonathan Shaw for R2 & R7.
Mr. M.R. Gokul Krishnan for R3.
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Appeal No. 86 of 2017

For Appellant(s): Mr. A. Yogeshwaran.

For Respondent(s): Mr. G.M. Syed Nurullah Sheriff for R1.
Mr. Darpan K.M. along with
Mr. Rajath Jonathan Shaw for R2 & R4.
Mr. M.R. Gokul Krishnan for R3.
Mr. Vijay Narayanan, Senior Counsel along with
Mr. P.N. Rajeshwara for R5.

Judgment Reserved on: 04th April 2022.

Judgment Pronounced on: 31st May 2022.

CORAM:

HON'BLE Mr. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER

HON'BLE Dr. SATYAGOPAL KORLAPATI, EXPERT MEMBER

HON'BLE Dr. VIJAY KULKARNI, EXPERT MEMBER

Whether the Judgment is allowed to be published on the Internet - Yes/No

Whether the Judgment is to be published in the All India NGT Reporter - Yes/No

COMMON JUDGMENT

Delivered by Justice K. Ramakrishnan, Judicial Member

1. The Original Application Nos.26 of 2013 (SZ), 27 of 2013 (SZ) and 28 of 2013 (SZ) were originally filed before the Hon'ble High Court of Karnataka as Writ Petition Nos. 21439 of 2005 (GM-POL-PIL), 2180 of 2007 (GM-RES-PIL) and 11095 of 2007 (GM-RES-PIL) respectively which were later transferred to the National Green Tribunal, Southern Zone Bench, Chennai by the Hon'ble High Court of Karnataka in terms of order passed by the Hon'ble Supreme Court dated 09.08.2012 in **Bhopal Gas Peedith Mahila Udyog Sangathan & Ors. (2012) 8 SCC 326** and thereafter, the same have been numbered as mentioned above before the Southern Zone Bench, Chennai. Thereafter, the above three cases have been transferred to the Principal Bench of National Green Tribunal, New Delhi where it was renumbered as Original Application Nos.578 of 2018 (PB), 579 of 2018 (PB) and 580 of 2018 (PB) respectively. There was another Writ Petition filed as W.P. No.22933 of 2012 before the Hon'ble High Court of Karnataka which was also transferred to the Southern Zone Bench, Chennai and numbered as Appeal No.51 of 2012 (SZ) and on transfer to the Principal Bench, it was renumbered as Appeal No.176 of 2018 (PB).

2. In all these Original Applications, the applicant had assailed the grant of Environmental Clearance (EC) dated 20.03.1997 and its expansion permitted vide Proceedings dated 16.04.2002, by the MoEF&CC/1st Respondent in favor of the 5th Respondent, the Project Proponent viz., M/s. Udupi Power Corporation Limited which was formerly known as M/s. Nagarjuna Power Corporation Limited (NPCL). They also challenged the letter of the MoEF&CC dated 31.01.2005 by which letter dated 05.10.2004 cancelling the Environmental Clearance (EC) dated 20.03.1997 was superseded, holding that the Environmental Clearance (EC) dated 20.03.1997 continue to be valid.
3. Appeal No.176 of 2018 (PB) [Earlier Appeal No.51 of 2012 (SZ)] was filed by the appellant challenging the Environmental Clearance (EC) dated 01.09.2011 in respect of the same project referred to by the parties as 'Final Comprehensive Environmental Clearance' and also termed as 'amended Environmental Clearance' granted by the MoEF&CC to the same project proponent.
4. Appeal No.86 of 2017 (SZ) was filed by the same appellant in Appeal No.176 of 2018 (PB) and the applicant in Original Applications mentioned above challenging the Environmental Clearance (EC) dated 01.08.2017 issued by the MoEF&CC in favour of the 5th Respondent - M/s. Udupi Power Corporation Limited for expansion of their existing 2 x 600 MW Thermal Power Plant (Phase-I) by addition of 2 x 800 MW (Phase-II) at Padubidri Industrial Area in Village Yellur.
5. The common question that has been raised in all these Original Applications No.578 of 2018 (PB), 579 of 2018 (PB) and 580 of 2018 (PB) was against the setting up of 1000 MW Thermal Power Plant in Yellur, Karnataka by the 5th Respondent on the strength of the Environmental Clearance (EC) dated 20.03.1997.
6. It was alleged in these applications that initially M/s. Nagarjuna Fertilizer and Chemical Limited (NFCL) had proposed 2 MTPA capacity steel production industry with captive power generation plant of 1000

MW at the same site in Mangalore Taluk as per Government Order dated 15.11.1995, which was later permitted to be shifted to Yellur, Santhur, Padebetu and Thenka Villages in the year 1995-96 by the Karnataka Industrial Areas Development Board (KIADB). According to the applicant, the 5th Respondent power project is neither location specific nor load specific and environmental friendly which is in violation of the new IPP Policy dated 08.01.2001.

7. The Karnataka State Pollution Control Board granted consent on 19.03.1996 based on a Regional Environment Impact Assessment for the site and the Clearance was granted without making reference to any date or the name of the agency which had carried out the studies. The Yellur Village has never been a part of approved location of the two other Thermal Power projects proposed by NTPC and Cogentrix and thereafter, Part I of the letter granting Clearance which states that it was located within such area, for which, KSPCB, Government of Karnataka and the Government of India had cleared the project earlier was incorrect and misleading.
8. They also alleged that there was no cumulative impact assessment study conducted and the conditions imposed were not sufficient. They further raised several issues regarding the damage caused on account of Thermal Power Plant and its likely impact on the water bodies situated in that area. They also challenged the method by which the Environmental Clearance (EC) earlier closed was reviewed by the MoEF&CC allowing the 5th Respondent to operate the unit and subsequently, granting further Clearance for further expansions.
9. The Principal Bench of National Green Tribunal by Common Judgment dated 14.03.2019, disposed of the matter with the following directions:-

“143. With reference to O.A. Nos. 578/2018, 579/2018 and 580/2018 and, Appeal No. 176/2018, we take note of the fact that the Phase-I of the power plant has since been completed as both the units of 600 MW each have been synchronized with the power grid and, therefore, is already supplying power. We are conscious of the position that fait accompli situation should not and cannot be permitted. We have held so in the case of S.P. Muthuraman vs. Union of India & Ors. Unfortunately a fait accompli situation had arisen. The question that now arises is as to whether the Tribunal is helpless.

144. As noted already, in W.P. No. 21439/2005 while disposing off I.A. No. V/06 seeking for an interim relief, the Karnataka High Court had made it clear that all further action taken by the Respondents during the pendency of the Writ Petition will be subject to the result of the Writ Petitions. Keeping this in view, we have already held that all Environment Clearances, i.e., EC dated 20.03.1997, expansions dated 25.01.1999 and 09.09.2009 and the Comprehensive Environment Clearance dated 01.09.2011 as unlawful and, therefore, invalid.

145. Justifiably, therefore, directions would be called for to remove the plant and order for restoration of the area and the environment. However, considering the facts and circumstances, the lapse of time and the fait accompli situation that has arisen, we are of the view that the interest of public will not be served in passing such order. The need of the hour is 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., the Respondent No. 5, project proponent, liable to pay Environmental Compensation which shall be assessed by a Committee of Experts. We, accordingly constitute such a Committee comprising of the following:

1. Senior Scientist, CPCB.
2. Senior Representative, IIT Chennai.
3. Senior Scientist, IIT Bangalore

CPCB shall be the nodal agency to coordinating amongst the Members for taking up the task.

146. The Committee shall assess the environmental damage on account of the environmental violations in the areas 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.

147. Awaiting such report, we direct M/s. Udupi Power Corporation Ltd. to pay an interim Environmental Compensation Rs.5 crores with the CPCB. The interim compensation would be subject to assessment of final damages by the Committee of Experts.

148. This amount shall be deposited within a period of one month from hence.

149. The CPCB, in the meanwhile, shall utilize the interim compensation for restitution and remedial works for restitution of the environment including the possible plight of the people affected by the plant.

150. We make it clear that this amount shall be distinct from the other obligations of the project proponent under the Corporate Social Responsibility (CSR) or other obligations.

151. We have already held that the Environmental Clearance dated 01.08.2017 for expansion by addition of 2x800 MW (Phase-II) Imported Coal based Super Critical Thermal Power Project at Padubidri Industrial Area in Village Yellur, Taluk Udupi, District Udupi, Karnataka, is bad inter alia for having failed to comply with the mandatory requirement of holding public hearing in terms of stage-III of the EIA Notification, 2006 read with Clause 7 (ii) thereof and item 1(d) of the schedule to the said Notification, we direct that there shall be no further activities in respect of the proposal for expansion.

152. Before embarking upon it, we deem it appropriate to direct the MoEF&CC to ensure that the project proponent carries out an additional EIA study, in terms of additional ToR prepared pursuant to our findings at paras 124 and 125 supra, followed by strict observance of procedure under Stage-III of EIA Notification, 2006 before being finally placed for appraisal by the EAC for consideration for grant of Environmental Clearance. Paras 124 and 125 referred to above are reproduced below for convenience:

"124. The question that then requires determination is, should the EC be quashed and set aside? After careful consideration, we find that further studies are unavoidable in order to ensure that the EIA is complete. We, therefore, direct as follows:

(i) Baseline data of the area in relation to the existing project of 2x600 MW shall be scrupulously collected;

(ii) In addition to the above, the State of Karnataka shall get a carrying capacity study of the area carried out.

(iii) The baseline data and the carrying capacity study shall be considered as components for studying the impact in relation to the proposed expansion;

(iv) Fresh public hearing shall be conducted strictly in accordance with the procedure laid down in Appendix IV of EIA Notification, 2006 ensuring wide participation of the people affected by the project.

125. After completion of the above, report shall be submitted to the MoEF&CC to be placed before the Expert Appraisal Committee for appraisal as required under stage IV of the EIA Notification, 2006.

The entire exercise shall be completed within a period of one year. In the meanwhile, EC dated 01.08.2017 shall remain suspended."

Interim report shall be submitted every three months, first of which shall be 17.07.2019.

153. It will only be after the aforesaid requirements are fully satisfied that the MoEF&CC shall consider the grant of Environmental Clearance. In the meanwhile, the impugned order dated 01.08.2017 shall remain suspended and shall not be acted upon.

154. List this matter after three months in terms of the above direction for consideration of the interim report and also to consider issuing directions for payment of compensation.

155. The Respondent No. 5 shall pay a sum of 31 lakh, as cost to the Applicant.

156. With the above directions, O.A. Nos. 578/2018, 579/2018, 580/2018 and, Appeal Nos. 176/2018 and 86/2018 are allowed in part."

10. By virtue of this Judgment, the Tribunal directed the MoEF&CC to consider the grant of Environmental Clearance (EC) only after satisfying the requirements mentioned in the Judgment. There was a further direction to list the matter after three months in terms of the above directions for consideration of interim report and also considering the issuance of direction for payment of compensation.
11. As per order dated 04.04.2019, after considering the letter received from the Indian Institute of Technology (IIT), Chennai stating that they have no expertise to deal with the issue, the Principal Bench of National Green Tribunal had substituted the Madras School of Economics and the IIT - Bengaluru was corrected as Indian Institute of Sciences, Bengaluru.
12. On 14.10.2019, this Tribunal had considered the report submitted by the Committee dated 15.07.2019 where they have made the following suggestions/implementations:-

"(i) To constitute a separate committee under the Chairmanship of Director, National Institute of Technology Karnataka comprising members from Karnataka State Pollution Control Board, Department of Aquatic Environment Management, Central Ground Water Authority, Agricultural University, Department of Health

to review the environment status annually w.r.t. ground water, ambient air quality, soil conditions, coastal water, conditions of the pumping line, health records and compliance to the environmental conditions etc.

(ii) To continue the studies of ground water quality & surface water quality monitoring, ambient air quality monitoring, inspection of intake & outfall pipe lines, coastal water & sediment studies, health camps etc.

(iii) The unit has to meet the new standards of sulphur dioxide and oxides of nitrogen within the timeline given by CPCB.

(iv) The Karnataka State Pollution Control Board shall be directed to identify fugitive dust emission sources and prescribe the standard for the same. Also the unit shall be directed to carryout fugitive dust emission monitoring as per the source identified.

(v) The unit shall bring out the publication based on the health check-up/ study conducted for the villagers and staffs to know the impact on health

The Hon'ble NGT directed to assess the Environmental Compensation based on "Polluter Pays Principle" Under Section 20 of the National green Tribunal Act, 2010.

As per the methodology developed by CPCB, the cases of Non Compliance with Directions and Accidental Discharges are considered to estimate Environmental Compensation. Accordingly, the committee found that the unit has taken 1630 days to comply various directions issued time to time by KSPCB. Accordingly, the Environmental Compensation (EC) estimated is Rs.4,89,00,000/- (Rupees Four Crores Eighty Nine Lakh only).

The unit has submitted Rs.5,00,00,000/ (Rupees Five Crores only) as an interim Environmental Compensation vide NEFT UTR No. SBIN719098514196 dated 08.03.2019 to CPCB's bank account no. 532702010009078 at Union Bank of India, I.P. Extension Branch, Delhi, within the stipulated times as per the direction of NGT order."

13. The Project Proponent also filed two compliance affidavits one stating that they have complied with the direction to pay interim compensation of Rs.5 Crores with a prayer to return Rs.11 Lakhs which was in excess of the compensation now fixed by the committee and another affidavit regarding the implementation of the recommendations made by the Committee, for which, they are making proper preparation. After considering the submissions made by the parties, this Tribunal had passed the following order:-

"2. The Project Proponent has filed their two compliance affidavits one stating that they 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 they have stated that they are under preparation of doing those things.

3. The Counsel appearing for the applicant submitted a memo 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. Further one of the Member suggested by this Tribunal was not present when the Committee inspected and submitted its report. It is also mentioned in the memo of objections that one of the Member appointed, namely, Dr.Hoysala N. Chanakya is not an expert on the subject of assessing compensation in respect of Thermal Power Plant but he has done specialization in Biogas, Decentralized/Sustainable rural energy, Water Purification and Appropriate

Agricultural Technologies and so he is not a competent person to assess the damage in respect of the industry in question.

4. The Counsel for the Project Proponent submitted that as per the direction of this Tribunal, the State of Karnataka will have to conduct carrying capacity study. In Para 152 of the Judgment dated 14.03.2019, Paras 124 and 125 of the findings of TOR was extracted and thereafter it was observed that in addition to above the State of Karnataka shall get a carrying capacity study of the area carried out. But according to the counsel for the project proponent, such an exercise has not been done and there is also a direction that the entire exercise will be completed within a period of one year and interim report shall be submitted every three months first of which shall be on 17.07.2019 based on which the present report has been filed.

5. When compensation will have to be assessed in respect of particular industry, the expert must be of such a person that he must have expertise on that field. So we direct the Indian Institute of Science, Bangalore to depute a suitable person who has expertise in thermal power plant and allied subject in dealing with its impact on environment for the purpose of assessing compensation in place of Dr.Hoysala N. Chanakya who is already deputed.

6. The Committee is also directed to get the assistance of Dr.Zareen Bagum, Associate Professor, Department of Economics, Madras School of Economics, Chennai who is not present without whom the Committee should not be said to be completed. So further study will have to be done by the Committee in the presence of these persons and after considering the objection raised by the applicant to the earlier report dated 17.07.2019 and make appropriate exercise in revisiting the compensation fixed. The Project Proponent as well as applicant are a liberty to submit their views before the Committee in this regard.

7. The State of Karnataka is directed to make the study regarding carrying capacity as directed by this Tribunal in the Judgment dated 14.03.2019 and submit a report within the time line period by this Tribunal in the Judgement dated 14.03.2019 at the earliest. The Committee is directed to comply with the direction and further report shall be submitted once in three months as directed in the judgment dated 14.03.2019.

8. Registry is directed to communicate this order to the Committee as well as Indian Institute of Science, Bangalore by email to comply with the direction.

9. Merits of the submission made by the Counsel for the applicants in his memo have not been considered by thus Tribunal that has to be gone into by the Committee and take appropriate call on the same in accordance with law."

- 14.** After this Bench was restarted, matters have been transferred to this Bench and that is how, this Bench has taken cognizance of the matter, assigning the original numbers given to the cases by this Bench and it is being taken up.
- 15.** As per order dated 20.02.2020, the case was posted for consideration of further report and the application filed by the Central Pollution Control Board stating that earlier a Committee was formed by this Tribunal comprising a Senior Scientist from CPCB, Senior representative from IIT-Chennai, Senior Scientist from IIT - Bangalore for the purpose of considering certain aspects as per Para No. 146 of the Order dated 14.03.2019. But on the basis of the letter received from IIT - Chennai, this Tribunal modified the Committee by including a Member from Madras

School of Economics and instead of IIT – Bangalore, Indian Institute of Science, Bangalore were added. Dr. Zareena Bagum, Associate Professor, Department of Economics, Madras School of Economics, Chennai was deputed earlier by that institution and Dr. H.N. Chanakya was deputed by Indian Institute of Science, Bangalore and the report was submitted to this Tribunal. But in that report, it was not mentioned as to whether Dr. Zareena Bagum was associated with the inspection and preparation of report, as she has not signed the report as well. An objection was raised by the learned counsel for the applicant that one of the Committee Member viz., Dr. H.N. Chanakya has no expertise in the field of assessing industrial pollution and compensation and this Tribunal by order dated 14.10.2019, directed the committee to submit a fresh report after getting participation of Dr. Zareena Bagum, Associate Professor, Department of Economics, Madras School of Economics and also getting a suitable person with expertise in the field from Indian Institute of Science, Bangalore to submit the report.

16. On that day, the CPCB has filed an affidavit stating that Madras School of Economics has informed their inability to spare Dr. Zareena Bagum due to other commitments and also informed that they have also received a letter from Indian Institute of Science, Bangalore stating that Dr. H.N. Chanakya is an experienced person in environmental issue and industrial issue and has been advising KSPCB for over 15 years and also informed that Indian Institute of Science, Bangalore did not have any comprehensive expert specialized exclusively on environmental issues and emissions from coal power plants. But on the directions of this Tribunal, they have deputed Professor S.K. Satheesh, Faculty of Centre of Atmospheric and Oceanic Sciences having experience in the Aerosols and Oceanography as an alternate representative and wanted this Tribunal to reconstitute the committee.
17. This Tribunal had also considered the application filed by the project proponent to modify the Order dated 14.10.2019 to the extent that memo filed by the applicant which was directed to be considered by the

committee constituted by this Tribunal expands the scope of terms and reference and that should not be allowed.

18. As regards, the affidavit filed by the CPCB was concerned, this Tribunal allowed the prayer to replace Dr. Zareena Bagum, Associate Professor, Department of Economics, Madras with an option to co-opt any expert in the field to assist the committee. This Tribunal also accepted the prayer in the affidavit of CPCB to replace Dr. H.N. Chanakya by Professor S.K. Satheesh, Faculty of Centre of Atmospheric and Oceanic Science, Indian Institute of Science, Bangalore.
19. Further, this Tribunal had rejected the prayer for modification of the Order dated 14.10.2019 regarding consideration of the memo submitted by the applicant by the Committee. This Tribunal directed the Committee not to consider the question as to whether the unit has to be closed and whether the prosecution has to be launched against the unit, as it is for the regulating authority to consider those aspects. Only to that extent, the modification was allowed and the M.A. No.01 of 2020 was disposed of. Thereafter, the matter has been adjourned from time to time for the purpose of getting the report on carrying capacity and other further report regarding compensation.
20. Again, the matter was taken up on 01.06.2020 and on that day, the Central Pollution Control Board wanted to substitute Dr. Krishna Raj, Professor of Economics from Indian Institute of Social and Economic Change (ISEC), Bangalore to join a committee in the place of Dr. Zareena Begum and also suggested the name Dr. N.P. Shukla, Former Chairman of Madhya Pradesh Pollution Control Board (MPPCB) and Member of Expert of Appraisal Committee (Thermal Power/Coal Mines/Infrastructure), Ministry of Environment Forests and Climate Change (MoEF&CC), as an expert member in the place of Dr. S.K. Satheesh, Indian Institute of Science, Bangalore as he had expressed his inability to join the committee and on the basis of the direction given by the Tribunal, the Central Pollution Control Board had filed panel of experts to substitute Dr. H.N. Chanakya or Dr. S.K. Satheesh. Accordingly, Dr. R. Srikanth, Professor & Dean, School of Natural Sciences and Engineering,

National Institute of Advanced Studies, Indian Institute of Science Campus, Bangalore was selected and the Committee was reconstituted by including Dr. Krishna Raj, Professor of Economics from Indian Institute of Social and Economic Change (ISEC), Bangalore and Dr. R. Srikanth, Professor & Dean, School of Natural Sciences and Engineering, National Institute of Advanced Studies, Indian Institute of Science Campus, Bangalore and they have been directed to submit a report.

21. Thereafter, the matter has been adjourned from time to time either at the request of the CPCB or State Departments for preparation of the report and submission of the same. Subsequently, the State of Karnataka has submitted the report pertains to carrying capacity study and also the committee appointed by this Tribunal with reconstituted members submitted the report.
22. The applicant has filed a memo raising his objections and also submissions on the basis of the report submitted. The project proponent also filed their compliance report as well as objections to the report submitted.
23. Heard the learned counsels Mr. A. Yogeshwaran for the applicant/appellant, Mr. G.M. Syed Nurullah Sheirff for the MoEF&CC, Mr. Darpan K.M. along with Mr. Rajath Jonathan Shaw for State Departments, Mr. M.R. Gokul Krishnan for Karnataka State Pollution Control Board, Mr. Vijay Narayanan, Senior Advocate along with Mr. P.N. Rajeshwara for the Project Proponent/Udupi Power Corporation Ltd., Mr. Thirunavukarasu for CPCB in all these cases and we also heard Mr. Santhosh Kumar Singh, Head - Adani Energy Sustainability Group at Adani Power on technical issues on the basis of the Joint Committee report and the carrying capacity report.
24. The learned counsel appearing for the applicant/appellant in all these cases argued that there are certain contradictions between the study conducted for carrying capacity and also the Joint Committee report. The committee which conducted the carrying capacity study in their report

specifically mentioned certain violations and pollution activities which will have to be taken note of on account of the dust emission, health impact and marine discharge, but nothing was mentioned about the same in the Joint Committee report. Though the report of carrying capacity reveals about certain possibility of damage being caused on account of deposit of dust on the plants and the possibility of affecting the growth and yield of the plants, the Joint Committee has not taken note of that aspect and no compensation was assessed in this regard. There was no co-relation done by the Joint committee while assessing the compensation of the past violations and its impact, though they have mentioned that the impact level has been reduced on account of the improvement measures taken by the Project Proponent. A study will have to be conducted in respect of damage caused to the farmers on account of the pollution caused due to the activities of the Project Proponent and they will have to assess the compensation payable to the farmers and that will have to be disbursed to them, apart from taking other precautionary measures to protect the neighboring agricultural lands from further pollution being caused on account of the existing units. The MoEF&CC has also to consider the carrying capacity study conducted by the Committee and they will have to incorporate the necessary study to be conducted on that basis in the ToR to be issued and thereafter, consider the question of granting Environmental Clearance for the expansion of the Project Proponent's unit.

25. The learned counsel for the MoEF&CC, Central Pollution Control Board, State Pollution Control Board and the State Departments submitted that respective reports sought for by the Tribunal vide Judgment dt.14.03.2019 have been submitted and detailed study has been conducted and on that basis, compensation was also assessed. Certain recommendations were also made and on that basis, further studies will have to be conducted to meeting the situation that is likely to arise on account of the operation of the Project Proponent unit.

26. On the other hand, the learned Senior Counsel appearing for the Project Proponent as well as the Technical Officer - Mr. Santhosh Kumar Singh, Head - Adani Energy Sustainability Group at Adani Power who was present submitted before the Tribunal that the Joint Committee report will go to show that the Ambient Air Quality and soil quality are within the permissible limit and there was no possibility of any pollution being caused on account of their act. Further, the study conducted by the Committee appointed by the State Government to assess the carrying capacity has not taken certain aspects on ground level, but they have relied on the information given by the local people for the purpose of arriving at the conclusion. Further, there is a contradiction between the study conducted by the Committee which submitted the Carrying Capacity Study report and the Joint Committee appointed by this Tribunal on the question of pollution and other aspects. The calculation made for compensation on health issues is without any basis, especially when they have come to the conclusion that there are other industries situated and it is not possible to fasten the entire contribution on the Project Proponent alone. Further, primary data collected are not from the local area where the study will have to be conducted, but on the other hand, they have relied on certain data of cities like Bangalore and other urban cities which is not relevant for the purpose of assessing the compensation on health issues in the project affected area. Further, as regards the marine discharge is concerned, there was some breach occurred and that has been rectified immediately. But that aspect has not been considered by the Committee appointed by the State Government for conducting carrying capacity study. The standard taken by them for assessing the emission level of So_x and No_x are not correct.
27. So, according to the learned Senior Counsel, the 5th Respondent/Project Proponent unit has taken all the necessary precautions and there is no possibility of any pollution being caused and the Joint Committee earlier appointed by this Tribunal had assessed the compensation of Rs.4.89 Crores and the assessment made by the present Committee including this amount for a higher amount on imaginary data are not sustainable in law and the same will have to be rejected. They are prepared to abide by

any conditions imposed by the Tribunal to protect environment and also to protect the interest of the people in the project impact area, as an industrial unit committed to protect environment.

28. We have considered the pleadings, observations made in earlier Judgment dated 14.03.2019, the Joint Committee reports and the submissions made by the learned counsel appearing for the parties.

29. The points that arise for consideration are:-

- (i) What is the nature of damage caused to the environment, including soil, water, air and socio-economic conditions of the project impact area?
- (ii) Whether further studies will have to be conducted in order to arrive at the actual compensation payable to the persons affected on account of the alleged pollution that is being caused on account of the operation of the 5th Respondent units for their past violation?
- (iii) What is the nature of direction to be issued applying the principles of "*Precautionary Principle*" and "*Sustainable Development*" for protecting environment and also considering the question of expansion of the Project Proponent unit on the basis of the carrying capacity study conducted by the State Government as directed by this Tribunal?
- (iv) Relief and costs.

POINTS:-

30. While disposing the case after detailed hearing, this Tribunal came to the conclusion that there were certain violation of conditions and non-compliance of the ash management and came to the conclusion that study is required on these aspects. Further, it was also observed in the Judgment that the impact of imported coal source study has not been conducted and the study was conducted by an agency which was not

having accreditation and the study has not consist of the impact of existing sea water intakes and outfalls.

31. It is seen from Para 120 of the Judgment dated 14.03.2019 that even earlier there were notices issued for committing violation of consent conditions. It is on that basis that under Para 124 of the Judgment, this Tribunal directed to conduct fresh EIA Study on the following grounds:-

“(i) Baseline data of the area in relation to the existing project of 2 x 600 MW shall be scrupulously collected

(ii) In addition to the above, the State of Karnataka shall get a carrying capacity study of the area carried out

(iii) The baseline data and the carrying capacity study shall be considered as components for studying the impact in relation to the proposed expansion

(iv) Fresh public hearing shall be conducted strictly in accordance with the procedure laid down in Appendix IV of EIA Notification, 2006 ensuring wide participation of the people affected by the project.”

32. It is thereafter, the MoEF&CC was directed to place the study report before the Expert Appraisal Committee for appraisal and after, considering the same, proper appraisal will have to be done as provided under Stage – IV of the EIA Notification, 2006.

33. In Para 139 of the Judgment, this Tribunal had extracted the study carried out on “Environmental Profile and People’s Livelihood aspect in the vicinity of Coal-based Thermal Power Plant at Yellur Panchayat, Udipi District” as follows:-

“Analysis of the water samples collected from surface and ground water bodies within 2 km zone reveal higher inorganic anions, cations and heavy metals beyond the permissible limits of Bureau of Indian Standards (BIS) and World Health Organization (WHO). Similarly, the analysis of water samples of the villages of Yellur (including Kolachur), Nadsal (including Tenka Yermal) and Santhur by PCB also reveal of contamination. Release of effluents (oil spills rich in hydrocarbons) directly to natural drains at north-western side (Yellur) of TPP has been observed during the field work and also reported by local people in the vicinity. Also, the release of coal mix effluents directly into the streams has been noticed at north-western (Yellur), south-western (Yellur, Padebetu, Tenka) and southern (Kolachur) sides. The irresponsible act of releasing untreated effluents (rich in salinity, heavy metals, hydrocarbons) is primarily responsible for contamination of water (ground and surface waters) and land resources. Due to these, higher accumulations of contaminants in the environment have affected human and livestock dependent on the water bodies and agriculture fields. The severity of the contamination is felt even at coastal region which is over 4 km (as effluent contaminated water passes through the agriculture fields). The presence of

zinc, cadmium, lead, iron, cobalt, nickel, copper, chromium, manganese in water samples in the core zone (within 2 km) and also in soil samples of buffer regions of TPP reveal heavy metal contamination with xenobiotic compounds.

The transport and dry disposal of coal ash (fly ash) has resulted in the dispersion of ash particulates and fugitive dust in the neighborhood. Intermittent release of ash pond water to nearby stream (eventually joins the Shambhavi river) in Santhur village has contaminated to ground water resources. Apart from these, leakage of saline water into agriculture fields has enhanced the salinity affecting paddy yield. Agricultural crop lands have been abandoned due to low crop yield subsequent to TPP's contaminations. The indiscriminate disposal of synthetic substances used for coating of the GRP pipeline has also added to the soil contamination.

Socioeconomic survey of residents within 6 km zone reveals the impact on livelihood of people due to reduced crop productivity, higher instances of human and livestock health issues, damages to infrastructure, etc. which further corroborates the environmental impacts (water, soil and biotic elements) with the contamination of water, air and soil."

34. In Para 140 of the Judgment, this Tribunal had extracted the impact on the basis of the summary of findings of the report which reads as follows:-

"140. The summary of findings in the report, records that as many as 47 affects have been observed on plants, vegetation, animals, fish and human beings, 5 impacts of contaminated water based on water sample analysis, contamination of air and environment caused by transportation in open trucks and dumping of dry coal ash, settlement of blackish particles settle on leaves, clothes, objects inside homes, food kept in open, etc. in core zone, salt deposits on leaves and roofing tiles, corrosion of tin roofing sheets, agriculture implements, etc. drying of leaves and leaf burn, etc. were noted. Impact on people's livelihood caused by various deleterious effects within 2 km radius, i.e., core zone, impact on live stock and impact on biodiversity had also been noticed. The study reveals that there was gross environmental mismanagement which, in our considered opinion, can be reasonably attributed to the casual manner in which the project had been cleared and barely monitored. There is no reason to doubt that this is a case of serial violations where the violator has been given a free run."

35. So, it cannot be now said by the Project Proponent that there was no impact either on health or environment on account of the operation of their unit earlier and this fact was in a way supported by the Joint Committee appointed by this Tribunal that the various improvements made by the project proponent in controlling the pollution that is being caused on account of mismanagement of ash pond and dust emission on account of improper disposal of the ash collected and breach occurred in the discharge pipeline into sea.
36. Earlier, while disposing the matter, this Tribunal had imposed an interim compensation of Rs.5 Crores which was deposited by the project proponent. Further, the report submitted by the Expert Committee

earlier dated 15.07.2019 conducted study of impact for about 10 Km from the project area and the study was conducted in respect of 29 villages. It was also mentioned in that report that the Central Pollution Control Board has issued a direction by Proceedings dated 11.12.2017 directing the Udupi Power Corporation Limited to comply with the direction in the Notification dated 17.12.2015 regarding the installation of certain mechanism. It was found by the committee that comparison of Ambient Air Quality result of eight locations with station established at the foot hills of Western Ghats located remotely at about 30 Km from the unit reveals that there is increase in concentration of So₂ by 4%, No₂ by 14%, PM₁₀ by 22% and PM_{2.5} by 26%.

37. It was observed that the pipeline leakage location and affected area was visited by the Expert Committee and observed that the present Geomorphologic and Vegetation feature shows no prima facie signs of any salinity and impact at sea water leakage site. But they have not noted as to what was the damage happened at the time when the leak had occurred. It cannot be said that there will not be any possibility of any impact on account of the same.
38. The following deficiencies cum non-compliances were noted in the report which reads as follows:-

"a) Discharge in violation of consent conditions, mainly prescribed standards / consent limits.

b) Not Complying with the directions issued, such as direction for closure due to non - installation of OCEMS, non - adherence to the action plans submitted etc.

c) Intentional avoidance of data submission or data manipulation by tampering the online continuous emission / effluent monitoring systems.

d) Accidental discharges lasting for short durations resulting into damage to the environment.

e) Intentional discharges to the environment - Land, Water and Air resulting into acute injury or damage to the environment.

f) Injection of treated / partially treated / untreated effluents to ground water.

The cases of Non Compliance with Directions and Accidental Discharges are considered to estimate Environmental Compensation. The directions issued by KSPCB over the period are for (i) proper management and disposal of fly ash, (ii) reducing fugitive dust emission from coal handling by providing wind barriers, installation of dry fog system, (iii) drift eliminator for cooling tower to reduce drift loss (iv) proper management of wastewater and desilting of storm water drains (v) proper operation of STP (vi) construction of retaining wall to avoid coal sliding (vii) Rain water harvesting (viii) tree plantation for increase green cover (ix) OCEMS connectivity to CPCB (x) Proper management of ETP sludge (xi) providing oil spill kits with boom to managing oil leakages etc."

39. They also noted the non-compliance period as 1,630 days. It is on that basis, they have calculated the compensation at Rs.4.89 Crores. But though as per the Central Pollution Control Board norms, the R - Factor can go upto Rs.500, they have taken only Rs.250 for that purpose. Considering the fact that it is a "Red Category" industry and Thermal Power Plants are supposed to be one of the major polluting 17 industries, we feel that R - Factor can be taken as Rs.500/- instead of Rs.250/- taken by the Board. If the calculation is made on that basis, then the compensation for non-compliances will come to $EC = 80 \times 1,630 \times 500 \times 1.5 \times 1 = \text{Rs.9.78 Crores}$ and this can be rounded to **Rs.10 Crores**. This is only in respect of violation of the conditions and they have only taken the period of violation from the date of its detection and not the actual period of violation as such. No study was conducted in respect of damage caused to the marine ecology immediately after the leak was detected and no separate study was also conducted in this regard by the Pollution Control Board, when they came to know about the same. The Ash dyke Management was also not found to be satisfactory but ultimately they came to the conclusion that because of some improvement made by them, they could not notice any significant non-compliance of the environmental monitoring data of Ambient Air Quality, Groundwater Quality, Source Emission/Effluent discharge etc. There is always scope for further improvement to improve the system and they have directed to implement the following things to be done by them:-

"i. To constitute a separate committee under the Chairmanship of Director, National Institute of Technology Karnataka comprising members from Karnataka State Pollution Control Board, Department of Aquatic Environment Management, Central Ground Water Authority, Agricultural University, Department of Health to review the environment status annually w.r.t. Ground Water, Ambient Air Quality, Soil Conditions, Coastal Water, Conditions of the pumping line, Health records and compliance to the Environmental Conditions etc.

ii. To continue the studies of Ground Water Quality & Surface Water Quality Monitoring, Ambient Air Quality Monitoring, Inspection of intake & outfall pipelines, Coastal Water & Sediment Studies, Health Camps etc.

iii. The unit has to meet the new standards of Sulfur dioxide and Oxides of Nitrogen within the timeline given by CPCB

iv. The Karnataka State Pollution Control Board shall direct to identify fugitive dust emission sources and prescribe the standard for the same. Also the unit shall be directed to carryout fugitive dust emission monitoring as per the source identified.

v. The unit shall bring out the publication based on the health check - up / study conducted for the villagers and staffs to know the impact on health."

40. As regards the health impact is concerned, the Joint Committee noticed that there were increase of health problems and most of them related to respiratory infected diseases and they have come to the following conclusions:-

"4.4.4 Conclusion

Based on the analysis of the survey data following conclusions emerge. This is purely an opinion or perception based socio - economic survey and the opinions on the quality of air, water and soil have to be corroborated on the basis of scientific analysis.

1. A large number of respondents who are primarily agriculturists have lost their agricultural land due to setting up of UPCL plant. People have also lost their houses and land.

2. Majority of the respondents are of the opinion that there are no benefits from the UPCL plant and there is no improvement in the infrastructure also.

3. Health conditions of the residents of the area were adversely affected by the UPCL plant. Many people (54.25%) are of the opinion that people are suffering from multiple health problems and 39 percent expressed that people suffered from respiratory problems.

4. People were of the opinion that environmental pollution occurred with respect to Air, Water and Soil. According to 69.25 percent of respondents local Environmental conditions were moderate.

5. Most of the respondents (97.4%) expressed their opinion against the expansion of UPCL plant and 93.4% expressed their opinion against setting up of any new industry in the region."

41. Though on the primary assessment of the existing level of pollution and the improvements made by the project proponent, the Joint Committee came to the conclusion that there was not much impact on soil, water and air quality in that area. However, they came to the conclusion that further study on the basis of the scientific analysis has to be done on these aspects. The Joint Committee after conducting the water analysis, Ambient Air Quality etc. found that they are meeting the standards in and around the project area.
42. As regards the existence of TDS, Chloride and hardness found high in the open well located in the agricultural field and found low in open well located near the houses, they came to the conclusion that it may be due to entry of agricultural runoff into the open well located in the agricultural field. They have further come to the conclusion that there was no

significant ground water contamination since the ground water quality samples collected from the open wells are conforming to the IS 10500 : 2012 Standards.

43. As regards the agricultural impact is concerned, they came to the conclusion that there was no remarkable change in the productivity of paddy and black gram over the last 11 years as per the yield statistics information of Department of Economic and Statistics. The Agricultural Department also reported that the decline in the area of paddy and black gram was not only a trend in the surrounding villages of M/s. UPCL but also phenomenon noticed in the entire Udupi District. The soil analysis revealed that electro conductivity of soil in all 24 villages of Udupi Taluk and Karkala Taluk located in the surrounding of M/s. UPCL is less than 2 dS/m. This indicates that salinity effect is insignificant and soil health complies with the non-saline class. Hence, it can be concluded that the Soil Electrical Conductivity of soil is found to be normal in villages around M/s. UPCL and no noticeable impact due to sea water cooling which is provided with drift eliminator (after several years of operation without this vital equipment) to reduce the loss of sea water to the environment due to evaporative cooling process.
44. As regards the status of horticulture crops are concerned, as per the department records, there was no crop loss reported in the surrounding areas between 2008-09 to 2019-20 and with the existing data, there is no drastic change in cropping pattern before and after commencement of M/s. UPCL.
45. As regards the health study is concerned, within a distance of 10 Km, in between 11 to 15 Km and between 16 to 20 Km shown in Table 10 A of the Joint Committee report that there is an increase in acute respiratory infection and cancer respectively during the period 2012 - 2020. It is also noticed by the Joint Committee that there are air pollution related diseases reported significantly in the villages located within 10 Km radius from M/s. UPCL, whereas the number of cases were found to be decrease beyond 10 Kms. The Airborne and waterborne diseases reported in the

Government PHCs identified by the District Health Authorities are decreasing with increasing distances from M/s. UPCL. That gives an indication that the acute respiratory infection are increasing within the area of 10 Kms. Though the present Ambient Air Quality shows some improvement, it cannot be said that they are not responsible for respiratory infection caused in that area. They have taken the formulae as $\text{Damage H (in Rupees)} = \text{Number of cases reported (X)} * \text{Contribution of Industry (COI) affected area}$. They have relied on the study conducted by Vijayalakshmi and Krishnaraj in 2020 and on that basis, they calculated the amount of Rs.70,04,10,828/- as compensation but there were also other industries located within that area and they came to the conclusion that it is not possible to apportion the contribution between M/s. UPCL and other industries and as such, they have fastened the entire liability on M/s. UPCL.

46. It may be mentioned here that they found that there are certain deficiencies in handling the ash dyke and there was no records related to ash disposal management. In carrying capacity report at Page 98, they came to the conclusion that as per the study conducted, M/s. UPCL does not have proper fly ash/bottom ash inventorization and hence indicates improper fly ash management. The team could not find the reuse of fly ash and bottom ash and its records. The present dyke ponds are not being properly maintained and the depth of the dyke ponds are low and no over flow water collection facility were evidenced during heavy rainy period. In view of this, there is a possibility of over flow of water from the dyke pond into the nearby villages and agricultural farms. The present ash generation per day was 673 Tons and per year (considering 235 days' operation) is 1,58,146 Tons.
47. It was also noticed that there is no evidence of the present ash generation being put into productive reuse by M/s. UPCL and hence, with the further additional unit, ash generation would be almost doubled and is not likely to be able to reuse. This may lead to accumulation and the entire quantity of ash in the dyke pond will drastically increase and the over flow during rainy season also proportionately increases given the

present management practice. It was also noticed that fly ash is ultra-fine, M/s. UPCL Dyke ponds are in dry state and there is a possibility of fly ash becoming airborne into the nearby environment. Long-term exposure of fly ash in the air can lead to serious pulmonary disease like bronchitis, silicosis, fibrosis, pneumonitis, etc. The ash contains toxic heavy metals too that are known carcinogens. So, with respect to the management of fly ash and M/s. UPCL, the present generation of fly ash and bottom ash has not been put to proper reuse or storage which leads to ground water contamination. The nearby farmers have complained on the decrease in crop yield and deposition of fly ash due to airborne particulars. By adding additional expansion facilities in the plant, it may further impact on ground water and soil would be borne to contamination. It appears that it is on the basis of the complaints made by the local public but the earlier observations shows the deficiency in management of fly ash and bottom ash and probable cause of pollution.

48. Further, Page 99 of the report of Carrying Capacity Study conducted by the Environmental Management and Policy Research Institute, Department of Forest, Ecology and Environment, Government of Karnataka, it was observed that black color leachate water is being pumped into the cooling tower below down water collection pond and that was captured in the photographs. It was further observed in the report that during heavy wind flow, this coal dust which is airborne deposits in the surrounding environment and it was further observed that there is a layer of black dust in the plants and agricultural crops. This indicates that M/s. UPCL is not properly handling coal (continuous sprinkling) to prevent airborne dust into the environment. Water sprinkling is not being carried out at each and every stage of handling due to which there is lot of fugitive coal dust and emission into the atmosphere. Though the Ambient Air Quality at the time of conducting inspection by the Joint Committee was found to be within norms, the study conducted by the Carrying Capacity Team noticed the presence of black dust on the crops in the nearby agricultural lands and it was observed by them that it may be due to mishandling of coal without

providing continuous sprinkling of water when it is being handled for their purpose.

49. So under such circumstances, though M/s. UPCL alone was not responsible for the increase in the airborne diseases, it cannot be ruled out that they are not contributing anything towards the same and considering the nature of polluting industry, the coal-based Thermal Power Plant is the majority percentage of contribution will be from them.
50. Further, the other natures of industry which is situated are not clear and how far, their pollution control mechanisms are effective in preventing dust pollution. Though there is some force in the submissions made by the learned Senior Counsel appearing for M/s. UPCL that they cannot be completely made responsible for the alleged increase in the airborne diseases, we cannot agree with them that they are not contributing anything towards the same. Considering the circumstances, taking 60% as their contribution, we feel that 60% of Rs.70,04,10,828/- (calculated by the Expert Committee appointed by this Tribunal) can be imposed as compensation for environmental damage caused by increasing health impact in the neighboring areas and we feel that, that amount can be fixed as compensation under that ground. If such a recalculation is made, then the amount will come to Rs.42,02,46,496.80 (60% of Rs.70,04,10,828/- = Rs.42,02,46,496.80) and it can be rounded to **Rs.42,02,50,000/-** and if this amount is added to **Rs.10 Crores** already assessed for violation of conditions and failure to carry out the directions, the total compensation will come to **Rs.52,02,50,000/-** and M/s. UPCL is liable to pay that amount as compensation for the violation of conditions and health impact caused.
51. Though the Central Pollution Control Board has given a difference of opinion on the question of adding both for the purpose of assessing the environmental compensation and the maximum one alone can be taken but we do not find any merit in their opinion, as compensation on different components will have to be independently assessed and the aggregate amount of all factors will constitute component of total compensation. So under such circumstances, adding the compensation

for health impact and compensation for violation cannot be said to be excessive and it is not permissible as contended by the CPCB.

52. The Joint Committee earlier made their observations and recommendations as follows:-

“Based on the inspection and review of environmental monitoring data, source emission & effluent compliances, fly ash management etc., the observations of Expert Committee are:

** The unit uses imported coal complying with sulfur content <0.8% and Ash content <12%, as per the consent conditions, the average Sulfur Content and Ash content in imported coal was 0.45% and 6.12% respectively.*

** The unit consumes sea water i.e. 5 to 5.9 KL / MW which is within the permitted limit of 8.57 KL / MW.*

** The unit off shore intake of sea water from Arabian Sea and discharges of wastewater in to Arabian Sea is as per the recommendation by N.L.O. Goa.*

** The unit has re - circulating cooling water system with natural draft and provided with drift eliminator to reduce the loss of water to the environment and reduce droplets (salt water) carryover to the environment.*

** The unit complies with the prescribed effluent discharge standards for cooling tower blow down, boiler blow down and final effluent discharge from Guard pond to Sea. The temperature difference of wastewater discharged through a pipeline in to a sea is maintained within 5° C and the average of discharge limit of wastewater in to sea is found within permitted limit.*

** The Unit 1 achieved the target of Fly ash utilization as per the MoEF & CC Notification, but the Unit 2 could not achieve during its 4th year. Both units started achieving 100% fly ash utilization during 2016-17 and 2018-19 and over all fly ash utilization is about 84%.*

The manual ambient air quality monitoring stations results of 8 stations located at various distance ranging from 0.8 km to 6.4 km reveal that SO₂ NO₂. PM₁₀ and PM₂₅ are found compiling with Ambient Air Quality Standards of Annual average. But, while comparing with station established at the foot hills of Western Ghats reveals that there is increase in concentration of all the parameters SO₂ by 4%, NO₂ by 14%, PM₁₀ by 22% and PM_{2.5} by 26% respectively.

** The Karnataka State Pollution Control Board has stringent the source emission (stack) standard of particulate matter as 50 mg / Nm³ against the National Standard of 150 mg / Nm³ from the inception of unit considering the environmental sensitivity of Location (Western Ghats). The source emission with respect to Particulate Matter and Mercury are complying with the prescribed standards. The unit has to take appropriate measure within the timeline i.e. 2022 given by CPCB to meet the prescribed emission. standard of Sulfur Dioxide and the Oxides of Nitrogen.*

** KSPCB has not prescribed fugitive emission standard to control the fugitive dust emissions from coal handling, fly ash handling, lime and gypsum handling etc. as part of consent conditions for regular monitoring and compliance of the same.*

** The unit has closed part of the ash dyke and rehabilitated the same with plantation to control dust emissions from the ash ponds.*

** The ground water quality monitoring results of Ground water monitoring established around ash pond and other places, pipeline corridor, and surface water quality of Mulki River reports reveals that there is no noticeable impact on ground water and surface water, except marginal increase in iron content.*

** CSIR - National Geophysical Research Institute (NGRI), Hyderabad study of ground water contamination, if any, due to sea water pipeline leakages concluded that there was no permanent water quality deterioration in particularly with regard to elevated TDS, sodium, chloride and sulphate. The pipeline leakage location and affected area was visited by the Expert Committee*

and observed that present geo - morphological & vegetation features shows no prima - facie signs of any salinity and impact at sea water leakage site.

* The unit is carrying out inspection submarine pipelines for intake and outfall lines by engaging Coastal Marine Construction & Engineering Limited (COMACOE) to ascertain the condition of pipelines, internal & external corrosion / erosion, pitting, etc. The study carried out during December 2018 reveals that there was no damage, anchorage etc. found and the pipeline is in good condition.

* The coastal water study carried out by Department of Aquatic Environment Management concluded that sea water intake & effluent discharge point is meeting the primary water quality criteria, the heavy metal present in the sediments are within acceptable limits, phytoplankton species are found common type along the West Cost and do not pose any threat to the environment.

* The Expert Committee observed during inspection that there was large extent of marine pollution from marine sources. Visual and sensorial assessments indicate this to be ballast oil and other marine vessels discharges. It is unlikely the UPCL has such large stocks to create such a large discharge extending over hundreds of kilometers.

Based on the above observations, Expert Committee concludes that there cannot be any significant impacts on environment based on the present environmental compliance status of unit. Also, the committee could not notice any significant non - compliances on the Environmental monitoring data of ambient air quality, ground water quality, source emission / effluent discharge, etc. But there is always scope to further improve the system."

53. As regards the compensation aspect is concerned, this Tribunal had recalculated the same and that amount will have to be substituted in the place of compensation assessed by the Joint Committee and on all other aspects, this Tribunal is accepting the Joint Committee report.
54. As regards the carrying capacity study is concerned, this Tribunal is not expressing any opinion regarding the conclusions arrived at by them, but they have specifically mentioned in the limitation of the study and recommendations portion as follows:-

"7.1 Limitations of the study

1. The present assessment being a limited- period, study has not been able to capture the seasonal variations, and this is a major limitation.
2. Current analysis was carried out when the UPCL plant was operating at below normal capacity and hence the results obtained during the study should be considered accordingly. This prompts to carry out the study with the plant operating at designed capacity.
3. Lack of data from UPCL regarding discharge of effluents into the Arabian Sea constraints the study in that regard.
4. Assessing and analyzing the carrying capacity and impacts on the biodiversity requires long-term studies, and the same could not be attempted.
5. Due to the Pandemic situation of Covid-19, the Study team faced major difficulties in visiting the study area to collect more data that could had further enriched the study

7.2 Recommendations

The following recommendations are presented.

a) This is a short-term study; long-term studies should be undertaken to comprehensively determine the impacts of the power plant and remaining carrying capacity to accommodate the additional quantum of impact across seasons.

b) Prior to expansion UPCL should ensure strict adherence to all environmental norms.

c) Third party ambient air quality monitoring on regular basis may ensure adherence to environmental norms.

d) Monitoring of groundwater quality in open wells in the surrounding area of UPCL is necessary.

e) Desirably the information on the agriculture, horticulture, fishing and farming crops should be periodically collected and reasons for adverse impacts identified and mitigated in the study area and even beyond.

f) Human health monitoring in the surrounding villagers as well as by the other villages beyond 10 Km from the plant is desirable.

g) Airborne particles may be monitored in routine and data collected.

h) A detailed study on the ramifications of the UPCL seawater discharges into Arabian Sea and on coastal zone, and the present status of the marine biology should be undertaken. A clear demarcation of HTL and LTL should be made and adherence to notifications under the CRZ Rules 2019 needs to be ensured.

i) Comprehensive Social Audit of industrial activity would help in identification and prioritization of the concerns of local communities.

j) There are several critical ecosystems in the study area like Myristica swamps, island ecosystems, and other pristine wildlife habitats (Figure 7.1). These critical ecosystems are influenced by monsoonal climate. Therefore, long-term monitoring and detailed study of the area is very essential with reference to the implications of UPCL and its capacity expansion for terrestrial, freshwater and marine biodiversity and ecosystems."

55. The report on Environmental Monitoring and Analysis and Source Dispersion Modelling Study at M/s. UPCL by Environmental Management Policy Research Institute, Bangalore also gives some picture about the deficiencies and they came to the conclusion regarding the Ambient Air Quality monitoring as follows:-

"CONCLUSION:

In Ambient Air Quality monitoring seven sampling locations were identified to assess the GLC of point source emission of Gaseous and Particulate matter. The sampling locations are Top of the fire station, Mudurangadi village, UPCL Sea Water Pump House (Thenka-Yermal Village), Hejamady Village, Inna-Village and Nandikoor Village.

- Sulphur Dioxide as SO₂: Ambient Air Quality measurement values of SO₂ are ranging from 7.3 to 13.2 µg/m³. Highest value of 13.2 µg/m³ is obtained and however the values are within the NAAQM standards.

- Nitrogen Dioxide as NO₂: Ambient Air Quality values of NO₂ are ranging from 9.5 to 14.2 µg/m³. Highest value of 14.2 µg/m³ is obtained and however the values are within the NAAQM standards.

- Particulate Matter (PM₁₀): Ambient Air Quality values of PM₁₀ are ranging from 49.4 to 58.8 µg/m³. Highest value of 58.8 µg/m³ is obtained and however the values are within the NAAQM standards.

- Particulate Matter (PM_{2.5}): Ambient Air Quality values of PM_{2.5} are ranging from 18.9 to 26.4 µg/m³. Highest value of 26.4 µg/m³ is obtained and however the values are within the NAAQM standards."

56. As regards the stack emission monitoring and analysis, they came to the following conclusion:-

“CONCLUSION:

In Stack Emission monitoring at thermal boiler both the stacks are not complying for Sulphur Dioxide Concentration of 886 mg/Nm³ & 1192 mg/Nm³ against the CPCB Emission Limit value of 600 mg/Nm³ and rest all the parameters are complying with the CEPCB ELV.”

57. As regards the soil sampling is concerned, they came to the following conclusion:-

“CONCLUSION:

In Soil sample collected ten locations. The sampling locations are Pump House Sea Water Sedimentation Tank -I, Pump House Sea Water Sedimentation Tank -II, Pump House, Hejamady Village, Inna Village, JM Nandikoor Village, Near Fire Station, Madrangdi Village, R & R Adamar Village and K.S.Ullooru.

- *Arsenic as As: Soil sample measurement values of Arsenic are ranging from 2.84 to 9.48 mg/kg.*
- *Zinc as Zn: Soil sample measurement values of Zinc are ranging from 5.14 to 114.01 mg/kg.*
- *Cobalt as Co: Soil sample measurement values of Cobalt are ranging from 2.58 to 7.22 mg/kg.*
- *Molybdenum as Mo: Soil sample measurement values of Molybdenum are ranging from 2.07 to 11.03 mg/kg.*
- *Nickel as Ni: Soil sample measurement values of Nickel are ranging from 3.21 to 28.8 mg/kg.*
- *Chromium as Cr: Soil sample measurement values of Chromium are ranging from 19.22 to 92.95 mg/kg.*
- *Copper as Cu: Soil sample measurement values of Copper are ranging from 3.58 to 78.35 mg/kg.*
- *Iron as Fe: Soil sample measurement values of Iron are ranging from 5094.5 to 394060.76 mg/kg.*
- *Lead as Pb: Soil sample measurement values of Lead are ranging from 2.98 to 23.91 mg/kg.*
- *Manganese as Mn: Soil sample measurement values of Manganese are ranging from 15.05 to 271.23 mg/kg.*
- *Antimony , Cadmium, Mercury and Hexavalent Chromium metals are below detection limit.*

The levels of heavy metals in the soil were highest for Fe and Mn followed by Zn, Cr and Cu. In the soil samples, the Fe content ranged from 5094.5 to 394060.76 mg/kg dry soil, Mn ranged from 15.05 to 271.23, Zn ranged from 5.14 to 114.01 mg/kg, Cr ranged from 19.22 to 92.95 mg/kg and Cu ranged from 3.58 to 78.35 mg/kg. Following heavy metals in the soil were lowest for Ni followed by Pb, Mo, As and Co. In the soil samples, the Ni content ranged from 3.21 to 28.80 mg/kg, Pb ranged from 2.98 to 23.91 mg/kg, Mo ranged from 2.07 to 11.03 mg/kg, As ranged from 2.98 to 23.91 mg/kg and Co ranged from 3.21 to 28.8 mg/kg.”

58. As regards the water sampling and analysis, they came to the following conclusion:-

“CONCLUSION:

In Ground Water sample collected ten locations. The sampling locations are Inna Village , Upcl Ash Pond , Jm Nandikoor Village , Hejamady Village , Pump House, K.S.Ullooru , Mudrangadi Village and R & R Adamar Village.

- *Aluminium as Al: Ground Water sample measurement values of Aluminium are ranging from 0.009 to 4.797 mg/L. Highest value of 4.797mg/L is obtained. While the Permissible limit is 0.2 mg/L (IS 10500 standard). Pump House ground water location sample exceeding the limit and rests of the location sample within the limit.*

- *Barium as Ba: Ground Water sample measurement values of Barium are ranging from 0.053 to 0.38 mg/L. Highest value of 0.38mg/L is obtained. While the Acceptable limit is 0.7 mg/L (IS 10500 standard). All ground water location samples within the limit.*

- *Boron as B: Ground Water sample measurement values of Boron are ranging from 0.015 to 0.104 mg/L. Highest value of 0.104 mg/L is obtained. While the Permissible limit is 2.4 mg/L (IS 10500 standard). All ground water location samples within the limit.*

- *Copper as Cu: Ground Water sample measurement values of Copper are ranging from 0.004 to 0.081 mg/L. Highest value of 0.018mg/L is obtained. While the Permissible limit is 1.5 mg/L (IS 10500 standard).All ground water location samples within the limit.*

- *Manganese as Mn: Ground Water sample measurement values of Manganese are ranging from 0.095 to 1.003 mg/L. Highest value of 1.003mg/L is obtained. While the Permissible limit is 0.3 mg/L (IS 10500 standard). UPCL Ash Pond and K.S.Ullooru ground water location sample exceeding the limit and rests of the location sample within the limit.*

- *Selenium as Se: Ground Water sample measurement values of Selenium are ranging from 0.006 to 0.006 mg/L. While the Acceptable limit is 0.01 mg/L (IS 10500 standard).All ground water location samples within the limit.*

- *Zinc as Zn: Ground Water sample measurement values of Zinc are ranging from 0.006 to 3.864 mg/L. Highest value of 3.864mg/L is obtained. While the Permissible limit is 15 mg/L (IS 10500 standard). All ground water location samples within the limit.*

- *Lead as Pb: Ground Water sample measurement values of Lead are ranging from 0.041 to 0.041 mg/L. While the Acceptable limit is 0.01 mg/L (IS 10500 standard). UPCL Ash Pond ground water location sample exceeding the limit and rests of the location sample within the limit.*

- *Nickel as Ni: Ground Water sample measurement values of Nickel are ranging from 0.003 to 0.013 mg/L. Highest value of 0.013mg/L is obtained. While the Acceptable limit is 0.02 mg/L (IS 10500 standard). All ground water location samples within the limit.*

- *Chromium as Cr: Ground Water sample measurement values of Chromium are ranging from 0.003 to 0.005 mg/L. Highest value of 0.005mg/L is obtained. While the Acceptable limit is 0.05 mg/L (IS 10500 standard). All ground water location samples within the limit.*

- *Iron as Fe: Ground Water sample measurement values of Iron are ranging from 0.003 to 0.041 mg/L. Highest value of 0.041mg/L is obtained. While the Acceptable limit is 1.0 mg/L (IS 10500 standard). All ground water location samples within the limit.*

- *Magnesium as Mg: Ground Water sample measurement values of Magnesium are ranging from 2.0 to 56 mg/L. Highest value of 56mg/L is obtained. While the Permissible limit is 100 mg/L (IS 10500 standard). All ground water location samples within the limit.*

- *Silver, Cadmium, Molybdenum and Arsenic metals are below detection limit. All ground water location samples within the limit.*

The levels of heavy metals in the Ground Water were highest for Mg and Al followed by Zn, Mn, Ba and B. In the Ground Water samples, the Mg content ranged from 2 to 56 mg/L, Al ranged from 0.009 to 4.797mg/L, Zn ranged from 0.006 to 3.868 mg/L, Mn ranged from 0.095 to 1.003 mg/L, Ba ranged from 0.053 to 0.38 mg/L, B ranged from 0.015 to 0.104 mg/L. Following heavy metals in the Ground Water were lowest for Cu followed by Fe, Pb, Ni, Se and Cr. In the Ground Water samples, the Cu content ranged from 0.004 to 0.081 mg/L, Fe ranged from 0.003 to 0.041 mg/L, Pb ranged from 0.041 to 0.041 mg/L, Ni ranged from 0.003 to 0.013 mg/L and Se ranged from 0.006 to 0.006 mg/L, Cr ranged from 0.003 to 0.005 mg/L."

59. As regards the sea water impact is concerned, they came to the following conclusion:-

"CONCLUSION:

In Sea water sample collected three locations. The sampling locations are Pump House – Sedimentation Tank, Intake Sea Water and Out Take Sea Water.

- *Zinc as Zn: Sea Water sample measurement values of Zinc are ranging from 0.014 to 0.014 mg/L. Highest value of 0.014mg/L is obtained.*
- *Arsenic, Cadmium, Copper, Chromium, Nickel, Lead, Mercury, Selenium and Hexavalent Chromium metals are below detection limit."*

60. As regards the methodology for measurement of TCLP sampling and analysis, they came to the following conclusion:-

"CONCLUSION:

In TCLP sample collected four locations. The sampling locations are UPCL Coal Yard, UPCL Bottom Ash Bin, UPCL Fly Ash, UPCL Pond Ash.

- *Arsenic as As: Coal and Ash sample measurement values of Arsenic are ranging from 3.51 to 7.29 mg/L. Highest value of 7.29mg/L is obtained. While the Permissible limit is 5.0 mg/L (TCLP standard). UPCL Fly Ash and UPCL Pond Ash Coal and Ash location sample exceeding the limit and rests of the location sample within the limit.*
- *Barium as Ba: Coal and Ash sample measurement values of Barium are ranging from 1.57 to 6.41 mg/L. Highest value of 6.41mg/L is obtained. While the Permissible limit is 100 mg/L (TCLP standard). All location samples within the limit.*
- *Chromium as Cr: Coal and Ash sample measurement values of Chromium are ranging from 0.37 to 3.04 mg/L. Highest value of 3.04mg/L is obtained. While the Permissible limit is 5.0 mg/L (TCLP standard). All location samples within the limit.*
- *Copper as Cu: Coal and Ash sample measurement values of Copper are ranging from 0.12 to 2.96 mg/L. Highest value of 2.96mg/L is obtained.*
- *Cobalt as Co: Coal and Ash sample measurement values of Cobalt are ranging from 0.18 to 1.24 mg/L. Highest value of 1.24mg/L is obtained.*
- *Nickel as Ni: Coal and Ash sample measurement values of Nickel are ranging from 0.2 to 14.35 mg/L. Highest value of 1.24mg/L is obtained.*
- *Zinc as Zn: Coal and Ash sample measurement values of Zinc are ranging from 0.21 to 51.6 mg/L. Highest value of 51.6mg/L is obtained.*
- *Manganese as Mn: Coal and Ash sample measurement values of Manganese are ranging from 11.92 to 26.13 mg/L. Highest value of 26.13mg/L is obtained.*

- Iron as Fe: Coal and Ash sample measurement values of Iron are ranging from 0.81 to 41.2 mg/L. Highest value of 41.2mg/L is obtained.
- Fluoride as F: Coal and Ash sample measurement values of Fluoride are ranging from 0.7 to 27.97 mg/L. Highest value of 27.97mg/L is obtained.
- Cadmium, Lead and Mercury metals are below detection limit. All Coal and Ash location samples within the limit. As per TCLP limit Cd – 1.0 mg/L, Pb- 5.0mg/L, Hg 0.2mg/L.

The levels of heavy metals in the TCLP were highest for Zn and Fe followed by F, Mn and Ni. In the TCLP samples, the Zn content ranged from 0.21 to 51 mg/L, Fe ranged from 0.81 to 41.2, F ranged from 0.7 to 27.97 mg/L, Mn ranged from 11.92 to 26.13 mg/L, Ni ranged from 0.2 to 14.35 mg/L. Following heavy metals in the TCLP were lowest for As followed by Ba, Cr, Cu and Co. In the soil samples, the As content ranged from 3.15 to 7.29 mg/L, Ba ranged from 1.57 to 6.41 mg/L, Cr ranged from 0.37 to 3.04 mg/L, Cu ranged from 0.12 to 2.96 mg/L and Co ranged from 0.18 to 1.24 mg/L."

61. As regards the stack emission dispersion modeling, they came to the conclusion:-

"CONCLUSION

AAQ DAY -1

In Ambient Air Quality monitoring seven sampling locations were identified to assess the GLC of point source emission of Gaseous and Particulate matter. The sampling locations are Top of the fire station, Mudurangadi village, UPCL Sea Water Pump House (Thenka-Yermal Village), Hejamady Village, Inna- Village and Nandikoor Village.

- Sulphur Dioxide as SO₂: Ambient Air Quality measurement values of SO₂ are ranging from 6.7 to 12.4µg/m³. Highest value of 12.4µg/m³ is obtained and however the values are within the NAAQM standards.
- Nitrogen Dioxide as NO₂: Ambient Air Quality values of NO₂ are ranging from 11.7 to 15.5µg/m³. Highest value of 15.5µg/m³ is obtained and however the values are within the NAAQM standards.
- Particulate Matter (PM₁₀): Ambient Air Quality values of PM₁₀ are ranging from 45.5 to 56.6µg/m³. Highest value of 56.6µg/m³ is obtained and however the values are within the NAAQM standards.
- Particulate Matter (PM_{2.5}): Ambient Air Quality values of PM_{2.5} are ranging from 16.4 to 24.2µg/m³. Highest value of 26.4µg/m³ is obtained and however the values are within the NAAQM standards.

AAQ DAY-2

In Ambient Air Quality monitoring seven sampling locations were identified to assess the GLC of point source emission of Gaseous and Particulate matter. The sampling locations are Top of the fire station, Mudurangadi village, UPCL Sea Water Pump House (Thenka-Yermal Village), Hejamady Village, Inna- Village and Nandikoor Village.

- Sulphur Dioxide as SO₂: Ambient Air Quality measurement values of SO₂ are ranging from 7.3 to 13.2µg/m³. Highest value of 13.2µg/m³ is obtained and however the values are within the NAAQM standards.
- Nitrogen Dioxide as NO₂: Ambient Air Quality values of NO₂ are ranging from 9.5 to 14.2µg/m³. Highest value of 14.2µg/m³ is obtained and however the values are within the NAAQM standards.
- Particulate Matter (PM₁₀): Ambient Air Quality values of PM₁₀ are ranging from 49.4 to 58.8µg/m³. Highest value of 58.8µg/m³ is obtained and however the

values are within the NAAQM standards.

- *Particulate Matter (PM_{2.5}): Ambient Air Quality values of PM_{2.5} are ranging from 18.9 to 26.4µg/m³. Highest value of 26.4µg/m³ is obtained and however the values are within the NAAQM standards.*

STACK

In Stack Emission monitoring at thermal boiler both the stacks are not complying for Sulphur Dioxide Concentration of 886mg/Nm³ & 1192mg/Nm³ against the CPCB Emission Limit value of 600mg/Nm³ and rest all the parameters are complying with the CEPCB ELV.

STACK THERMAL BOILER UNIT-I

UPCL Thermal boiler unit-1 emission of Particulate matter concentration is 25.9mg/m³ and dispersed at the effective stack height of 275m (Stack height 275m + Plume Height 3.0m) with exit velocity of 6.5m/sec and the flue gas temperature are 25°C. All the modelling parameters are considered like location, base elevation, stack height, stack diameter, stack gas exit velocity, stack gas exit temperature, and contaminant emission rate. These stacks typically operate on a continuous basis with relatively emission rates. Based on the dispersion parameters the GLC reached at 0.8km at the concentration of 5.64µg/m³ at 2km dispersion Particulate matter is 0.76µg/m³ and at 5km dispersion Particulate matter is 0.00878µg/m³ and the predominant wind direction is WNW.

UPCL Thermal boiler unit-1 emission of Sulphur Dioxide concentration is 679mg/m³ and dispersed at the effective stack height of 275m (Stack height 275m + Plume Height 3.0m) with exit velocity of 6.5m/sec and the flue gas temperature are 25°C. All the modelling parameters are considered like location, base elevation, stack height, stack diameter, stack gas exit velocity, stack gas exit temperature, and contaminant emission rate. These stacks typically operate on a continuous basis with relatively emission rates. Based on the dispersion parameters the GLC reached at 0.83km at the concentration of 149µg/m³ at 2km dispersion Sulphur Dioxide is 2.34µg/m³ and at 5km dispersion Sulphur Dioxide is 0.289µg/m³ and the predominant wind direction is WNW.

UPCL Thermal boiler unit-1 emission of Nitrogen Dioxide concentration is 267mg/m³ and dispersed at the effective stack height of 275m (Stack height 275m + Plume Height 3.0m) with exit velocity of 6.5m/sec and the flue gas temperature are 25°C. All the modelling parameters are considered like location, base elevation, stack height, stack diameter, stack gas exit velocity, stack gas exit temperature, and contaminant emission rate. These stacks typically operate on a continuous basis with relatively emission rates. Based on the dispersion parameters the GLC reached at 0.81km at the concentration of 58.1µg/m³ at 2km dispersion Nitrogen Dioxide is 0.89µg/m³ and at 5km dispersion Nitrogen Dioxide is 0.0989µg/m³ and the predominant wind direction is WNW.

UPCL Thermal boiler unit-1 emission of Carbon monoxide concentration is 75mg/m³ and dispersed at the effective stack height of 275m (Stack height 275m + Plume Height 3.0m) with exit velocity of 6.5m/sec and the flue gas temperature are 25°C. All the modelling parameters are considered like location, base elevation, stack height, stack diameter, stack gas exit velocity, stack gas exit temperature, and contaminant emission rate. These stacks typically operate on a continuous basis with relatively emission rates. Based on the dispersion parameters the GLC reached at 0.77km at the concentration of 100.02µg/m³ at 2km dispersion Carbon monoxide is 1.21µg/m³ and at 5km dispersion Carbon monoxide is 0.123µg/m³ and the predominant wind direction is WNW.

THERMAL BOILER UNIT -II

UPCL Thermal boiler unit-II emission of Particulate matter concentration is 30mg/m³ and dispersed at the effective stack height of 275m (Stack height 275m + Plume Height 3.0m) with exit velocity of 6.8m/sec and the flue gas temperature are 25°C. All the modelling parameters are considered like location, base elevation, stack height, stack diameter, stack gas exit velocity, stack gas exit temperature, and contaminant emission rate. These stacks typically operate on a continuous basis with relatively emission rates. Based on the dispersion parameters the GLC reached at 0.86km at the concentration of 8.1µg/m³ at 2km dispersion Particulate matter is 2.21µg/m³ and at 5km dispersion Particulate matter is 0.24µg/m³ and the predominant wind direction is WNW.

UPCL Thermal boiler unit-1 emission of Sulphur Dioxide concentration is 779mg/m³ and dispersed at the effective stack height of 275m (Stack height 275m + Plume Height 3.0m) with exit velocity of 6.8m/sec and the flue gas temperature are 25°C. All the modelling parameters are considered like location, base elevation, stack height, stack diameter, stack gas exit velocity, stack gas exit temperature, and contaminant emission rate. These stacks typically operate on a continuous basis with relatively emission rates. Based on the dispersion parameters the GLC reached at 0.81km at the concentration of 210µg/m³ at 2km dispersion Sulphur Dioxide is 12.11µg/m³ and at 5km dispersion Sulphur Dioxide is 0.897µg/m³ and the predominant wind direction is WNW.

UPCL Thermal boiler unit-II emission of Nitrogen Dioxide concentration is 341mg/m³ and dispersed at the effective stack height of 275m (Stack height 275m + Plume Height 3.0m) with exit velocity of 6.8m/sec and the flue gas temperature are 25°C. All the modelling parameters are considered like location, base elevation, stack height, stack diameter, stack gas exit velocity, stack gas exit temperature, and contaminant emission rate. These stacks typically operate on a continuous basis with relatively emission rates. Based on the dispersion parameters the GLC reached at 0.76km at the concentration of 91.8µg/m³ at 2km dispersion Nitrogen Dioxide is 14.11µg/m³ and at 5km dispersion Nitrogen Dioxide is 6.76µg/m³ and the predominant wind direction is WNW.

UPCL Thermal boiler unit-1 emission of Carbon monoxide concentration is 70mg/m³ and dispersed at the effective stack height of 275m (Stack height 275m + Plume Height 3.0m) with exit velocity of 6.8m/sec and the flue gas temperature are 25°C. All the modelling parameters are considered like location, base elevation, stack height, stack diameter, stack gas exit velocity, stack gas exit temperature, and contaminant emission rate. These stacks typically operate on a continuous basis with relatively emission rates. Based on the dispersion parameters the GLC reached at 0.84km at the concentration of 18.8µg/m³ at 2km dispersion Carbon monoxide is 0.38µg/m³ and at 5km dispersion Carbon monoxide is 0.0871µg/m³ and the predominant wind direction is WNW.

SOIL

In Soil sample collected ten locations. The sampling locations are Pump House Sea Water Sedimentation Tank -I, Pump House Sea Water Sedimentation Tank -II, Pump House, Hejamady Village, Inna Village, JM Nandikoor Village, Near Fire Station, Madrangdi Village, R & R Adamar Village and K.S.Ullooru.

- Arsenic as As: Soil sample measurement values of Arsenic are ranging from 2.84 to 9.48 mg/kg. Highest value of 9.48mg/kg is obtained.
- Zinc as Zn: Soil sample measurement values of Zinc are ranging from 5.14 to 114.01mg/kg. Highest value of 114.01mg/kg is obtained.
- Cobalt as Co: Soil sample measurement values of Cobalt are ranging from 2.58 to 7.22mg/kg. Highest value of 7.22mg/kg is obtained.
- Molybdenum as Mo: Soil sample measurement values of Molybdenum are ranging from 2.07 to 11.03 mg/kg. Highest value of 11.03mg/kg is obtained.
- Nickel as Ni: Soil sample measurement values of Nickel are ranging from 3.21 to 28.8mg/kg. Highest value of 28.8 mg/kg is obtained.

- Chromium as Cr: Soil sample measurement values of Chromium are ranging from 19.22 to 92.95 mg/kg. Highest value of 92.95 mg/kg is obtained.
- Copper as Cu: Soil sample measurement values of Copper are ranging from 3.58 to 78.35 mg/kg. Highest value of 78.35 mg/kg is obtained.
- Iron as Fe: Soil sample measurement values of Iron are ranging from 5094.5 to 394060.76 mg/kg. Highest value of 394060.76 mg/kg is obtained.
- Lead as Pb: Soil sample measurement values of Lead are ranging from 2.98 to 23.91 mg/kg. Highest value of 23.91 mg/kg is obtained.
- Manganese as Mn: Soil sample measurement values of Manganese are ranging from 15.05 to 271.23 mg/kg. Highest value of 271.23 mg/kg is obtained.
- Antimony , Cadmium , Mercury and Hexavalent Chromium metals are below detection limit.

The levels of heavy metals in the soil were highest for Fe and Mn followed by Zn, Cr and Cu. In the soil samples, the Fe content ranged from 5094.5 to 394060.76 mg/kg dry soil, Mn ranged from 15.05 to 271.23, Zn ranged from 5.14 to 114.01 mg/kg, Cr ranged from 19.22 to 92.95 g/kg and Cu ranged from 3.58 to 78.35 mg/kg. Following heavy metals in the soil were lowest for Ni followed by Pb, Mo, As and Co. In the soil samples, the Ni content ranged from 3.21 to 28.80 mg/kg, Pb ranged from 2.98 to 23.91 mg/kg, Mo ranged from 2.07 to mg/kg, As ranged from 2.98 to 23.91 mg/kg and Co ranged from 3.21 to 28.8 mg/kg.

Ground Water

In Ground Water sample collected ten locations. The sampling locations are Inna Village , Upcl Ash Pond , Jm Nandikoor Village , Hejamady Village , Pump House, K.S.Ullooru ,Mudrangadi Village and R & R Adamar Village.

- Aluminium as Al: Ground Water sample measurement values of Aluminium are ranging from 0.009 to 4.797 mg/L. Highest value of 4.797 mg/L is obtained. While the Permissible limit is 0.2 mg/L (IS 10500 standard). **Pump House ground water location sample exceeding the limit** and rests of the location sample within the limit.
- Barium as Ba: Ground Water sample measurement values of Barium are ranging from 0.053 to 0.38 mg/L. Highest value of 0.38 mg/L is obtained. While the Acceptable limit is 0.7 mg/L (IS 10500 standard). All ground water location samples within the limit.
- Boron as B: Ground Water sample measurement values of Boron are ranging from 0.015 to 0.104 mg/L. Highest value of 0.104 mg/L is obtained. While the Permissible limit is 2.4 mg/L (IS 10500 standard). All ground water location samples within the limit.
- Copper as Cu: Ground Water sample measurement values of Copper are ranging from 0.004 to 0.081 mg/L. Highest value of 0.018 mg/L is obtained. While the Permissible limit is 1.5 mg/L (IS 10500 standard). All ground water location samples within the limit.
- Manganese as Mn: Ground Water sample measurement values of Manganese are ranging from 0.095 to 1.003 mg/L. Highest value of 1.003 mg/L is obtained. While the Permissible limit is 0.3 mg/L (IS 10500 standard). **UPCL Ash Pond and K.S.Ullooru ground water location sample exceeding the limit** and rests of the location sample within the limit.
- Selenium as Se: Ground Water sample measurement values of Selenium are ranging from 0.006 to 0.006 mg/L. While the Acceptable limit is 0.01 mg/L (IS 10500 standard). All ground water location samples within the limit.

- *Zinc as Zn: Ground Water sample measurement values of Zinc are ranging from 0.006 to 3.864 mg/L. Highest value of 3.864mg/L is obtained. While the Permissible limit is 15 mg/L (IS 10500 standard). All ground water location samples within the limit.*
- *Lead as Pb: Ground Water sample measurement values of Lead are ranging from 0.041 to 0.041 mg/L. While the Acceptable limit is 0.01 mg/L (IS 10500 standard). **UPCL Ash Pond ground water location sample exceeding the limit** and rests of the location sample within the limit.*
- *Nickel as Ni: Ground Water sample measurement values of Nickel are ranging from 0.003 to 0.013 mg/L. Highest value of 0.013mg/L is obtained. While the Acceptable limit is 0.02 mg/L (IS 10500 standard). All ground water location samples within the limit.*
- *Chromium as Cr: Ground Water sample measurement values of Chromium are ranging from 0.003 to 0.005 mg/L. Highest value of 0.005mg/L is obtained. While the Acceptable limit is 0.05 mg/L (IS 10500 standard). All ground water location samples within the limit.*
- *Iron as Fe: Ground Water sample measurement values of Iron are ranging from 0.003 to 0.041 mg/L. Highest value of 0.041mg/L is obtained. While the Acceptable limit is 1.0 mg/L (IS 10500 standard). All ground water location samples within the limit.*
- *Magnesium as Mg: Ground Water sample measurement values of Magnesium are ranging from 2.0 to 56 mg/L. Highest value of 56mg/L is obtained. While the Permissible limit is 100 mg/L (IS 10500 standard). All ground water location samples within the limit.*
- *Silver, Cadmium, Molybdenum and Arsenic metals are below detection limit. All ground water location samples within the limit.*

The levels of heavy metals in the Ground Water were highest for Mg and Al followed by Zn, Mn, Ba and B. In the Ground Water samples, the Mg content ranged from 2 to 56 mg/L, Al ranged from 0.009 to 4.797mg/L, Zn ranged from 0.006 to 3.868 mg/L, Mn ranged from 0.095 to 1.003 mg/L, Ba ranged from 0.053 to 0.38 mg/L, B ranged from 0.015 to 0.104 mg/L. Following heavy metals in the Ground Water were lowest for Cu followed by Fe, Pb, Ni, Se and Cr. In the Ground Water samples, the Cu content ranged from 0.004 to 0.081 mg/L, Fe ranged from 0.003 to 0.041 mg/L, Pb ranged from 0.041 to 0.041 mg/L, Ni ranged from 0.003 to 0.013 mg/L and Se ranged from 0.006 to 0.006 mg/L, Cr ranged from 0.003 to mg/L.

Sea water

In Sea water sample collected three locations. The sampling locations are Pump House –Sedimentation Tank, Intake Sea Water and Out Take Sea Water.

- *Zinc as Zn: Sea Water sample measurement values of Zinc are ranging from 0.014 to 0.014 mg/L. Highest value of 0.014mg/L is obtained.*
- *Arsenic, Cadmium, Copper, Chromium, Nickel, Lead, Mercury, Selenium and Hexavalent Chromium metals are below detection limit.*

TCLP

In TCLP sample collected four locations. The sampling locations are UPCL Coal Yard, UPCL Bottom Ash Bin, UPCL Fly Ash, UPCL Pond Ash.

- *Arsenic as As: Coal and Ash sample measurement values of Arsenic are ranging from 3.51 to 7.29 mg/L. Highest value of 7.29mg/L is obtained. While the Permissible limit is 5.0 mg/L (TCLP standard). **UPCL Fly Ash and UPCL Pond Ash Coal and Ash location sample exceeding the limit and rests of the location sample within the limit.***
- *Barium as Ba: Coal and Ash sample measurement values of Barium are ranging from 1.57 to 6.41 mg/L. Highest value of 6.41mg/L is obtained. While the Permissible limit is 100 mg/L (TCLP standard). All location samples within the limit.*
- *Chromium as Cr: Coal and Ash sample measurement values of Chromium are ranging from 0.37 to 3.04 mg/L. Highest value of 3.04mg/L is obtained. While the Permissible limit is 5.0 mg/L (TCLP standard). All location samples within the limit.*
- *Copper as Cu: Coal and Ash sample measurement values of Copper are ranging from 0.12 to 2.96 mg/L. Highest value of 2.96mg/L is obtained.*
- *Cobalt as Co: Coal and Ash sample measurement values of Cobalt are ranging from 0.18 to 1.24 mg/L. Highest value of 1.24mg/L is obtained.*
- *Nickel as Ni: Coal and Ash sample measurement values of Nickel are ranging from 0.2 to 14.35 mg/L. Highest value of 1.24mg/L is obtained.*
- *Zinc as Zn: Coal and Ash sample measurement values of Zinc are ranging from 0.21 to 51.6 mg/L. Highest value of 51.6mg/L is obtained.]*
- *Manganese as Mn: Coal and Ash sample measurement values of Manganese are ranging from 11.92 to 26.13 mg/L. Highest value of 26.13mg/L is obtained.*
- *Iron as Fe: Coal and Ash sample measurement values of Iron are ranging from 0.81 to 41.2 mg/L. Highest value of 41.2mg/L is obtained.*
- *Fluoride as F: Coal and Ash sample measurement values of Fluoride are ranging from 0.7 to 27.97 mg/L. Highest value of 27.97mg/L is obtained.*
- *Cadmium, Lead and Mercury metals are below detection limit. All Coal and Ash location samples within the limit. As per TCLP limit Cd – 1.0 mg/L, Pb- 5.0mg/L, Hg- 0.2mg/L.*

The levels of heavy metals in the TCLP were highest for Zn and Fe followed by F, Mn and Ni. In the TCLP samples, the Zn content ranged from 0.21 to 51 mg/L, Fe ranged from 0.81 to 41.2, F ranged from 0.7 to 27.97 mg/L, Mn ranged from 11.92 to 26.13 mg/L, Ni ranged from 0.2 to 14.35 mg/L. Following heavy metals in the TCLP were lowest for As followed by Ba, Cr, Cu and Co. In the soil samples, the As content ranged from 3.15 to 7.29 mg/L, Ba ranged from 1.57 to 6.41 mg/L, Cr ranged from 0.37 to 3.04 mg/L, Cu ranged from 0.12 to 2.96 mg/L and Co ranged from 0.18 to 1.24 mg/L.”

62. The Project Proponent has filed their objection to the same.

63. As regards the impact of carrying capacity and how far that will have to be taken into account while considering the application for grant of Environmental Clearance etc. are within the domain of MoEF&CC. The MoEF&CC has to consider the carrying capacity study conducted by the

agency appointed by the Government of Karnataka in respect of the project proponent and on that basis, they will have to issue additional ToR for conducting further Impact Assessment Study including the Carrying Capacity Study will have to be conducted by an accredited agency who are expected to prepare the EIA Report of the probable impact and remedial measures to be taken for the proposed expansion project of the UPCL and that matter has to be independently considered by the MoEF&CC.

64. The ToR must also includes a study to be conducted on socio-economic conditions on account of the expansion of the project and the past violations and its impact on the nearby agricultural lands and what is the nature of remedial measures to be taken applying the "*Precautionary Principle*" while preparing Environment Management Plan and to remedy the situation and those aspects will have to be properly appreciated by the EAC and if any further study will have to be conducted, if there are not satisfied with the EIA Report prepared, then they will have to call for further report, and thereafter properly appraise the same as contemplated under Stage - IV of the EIA Notification, 2006 as amended from time to time and thereafter, they will have to take a decision as to whether the expansion has to be allowed or not. applying the "*Precautionary Principle*" and "*Sustainable Development*" and impact on environment on account of such expansion and if it is decided to recommend the project, then what are all the additional conditions to be imposed by providing such recommendations which are necessary for the purpose of protecting environment.

65. As regards the impact on agricultural produce is concerned, both the Committee who conducted the carrying capacity study and also the modified Expert Committee appointed by this Tribunal have recommended that a further detailed study will have to be conducted in this regard and thereafter, necessary provisions will have to be made for compensating the farmers, if their activities are affected on account of the operation of M/s. UPCL. So, for that purpose, we appoint a Joint Committee comprising of (i) District Magistrate/Deputy Commissioner

of Udupi District or his nominee not below the rank of Assistant Collector/Sub Divisional Magistrate, (ii) Director of Agriculture and Horticulture or his nominee not below the rank of Deputy Director of Agriculture and Horticulture and (iii) a Senior Scientist from the Integrated Regional Office, CPCB, Bangalore to conduct a detailed study after getting details from the farmers whose lands are situated within 10 Kms of the project area and if there is any impact of the agriculture produce on account of the past act, and also future, assess the compensation and recover the amount from M/s. UPCL and disburse the amount to the affected farmers in proportion to the damage (if any) caused to their agricultural activity results in loss of agricultural produce.

66. So under such circumstances, we feel that the above cases can be disposed with the following directions:-

- a. M/s. UPCL shall pay an environmental compensation of **Rs.52,02,50,000/- (Rupees Fifty Two Crores Two Lakhs and Fifty Thousand only)** for the damage caused to the environment on account of the violation of conditions and directions issued and health impact in that area and the amount of **Rs.5,00,00,000/- (Rupees Five Crores only)** already deposited by them can be given credit to this and they need to pay the balance amount to the Central Pollution Control Board within a period of three months. If the amount is not paid within three months, then the Central Pollution Control Board is directed to recover the amount from M/s. UPCL in accordance with law.
- b. The MoEF&CC is directed to consider the carrying capacity study report submitted before this Tribunal by the State of Karnataka which was conducted through the Environmental Management and Policy Research Institute, Department of Forest, Ecology and Environment, Government of Karnataka and that must be forwarded to the Expert Appraisal Committee (EAC) and the Expert Appraisal Committee (EAC) after considering the same, issue further/additional ToR

incorporating the studies to be conducted on the basis of the recommendations made by the modified Expert Committee appointed by this Tribunal and also the carrying capacity study report submitted by the State of Karnataka and direct the project proponent to conduct a detailed EIA Study through an accredited agency and submit a report along with the application for grant of Environmental Clearance for expansion on the basis of the observations made by this Tribunal in this Judgment and Judgment dated 14.03.2019 and thereafter, on receipt of such EIA Report, the same be forwarded to the EAC by the MoEF&CC and thereafter, considering the same, the EAC shall make proper appraisal as contemplated under Stage - IV of EIA Notification, 2006 and if they decided to recommend the project, then recommend by incorporating the conditions which are required for the purpose of protecting environment applying the principle of "*Precautionary Principle*" and "*Sustainable Development*" and its impact on environment and the remedial measures to be taken in this regard.

- c. We are appointing a Joint Committee comprising of (i) District Magistrate/Deputy Commissioner of Udupi District or his nominee not below the rank of Assistant Collector/Sub Divisional Magistrate, (ii) Director of Agriculture and Horticulture or his nominee not below the rank of Deputy Director of Agriculture and Horticulture and (iii) a Senior Scientist from the Integrated Regional Office, CPCB, Bangalore to conduct a detailed study regarding the impact of activities of M/s. UPCL on nearby agricultural lands within 10 Km radius after collecting necessary details from the individual farmers, and after analyzing the soil, water and air quality in that area and deposit of black particles noticed at the time of inspection by the Expert Team who conducted the Carrying Capacity Study and if they came to the conclusion that there is any possibility of damage being caused to the agricultural produce resulted in loss of agricultural income to the individual farmers, then they are

directed to assess the compensation and recover the amount from M/s. UPCL and disburse the same to the affected farmers in proportion to the loss sustained by them. A representative from M/s. UPCL may also be permitted to participate when enquiry is being conducted by the Committee appointed by the Tribunal in this regard before making the assessment.

- d. The Central Pollution Control Board and the Karnataka State Pollution Control Board are directed to conduct periodical monitoring of activities of M/s. UPCL in respect of maintaining pollution control mechanism to arrest the air, soil and water pollution and monitor the efficiency of the mechanism provided to control the stack emission and dust emissions due to handling of coal and fly ash generated and if there is any deficiency found, then they are directed to take appropriate legal action including imposition of environmental compensation and directing other remedial measures to be taken by M/s. UPCL in this regard to improve the situation in accordance with law, after providing an opportunity to explain the deficiencies and imposition of environmental compensation to the project proponent.
- e. If the environmental compensation is recovered from M/s. UPCL within the time specified by this Tribunal, then the Integrated Regional Office, CPCB, Bangalore and the Karnataka State Pollution Control Board in consultation with the District Magistrate are directed to evolve a scheme for providing necessary environmental infrastructure improvement (water supply, sewage, STP, Solid Waste Management, Health facility and Skill development programs) in this area by taking 50% of the compensation recovered and implementation of the same must be monitored by the District Magistrate/Deputy Commissioner.
- f. The Committee must also act as 'Grievance Redressal Committee', addressing the environmental damage related complaints coming in that area and provide necessary redressal mechanism and that must be carried by M/s. UPCL. The

'Grievance Redressal Committee' also should include a representative from M/s. UPCL and the President/Chairman of the respective local body in that area, so that the public grievance can be properly addressed and permanent redressal mechanism can be provided to meet the situation.

- g. The Central Pollution Control Board and the Karnataka State Pollution Control Board are directed to ascertain as to whether the tampering of OCEMS readings as stated in their report is rectified and they are also directed to take appropriate legal action against the officials of M/s. UPCL in accordance with law, which may include initiation of prosecution and imposition of additional compensation for that purpose in lieu of prosecution.
- h. The Central Pollution Control Board and the Karnataka State Pollution Control Board are also directed to consider the question of directing M/s. UPCL to adopt Zero Liquid Discharge (ZLD) System and avoid marine discharge to protect marine environment, as there is a possibility of breach/ leak as there was certain observation made by the Committee that certain aquatic life in ecologically sensitive areas is being affected on account on the same.
- i. The right of the applicant to approach this Tribunal for future violation or future pollution related issues caused on account of the operation of M/s. UPCL is left open.
- j. The outcome of the decision making process by the MoEF&CC on consideration of granting of Environmental Clearance for the expansion proposal of M/s. UPCL is subject to the right of the parties to challenge, if they are aggrieved and that right is also left open.

67. The points are answered accordingly.

68. In the result, all the Original Applications and Appeals are finally disposed of with the following directions:-

(i) M/s. UPCL shall pay an environmental compensation of **Rs.52,02,50,000/- (Rupees Fifty Two Crores Two Lakhs and Fifty Thousand only)** for the damage caused to the environment on account of the violation of conditions and directions issued and health impact in that area and the amount of **Rs.5,00,00,000/- (Rupees Five Crores only)** already deposited by them can be given credit to this and they need to pay the balance amount to the Central Pollution Control Board within a period of three months. If the amount is not paid within three months, then the Central Pollution Control Board is directed to recover the amount from M/s. UPCL in accordance with law.

(ii) The MoEF&CC is directed to consider the carrying capacity study report submitted before this Tribunal by the State of Karnataka which was conducted through the Environmental Management and Policy Research Institute, Department of Forest, Ecology and Environment, Government of Karnataka and that must be forwarded to the Expert Appraisal Committee (EAC) and the Expert Appraisal Committee (EAC) after considering the same, issue further/additional ToR incorporating the studies to be conducted on the basis of the recommendations made by the modified Expert Committee appointed by this Tribunal and also the carrying capacity study report submitted by the State of Karnataka and direct the project proponent to conduct a detailed EIA Study through an accredited agency and submit a report along with the application for grant of Environmental Clearance for expansion on the basis of the observations made by this Tribunal in this Judgment and Judgment dated 14.03.2019 and thereafter, on receipt of such EIA Report, the same be forwarded to the EAC by the

MoEF&CC and thereafter, considering the same, the EAC shall make proper appraisal as contemplated under Stage - IV of EIA Notification, 2006 and if they decided to recommend the project, then recommend by incorporating the conditions which are required for the purpose of protecting environment applying the principle of "Precautionary Principle" and "Sustainable Development" and its impact on environment and the remedial measures to be taken in this regard.

(iii) We are appointing a Joint Committee comprising of (i) District Magistrate/Deputy Commissioner of Udupi District or his nominee not below the rank of Assistant Collector/Sub Divisional Magistrate, (ii) Director of Agriculture and Horticulture or his nominee not below the rank of Deputy Director of Agriculture and Horticulture and (iii) a Senior Scientist from the Integrated Regional Office, CPCB, Bangalore to conduct a detailed study regarding the impact of activities of M/s. UPCL on nearby agricultural lands within 10 Km radius after collecting necessary details from the individual farmers, and after analyzing the soil, water and air quality in that area and deposit of black particles noticed at the time of inspection by the Expert Team who conducted the Carrying Capacity Study and if they came to the conclusion that there is any possibility of damage being caused to the agricultural produce resulted in loss of agricultural income to the individual farmers, then they are directed to assess the compensation and recover the amount from M/s. UPCL and disburse the same to the affected farmers in proportion to the loss sustained by them. A representative from M/s. UPCL may also be permitted to participate when enquiry is being conducted by the Committee appointed by the Tribunal in this regard before making the assessment.

- (iv) The Central Pollution Control Board and the Karnataka State Pollution Control Board are directed to conduct periodical monitoring of activities of M/s. UPCL in respect of maintaining pollution control mechanism to arrest the air, soil and water pollution and monitor the efficiency of the mechanism provided to control the stack emission and dust emissions due to handling of coal and fly ash generated and if there is any deficiency found, then they are directed to take appropriate legal action including imposition of environmental compensation and directing other remedial measures to be taken by M/s. UPCL in this regard to improve the situation in accordance with law, after providing an opportunity to explain the deficiencies and imposition of environmental compensation to the project proponent.
- (v) If the environmental compensation is recovered from M/s. UPCL within the time specified by this Tribunal, then the Integrated Regional Office, CPCB, Bangalore and the Karnataka State Pollution Control Board in consultation with the District Magistrate are directed to evolve a scheme for providing necessary environmental infrastructure improvement (water supply, sewage, STP, Solid Waste Management, Health facility and Skill development programs) in this area by taking 50% of the compensation recovered and implementation of the same must be monitored by the District Magistrate/Deputy Commissioner.
- (vi) The Committee must also act as 'Grievance Redressal Committee', addressing the environmental damage related complaints coming in that area and provide necessary redressal mechanism and that must be carried by M/s. UPCL. The 'Grievance Redressal Committee' also should include a representative from M/s. UPCL and the

President/Chairman of the respective local body in that area, so that the public grievance can be properly addressed and permanent redressal mechanism can be provided to meet the situation.

(vii) The Central Pollution Control Board and the Karnataka State Pollution Control Board are directed to ascertain as to whether the tampering of OCEMS readings as stated in their report is rectified and they are also directed to take appropriate legal action against the officials of M/s. UPCL in accordance with law, which may include initiation of prosecution and imposition of additional compensation for that purpose in lieu of prosecution.

(viii) The Central Pollution Control Board and the Karnataka State Pollution Control Board are also directed to consider the question of directing M/s. UPCL to adopt Zero Liquid Discharge (ZLD) System and avoid marine discharge to protect marine environment, as there is a possibility of breach/leak as there was certain observation made by the Committee that certain aquatic life in ecologically sensitive areas is being affected on account on the same.

(ix) The right of the applicant to approach this Tribunal for future violation or future pollution related issues caused on account of the operation of M/s. UPCL is left open.

(x) The outcome of the decision making process by the MoEF&CC on consideration of granting of Environmental Clearance for the expansion proposal of M/s. UPCL is subject to the right of the parties to challenge, if they are aggrieved and that right is also left open.

(xi) Considering the circumstances, parties are directed to bear their respective costs in the Original Applications and Appeals.

(xii) The Registry is directed to communicate this order to the official respondents, SPCB, CPCB, the District Magistrate/Deputy Commissioner - Udupi District, Director of Agriculture and Horticulture, Principal Secretary for Environment and the Chief Secretary to Government, State of Karnataka for their information and compliance of directions.

(xiii) The Registry is also directed to forward the copy of all the reported submitted by Expert Committee appointed by this Tribunal and the report of Carrying Capacity Study conducted by the State of Karnataka to the MoEF&CC for their consideration as directed by this Tribunal in this Judgment while considering the application for granting Environmental Clearance for expansion proposal of M/s. UPCL and for compliance of directions issued by this Tribunal in this regard.

69. With the above observations and directions, all these Original Applications and Appeals are finally disposed of.

Sd/-
Justice K. Ramakrishnan, JM

Sd/-
Dr. Satyagopal Korlapati, EM

Sd/-
Dr. Vijay Kulkarni, EM

O.A. Nos.26 to 28/2013 (SZ),
Appeal No.51/2012, 86/2017 (SZ)
31st May 2022. Mn.