

BEFORE THE NATIONAL GREEN TRIBUNAL**WESTERN ZONE BENCH AT PUNE****APPEAL 35/2020****IN THE MATTER OF**

Kheti Vikas Seva Trust

..... Appellant

Versus

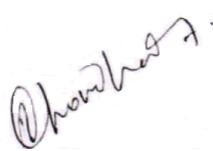
M/s Adani Enterprises Ltd. and Ors.

..... Respondents

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THROUGH


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BEFORE THE NATIONAL GREEN TRIBUNAL**WESTERN ZONE BENCH AT PUNE****APPEAL 35/2020****IN THE MATTER OF:**

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**REJOINDER ON BEHALF OF APPELLANT- KHETI VIKAS SEVA TRUST IN
REPUDIATION TO THE REPLY AFFIDAVIT FILED BY THE RESPONDENT
NO.1 DATED 12.11.2020****MOST RESPECTFULLY SHOWETH:**

1. That the above titled Appeal has been filed under Section 16 of the National Green Tribunal Act, 2010 challenging the legality and correctness of the Environment Clearance dated 8.05.2020 granted to Respondent No. I, Adani Enterprises Ltd ('AEL'), by MoEF&CC for the Greenfield Copper Refinery Plant of 1.0 MTPA (hereinafter referred to as 'impugned project') in villages Siracha, Navinal in Mundra Taluka, Kutch District, Gujarat.
2. That the instant rejoinder is being filed in response to the Reply of the Respondent No.1, ie., M/s Adani Enterprises Ltd. That at the outset, the Appellant denies each and every statement made by the said Respondent unless specifically admitted or is part of the record. The Appellant reiterates all the facts and submissions made in the present Appeal to be true and correct and the same may be read as part of the instant rejoinder and are not all being repeated for the sake of brevity.

3. That the Respondent No.1, Adani Enterprises Ltd. ('AEL') has raised the following objections in their Reply Affidavit –

- i. AEL has alleged on **Para 18, Pg 362**, that the present Appeal has been filed without any *locus standi* under Section 16 of the National Green Tribunal Act, 2010;
- ii. AEL has alleged as on **Para 18, Pg 363**, that the Appellant has previously filed baseless cases against Adani Group of Companies;
- iii. AEL has alleged as on **Para 20, Pg 365**, that there is discrepancy in date of signature in the verification clause of the Appeal, and the date of filing of the said appeal;
- iv. AEL has alleged, as on **Paras 31-32, Pgs. 373-376**, that the specific Terms of Reference ('ToR') Nos. 4(xii) and 6(iv) are Generic Terms of Reference and are not applicable to the impugned project;
- v. AEL has alleged as on **Para 35, Pg 380** that the Cumulative Impact Assessment has been done in Chapter 4 of the EIA Report;
- vi. AEL has alleged as on **Para 50, Pg 399**, that there cannot be comparisons made between Air Quality Reports of closely situated thermal power plants and Air Quality Report contained in the impugned EIA Report;
- vii. AEL has alleged as on **Para 26, Pg 368**, that the pictures of trees annexed by the Appellant as ANNEXURE A-3 are outside the project area;
- viii. AEL has alleged as on **Para 31 Pg 374**, that the since the APSEZ has applied for forest clearance, that there does not arise question of agitating grievances pertaining to any matter related to forest diversion in the present Appeal;
- ix. AEL has alleged as on **Para 37, Pg 382** that the project will operate on Zero Waste Liquid Discharge concept to mitigate water

pollution and Secured Landfill to mitigate impact on soil and groundwater.

ON LOCUS STANDI

4. The Appellant is an organization working for the interests of farmers situated in the Kutch Region of Gujarat. However, AEL has submitted on **Para 18, Pg 362**, that the present Appeal has been filed without any *locus standi* under Section 16 of the National Green Tribunal Act, 2010, as the Appellant is not aggrieved by the impugned EC. That however, such submissions are untenable owing to a plethora of judgments passed by the Hon'ble Supreme Court, as well as by this Hon'ble Tribunal, which have expanded the scope of 'aggrieved person' as under Section 16. That this Hon'ble Tribunal has held in the case of *Save Mon Region Federation and Anr. V Union of India (Appeal No. 39 of 2012)* vide order dated 14.03.2013 as follows:

"18. Law gives a right to 'any person' who is 'aggrieved' by an order to prefer an appeal. The term 'any person' has to be widely construed. It is to include all legal entities so as to enable them to prefer an appeal, even if such an entity does not have any direct or indirect interest in a given project. The expression 'aggrieved', again, has to be construed liberally. The framers of law intended to give the right to any person aggrieved, to prefer an appeal without any limitation as regards his locus or interest. The grievance of a person against the Environmental Clearance may be general and not necessarily person specific. This provision of Section 16 requires communication of the order to such person(s)."

5. It is submitted that notwithstanding the above judgment, the Appellant organization has been dedicated to working towards the needs of agriculturalists in the Kutch region of Gujarat, and as the impugned project is likely to affect grazing lands belonging to said agriculturalists, the Appellant organization is well within the scope of 'aggrieved person' as under Section 16 of the National Green Tribunal Act, 2010.

LIS PREVIOUSLY FILED BY APPELLANT

6. AEL has further alleged as on **Para 18, Pg 363**, that the Appellant has previously filed baseless cases against Adani Group of Companies with a view to harass. However, it is submitted that the Appellant has

previously filed only two Public Interest Litigations in the Hon'ble High Court of Gujarat viz., W.P. PIL No. 12 of 2011 and W.P. PIL No. 199 of 2014 against Adani Ports Special Economic Zone Ltd. and Adani Power Ltd. owing to various environmental violations being caused by such companies in the Kutch region of Gujarat.

7. Furthermore, it is denied that such cases were baseless and with a view to harass. It is submitted that AEL has adduced no evidence on record in furtherance of such claims. In fact, the Hon'ble High Court of Gujarat took cognizance of the allegations raised in W.P. PIL No. 12 of 2011, and thereby was pleased to direct the constitution of a committee under the Chairmanship of Ms. Sunita Narain to examine the allegations and submit a report. That as per final order dated 17.04.2015 in W.P. PIL No. 12 of 2011, the Hon'ble High Court of Gujarat has observed the following:

*"36. An additional reply affidavit on behalf of Ministry of Environment and Forest has been filed by Mr.Thirunavukkarasu, Deputy Director, Ministry of Environment and Forest, Government of India, stating that in compliance of the order dated 3.7.2013 passed by this Court, they have constituted a committee under the Chairmanship of Ms.Sunitha Narain to examine the allegations and to submit a report. **The Committee has submitted its report on 18.4.2013. The report has pointed out serious violations** and made recommendations for effective deterrence for non-compliance and remedial measures which includes creation of an Environment Restoration Fund, mangrove conservation, strengthening the monitoring abilities, preservation of the creeks, maintenance of inter-tidal action, fly ash management and disposal, lining of intake and outfall channels, ground water quality monitoring, CSR activities for fishermen and cancellation of North Port project etc. **The recommendations of the Committee have been accepted by the Ministry of Environment and Forest, Government of India, New Delhi.**"*

(emphasis supplied)

8. Therefore, W.P. PIL No. 12 of 2011 cannot be said to allege baseless claims. With regards to W.P. PIL No. 199 of 2014, the Hon'ble High Court of Gujarat vide final order dated 8.12.2014 have refrained from adjudicating on the merits of the case and held that efficacious remedy under the provisions of the National Green Tribunal are to be sought instead. The Hon'ble High Court accordingly held:

*"7. We, however, make it clear that as the petitioners have efficacious remedy under the provisions of the aforesaid Act as well as before the Ministry of Environment and Forest, **we have not entered into the merits of the case.** The petitioners shall be at liberty to avail remedy in accordance with law."*

(emphasis supplied)

Copies of the orders of the Hon'ble High Court of Gujarat in W.P. PIL No. 12 of 2011 dated 17.04.2015 and in W.P. PIL No. 199 of 2014 dated 8.12.2014 are collectively annexed herewith as **ANNEXURE A-9.**

9. Thus, it is patently evident that the allegations raised by the Appellant against APSEZ and Adani Power Ltd. in both Public Interest Litigations above mentioned were not baseless allegations or filed with an aim to harass.

ON THIRD PARTY DRIVING THE PROCEEDINGS

10. AEL submits on **Para 20, Pg 365**, that there is discrepancy in date of signature in the verification clause of the Appeal, and the date of filing of the said appeal. AEL therefore contends that such is an indication of a third party driving the proceedings and that the Appellant has merely lent his name to institute the said appeal. However, such is in direct contradiction to their own stand as previously mentioned, wherein AEL has claimed that the Appellant has personal animosity against Adani Group and has been instituting various frivolous petitions.

11. That the Appellant submits that the discrepancy in date of signature in verification clause of the Appeal and date of filing of the Appeal is owing to minor modifications that were required to be made prior to filing. That the Appellant has signed and authorized all documents, including the present Rejoinder, having full knowledge of the contents therein.

ON COMPLIANCE OF TERMS OF REFERENCE

12. The Appellant had previously submitted that AEL has not carried out various environment studies as per the ToR No. 4(xii) pertaining to 'Resettlement and Rehabilitation' and ToR No. 6(iv) mandating 'Baseline data gathering of Surface Water quality of nearby rivers'. In response, AEL has merely submitted, as on **Paras 31-32, Pgs. 373-376**, that the

specific Terms of Reference ('ToR') Nos. 4(xii) and 6(iv) are Generic Terms of Reference and are not applicable to the impugned project. That no further response has been provided by AEL on the subject. That the non-compliance of ToR Nos. 4(xii) and 6(iv) is discussed in detail below:

ToR No. 6(iv) Mandating Baseline Data of Surface Water Analysis

13. It is submitted that ToR No. 6(iv) states that "*Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines*" is to be assessed *inter alia* so that there is sufficient Baseline Data to measure present and future pollution. However, in direct violation of such condition, AEL has only analysed surface water quality at 4 locations, and justified such by stating, as on **Para 32, Pg 375**, that there are only 4 available locations within the project site area.

14. The Appellant denies that there are only 4 available locations within the project site area. It is submitted that such submission by AEL is a blatant misrepresentation as the Form-I and EIA Report clearly state that there are at least 5 water bodies within a 10 kms radius of the project site, not including Dhaneshwari river which flows through the project site.

15. That Form-I as annexed by AEL on **pg 431** clearly states how there are at least 5 water bodies within 10 kms radius, which include Kotdi Creek(0.5 km, S), Khari Nadi (1.9 km, W), Gulf of Kachchh (3.9 km, S), Nagavanti Nadi (4.7 km, E) and Phot Nadi (8.7 km, ENE). Therefore, the submission of AEL regarding only 4 available water sampling locations is *prima facie* untenable.

16. That notwithstanding such, it is patently evident that ToR No. 6(iv) specifically provides for the manner and locations of sampling, i.e., upstream, downstream, and on the project site. As per EIA Report on **Pg 585**, Table 3.7.1 clearly indicates that direction of 3 of 4 surface water locations analysed is in the Southern Direction of the project site, while 1

is in East South East Direction of the project site; therefore, it is evident that guidelines for collection of surface water samples not been adhered to while preparing EIA Report, and no justification for violation of procedure prescribed is provided by AEL.

17. That AEL has further sought to misdirect this Hon'ble Tribunal by stating as on **Para 32, Pg 375** that *"identification of a surface water sampling location depends on (i) the density of surface drainage in the study area and (ii) availability of surface water source."*

18. However, AEL has submitted no proof that such metrics are mandated by CPCB or MoEFCC. It is submitted that such a stand is in contravention to the Technical Guidance Manual for Metallurgical Industries, which clearly states in Annexure VII 'Guidance for Assessment of Baseline Components and Attributes' that:

"Monitoring locations should include up-stream, on site, down stream of proposed discharge points. Besides sampling should cover width of the river in case water quality modeling is proposed. Standard methodology for collection of surface water (BIS Standards). At least one grab sample per location per season"

19. Thus, the Technical Guidance Manual in no way, shape or form mentions conditions for water sampling as have been alleged and relied on by AEL. Copy of the relevant extracts of the Technical Guidance Manual for Metallurgical Industries is annexed herewith as **ANNEXURE A-10**.

20. It is submitted that water pollution is a grave concern in the area, as has been noted by the Sunita Narain Committee, as well as in the in the EIA Report itself. It is submitted that EIA Report in Chapter 7.0 titled IMPACT OF PROPOSED PROJECT ON WATER REGIME AND MITIGATION MEASURES on **Para 7.3 Pg 330**, states:

"TDS of Moti Khakhar, Desalpar and Siracha (2660.7 mg/l to 3322.3 mg/l), Total Hardness of Siracha (659.9 mg/l), Chlorides of Siracha (1321.6 mg/l), Sulphates of Moti Khakhar (486.5 mg/l), Manganese of Siracha (0.36 mg/l) and Iron of Jarpara (0.31 mg/l) samples show higher values than permissible limits."

21. In this context, it is clear that there has been concealment of vital information regarding water pollution levels which is material to appraisal of the project.

ToR No. 4 (xii) Mandating Resettlement and Rehabilitation Policy

22. It is submitted that ToR No. 4 (xii) specifically mandates that "*R&R details in respect of land in line with state Government Policy*" be provided by the project proponent. The Appellant submitted that such has not been done by AEL. In response thereto, however, AEL has merely stated that Adani Ports Special Economic Zone Ltd. ('APSEZ'), has applied for Stage-I Forest Clearance for diversion of 1576.81 ha. of forest land (which includes 102.39 ha. for impugned project), therefore grievances regarding Resettlement and Rehabilitation exclusively pertain to such Forest land diversion, and AEL is not required to address them.

23. However, such a stand is in willful and criminal ignorance of the submissions made during the Public Hearing for the impugned project, as were recorded by the Appellant as on Para 10, **Pg 14**, which clearly elucidate that the nearby villagers of Siracha and Navinal are reliant on the 102.39 ha. of forest land for grazing purposes.

24. That as the ToR specifically mandated for a policy to be evolved regarding Resettlement and Rehabilitation, AEL cannot avoid responsibility merely by outsourcing the forest clearance to another legal entity belonging to the same Adani group of companies, as the ToR were conferred upon AEL and not APSEZ.

ON CUMULATIVE IMPACT ASSESSMENT

25. The Appellant had submitted that the EIA Report does not carry out Cumulative Impact Assessment ('CIA') as mandated by ToR 7(i) and in the manner prescribed by the Technical Guidelines for Metallurgical Industries, as well as per the orders of this Hon'ble Tribunal. In response, AEL has submitted as on **Para 35, Pg 380** that the CIA has

been done in Chapter 4 of the EIA Report. However, the only cumulative assessment undertaken in Chapter 4 is on Table 4.6 **Pg 625**, wherein the cumulative Ground Level Concentrations 'GLCs' (24 hourly) have been analysed for impugned Project and closely situated Cement Grinding Unit of M/s ACL.

26. However, the cumulative impact caused by operations and emissions arising out of closely situated Coastal Gujarat Power Ltd ('CGPL') Power Plant of 5x800MW and Adani Power Ltd. thermal power plant of 4620 MW have not been analysed whatsoever.

27. The AEL has itself admitted as on Point No. 9.4 of Form-I that *'Existing Coastal Gujarat Power Ltd (CGPL) (5x800 MW), Adani Power Limited (4620 MW) and proposed Copper Smelter plant will have cumulative effect. Cumulative impact assessment will be included in the detailed EIA study.'*

28. However, a detailed CIA which factors in the impacts generated by CGPL 5x800 MW Power Plant and Adani Power Ltd. 4620 MW Power Plants has not been carried out in Chapter 4 of the EIA Report. That such omission is a direct violation of ToR 7(i) which explicitly states that *"Cumulative impact of **all sources of emissions** (including transportation) on the AAQ of the area shall be well assessed"*.

29. It is submitted that Cumulative Impact Assessment of multiple polluting projects in close proximity of each other on the local air quality and Ground Level Concentrations of noxious gases has been completely neglected, and attempts have been made to mislead the authorities in the following manner.

30. That Table 4.6 titled 'RESULTANT CUMULATIVE GROUND LEVEL CONCENTRATIONS (24 HOURLY)' on Pg C4-11 of the EIA Report, only analyses the cumulative GLCs of the impugned project and the closely situated Cement grinding unit, and does not include the two mega power projects situated in close proximity.

31. That Table 4.8 titled 'CONTRIBUTION BY NEARBY EXISTING INDUSTRIES (APL 4620 MW TTP AND CHPL 4000 MW TPP) IN BASELINE (24 HOURLY CONCENTRATION)' on Pg C4-19 of the EIA Report (**Pg 633**), merely provides the contribution of the two closely situated mega-power projects in emitting PM10, SO2 and NO2, and no assessment of the cumulative impacts of all projects for present and future effects has been done, as is mandated by the Technical Guidance Manual. The Appellant has previously submitted on Paras 20-26, **Pgs 19-22**, that cumulative impact assessment is to be carried out in the manner prescribed by the Technical Guidance Manual for Metallurgical Industries, and mandated by this Hon'ble Tribunal in order dated 14.12.2011 in *Appeal No. 5 of 2011 titled Vimal Bhai and Ors. v. MoEF&CC and Ors.*
32. It is submitted that CIA must necessarily assess impact of all the polluting activities in totality and not just simply quantify individual activities in isolation and add all the values. It is submitted that AERMOD model is based on Gaussian equation and therefore capable of computing several input parameters to obtain resultant concentration. The EIA Report however, has failed to do so. That the EIA Report intentionally separates the AERMOD output value for thermal power plants as on Table 4.8 and Cumulative GLCs of impugned project and nearby Cement Grinding Unit as on Table 4.6, so as to mislead the authorities.
33. Notwithstanding the direct violation of ToR 7(i), the Appellant had previously submitted that the CIA was not done in manner prescribed by Technical Guidance Manual for Metallurgical Industry. That as has already been submitted by Appellant on Paras 20-22, **Pg 19**, the CIA must analyse the cumulative effect caused by all past, present and reasonably foreseeable future projects as well, and that even 'induced impacts', which do not have direct relationship with the action under assessment, are also to be analysed. However, no such CIA has been

undertaken in the EIA Report Chapter 4, and any statement to the contrary by AEL is an attempt to mislead this Hon'ble Tribunal.

34. AEL has stated on Para 34, **Pg 378** that Technical Guidance Manual for Metallurgical Industry has no binding authority or legal force, and therefore, does not require adherence. The Appellant denies this statement. It is submitted that such statement by AEL is in direct contravention of orders of the Hon'ble Supreme Court, as well as this Hon'ble Tribunal. That the Hon'ble Supreme Court has observed the importance and applicability of Guidance Manuals in the matter of **Hanuman Laxman Aroskar v. Union of India and Ors.** reported in **(2019) 15 SCC 441:**

"The need for a sector specific manual arose because the 2006 notification "re-engineered the entire EC process" under its earlier avatar of 1994 and new sectors were incorporated into the ambit of the EC process. The 2006 notification noted that as many as 39 developmental sectors require prior ECs. Sector specific manuals, it was hoped, would bring about standardisation in the quality of appraisal and obviate potential inconsistencies between the work performed by SEIAAs and SEACs."

...

"It is in the backdrop of the 2006 notification and the Guidance manual that it becomes necessary to assess the process that was adopted in the present case and its outcome."

...

*"143 In the present case, as our analysis has indicated, there has been a failure of due process commencing from the non-disclosure of vital information by the project proponent in Form 1. Disclosures in Form 1 are the underpinning for the preparation of the ToR. **The EIA report, based on incomplete information has suffered from deficiencies which have been noticed in the earlier part of this judgment including the failure to acknowledge that within the study area contemplated by the Guidance manual, there is a presence of ESZs.**"*

(emphasis supplied)

35. Furthermore, this Hon'ble Tribunal expressly denied and negated the contention that Guidance Manuals are recommendatory and not mandatory, in *Appeal No 172 of 2013 titled Sreeranganathan K.P. v. Union of India and Ors.* vide order dated 28.05.2014 as follows:

"60...In complete violation of Chapter 12 of Environmental Impact Assessment Manual for Airports (Annexure A19) and Appendix III of the EIA Notification, 2006, the 5th respondent/Enviro Care India Pvt. Ltd., refused to disclose the names of the consultants with their brief resume in the copy of the summary of EIA report circulated by the 3rd respondent/K.G.S. Aranmula Airport Ltd., (Annexure A6) as well as the Environmental Impact Assessment Report for the construction of new airport at Aranmula prepared by the 5th respondent/Enviro Care India Pvt. Ltd., (Annexure A20) and the persons who prepared the EIA report in respect of the airport project in question were not experts in the relevant sector."

...

"151. ii. vi) As per the scheme of accreditation of EIA consultants, an EIA consultant can apply to a maximum of 5 sectors for accreditation. It is candidly admitted by the respondent/consultant that though he applied for the 5 sectors, his application did not include airport projects. The only explanation tendered by the 5th respondent/consultant is that in view of commercial reasons he did not apply for accreditation for airport sector though he has sufficient experience in the field. This explanation cannot be accepted even for a moment. Admittedly, the 5th respondent/consultant has not applied for accreditation for airport projects falling under Category A. Mere pendency of an application for accreditation for Category B projects would not cloth him with a right to make a study, field survey and preparation of EIA reports in respect of the airport projects which according to notification is categorized as Category A. If this contention has to be accepted, the very purpose of importance and significance of placing airport projects under Category A itself would be defeated. **It is contended by the 5th respondent/consultant that the guidelines manual is only recommendatory and not mandatory. But that is not the case in so far as EIA Notification, 2006 is concerned..."**

(emphasis supplied)

36. Furthermore, it is reiterated that this Hon'ble Tribunal has provided various modalities of conducting Cumulative Impact Assessment, in the matter of *Vimal Bhai and Ors. v MoEF and Ors. (Appeal No. 5 of 2011)* decided on 14.12.2011, as has already been stated by the Appellant as on Para 23, **Pg 20-21**. This Hon'ble Tribunal has held that CIA must include impact assessment determined based on all past, present, and future activities, and it is evident as per Chapter 4 of the EIA Report that such has not been carried out whatsoever.

37. That therefore, AEL has failed to carry out CIA as per Technical Guidance Manual for Metallurgical Industry, as per orders of this Hon'ble Tribunal, as well as per the ToR 7(i), all of which mandated a much more comprehensive CIA encompassing all sources of emissions.

ON AIR QUALITY STUDIES

38. The Appellant had previously contended that as on Para 69, **Pg 36**, that evidently misleading information has been provided in the EIA Report with regards to ambient air quality. That the Appellant had cited six monthly compliance reports of CGPL Thermal Power Plant and Adani Thermal Power Plant, located in close proximity of the impugned project, both of which clearly indicated a higher PM10 and PM2.5 concentration than what has been reported in the EIA Report. A perusal of the said six monthly compliance reports clearly indicate that there is a discrepancy with the ambient air quality reported in the EIA Report and the six monthly compliances reports. That the Appellant had thus submitted that such comparative information of compliance reports of CGPL and Adani Thermal Power Plant are indicative of misrepresentation of ambient air quality in the impugned EIA Report.

39. In response thereto, AEL has simply submitted, as in Para 50, **Pg 399**, that the data used in the EIA Report is pertaining to the period of October to December 2016, whereas, the CGPL Compliance Report and Adani Thermal Power Plant Compliance Report are for the period of July-September 2019. However, it is submitted that AEL has not denied that the two abovementioned Compliance Reports are true and that such Compliance Reports provide a more recent status of the ambient air quality in the impugned project area. AEL has simply stated that "*there cannot be any comparison of both the aforesaid set of data.*" (Para 50, Pg 399)

40. However, it is submitted that such is not a valid stance. That the current status of ambient air is of utmost importance, because if the ambient air is beyond permissible standards as per existing norms and regulations, then it stands to reason that no new polluting industry should come up to further deteriorate the already toxic air quality. It is submitted that the stance taken by AEL defeats the purpose of assessing the ambient air quality prior to grant of permissions to further increase air pollution load.
41. That furthermore, it is evident as per Table 3.5.1 titled 'CLIMATOLOGICAL DATA-STATION: IMD NEW KANDLA YEAR (1971-2000)', on **Pg 567**, that the EIA Report has utilized climate data of Kandla Port for the period 1971-2000. Such is indicative of the fact that AEL has used baseline data collected prior to the year 2016. That AEL is attempting to use information that is convenient and suits their purposes, and has not provided an accurate, updated scenario of the ambient air quality.
42. It is submitted that in Table 4.2 titled 'DETAILS OF STACK EMISSIONS FOR PROPOSED COPPER REFINERY PROJECT' as on Pg C4-7 of EIA Report, (**Pg 621**) there is no information provided regarding the baseline level of various air pollutants at receptor site. Furthermore, no incremental concentration under normal operating condition with coastline fumigation for night time operations is given.
43. It is submitted that AEL was directed to undertake reassessment of air quality by using CALPUFF Model during appraisal process by EAC. However, the EIA Consultant has not disclosed information regarding the type and period of meteorological data used to run CALPUFF Model. Such is important as the data requirement for CALPUFF is different from that required for AERMOD. It is therefore submitted that AEL may be directed to furnish the original invoices of meteorological data purchased to run both the models, ie., AERMOD and CALPUFF.

ON LOCATION OF TREES OUTSIDE PROJECT AREA

44. AEL submits on **Para 26, Pg 368**, that the pictures of trees annexed by the Appellant as ANNEXURE A-3 are outside the project area. In furtherance of such claim, AEL has relied on Annexure-7, which is a satellite image of the area with the boundaries of the project allegedly mapped out. AEL submits that the coordinates of trees pictured in ANNEXURE A-3 are outside the alleged boundaries of the project area.

45. However, it is submitted that the photographs of fully grown trees were annexed to negate the claims made by AEL that the project area does not contain significant fully grown trees and only has presence of certain shrubs. The said photographs were annexed by the Appellant to prove vital information has not been disclosed in Form-I and that proper assessment has not been undertaken while of EIA Report, which mentions the existence of certain shrubs and denies that there are several fully grown trees within 10 kms of the project area.

46. Furthermore, it is noteworthy that AEL has itself provided the alleged boundaries of the project area, and therefore the Appellant submits that AEL be put to strict test regarding the veracity of the alleged boundaries. It is submitted that the same Annexure-7 satellite image being relied on by AEL itself clearly displays ample spaces around the alleged project area where forest cover is apparent and abundant. Therefore, the Appellant submits that such trees and forest area should have formed part of the assessment undertaken in the EIA Report. However, the AEL has not responded to such submissions whatsoever, and has relied on self attested evidence.

ON CONCEALMENT OF FLORA AND FAUNA

47. The Appellant has submitted that AEL has concealed vital information regarding flora and fauna in and around the project area and there is deficient impact assessment of the impugned project on environment and ecology.

48. That AEL has submitted as on **Para 31 Pg 374**, that since the APSEZ has applied for forest clearance, that there can be no allegations raised against AEL pertaining to any matter related to forest land and forest diversion. AEL on **Para 45, Pg 394**, has relied on observations dated 6-7.09.2018 made by a sub-committee of Forest Advisory Committee ('FAC') made after site visit for 1576.81 ha. forest land diversion applied for by APSEZ.

49. However, it is submitted that the statement of FAC does not negate the requirement of project proponent ensuring that assessment of wildlife is carried out, with correct faunal distribution being analysed. The Appellant had submitted there has been an improper assessment of the flora and fauna around the project area in the EIA Report. It is submitted that the same above mentioned observation of the sub-committee of FAC also notes that there is occurrence of *Acacia Nilotica* in the forest around Siracha village, indicating that there is greater biodiversity than 'shrubs' or tree species *Prosopsis Juliflora*, as stated by AEL.

50. Furthermore, EIA Report analysis of faunal distribution makes no mention of the diverse species existing in and around the project area, or the importance of *Acacia Nilotica* forests. Therefore, the Appellant had previously submitted that there has been no proper impact assessment of the impugned project on flora and fauna carried out. The Appellant denies all submissions by AEL to the contrary.

ON SECURED WASTE DISPOSAL

51. The Appellant submits that the EIA Report does not provide adequate information and assessment of the method and manner of safe disposal of the total hazardous waste generated by the operations of the impugned project. In this regard, AEL has submitted as on Para 37, **Pg 382** that the project will operate on Zero Waste Liquid Discharge

concept and secured landfill to mitigate impact on soil and water pollution.

52. That the EIA Report Table 2.9 titled SOLID AND HAZARDOUS WASTE GENERATION on **Pg 533**, elucidates the total quantum of solid and hazardous waste that is proposed to be generated by the impugned project, as well as lists the various methods for disposal of such waste. That the said Table 2.9 clearly mentions the following waste items as being disposed of in Secured Land Fill situated within the project site:

a) 216000 TPA of ETP waste sludge and scrubber waste;

b) 6560 TPA of Nickel sludge;

c) 400,000 L/yr of Spent Catalyst;

d) 20,000 L/yr or Spent Resin.

53. It is submitted that all such extremely hazardous and toxic waste amounting to several lakhs of tonnes per annum is allegedly going to be stored in secured landfills situated on the project site area itself.

54. While appraising the impugned project, the EAC has sought additional details from AEL. That as per EAC Observation No. 11 (**Pgs 3069-3090**), AEL was directed to submit *inter alia* Secured Land fill site coordinates. However, it is crucial to note that no details or information of location of secured landfills have been submitted by AEL whatsoever. That such is despite the fact the EAC observation No.11 specifically sought Secured LandFill site coordinates.

55. In response to EAC Observation No. 11, AEL stated that such are provided in Annexure 11(a). However, on perusal of Annexure 11(a), **Pg 3075**, it is patently evident that such is a diagram of 'Layout Showing Piezometre locations' and no coordinates of Secured Landfill have been provided by the AEL whatsoever. That in such context, the EAC ought to have carried out detailed scrutiny of the project and the incorrect information provided by AEL. However, the EAC has failed to do so.

56. It is further submitted that the Appellant had previously stated, as on **Para 36-38, Pg 25** that AEL has not carried out any studies to determine the effect of the impugned project on nearby marine environment and ecology. The Appellant had submitted that AEL has merely stated that there will be no impact on marine ecology due to use of 'Zero Liquid Discharge' ('ZLD') system. However, ZLD based systems cannot overrule any accidental discharge from the impugned project.

57. Furthermore, as per Para 2.2.3 titled 'WATER REQUIREMENT' on Pg C2-6 of the EIA Report (**Pg 490**), AEL has proposed to send effluents from the process units Secondary Reverse Osmosis (RO) plant, after treating and reusing such effluents. Thereafter, rejects from the RO plant are allegedly proposed to be sent to Multi Effect Evaporator (MEE) and solids generated therein are allegedly proposed to be sent to Secured Land Fill (SLF).

58. However, AEL has provided no information as to the manner of treatment of waste effluents prior to sending to RO plant. Furthermore, AEL has undertaken no studies that determine the quantity of solids likely to be generated by the MEE, neither has AEL provided any details of the location and extent of SLF wherein such solids are to be dumped. That therefore, AEL has evaded undertaking any detailed studies on the effect of the impugned project on marine ecology and has merely reiterated its usage of ZLD system, without providing any detailed information thereof.

ON CHALLENGE TO STAGE-I FOREST CLEARANCE

59. AEL has repeatedly stated that the total forest land (102.39 ha.) to be diverted for the impugned project is included in the Forest Clearance of 1576.81 ha. applied for by APSEZ, and that such proposal of the APSEZ has been granted Stage-I clearance. AEL has stated on **Para 45, Pg**

394, that no challenge has been made to Stage-I clearance granted to APSEZ by the Appellant.

60. The Appellant submits that such is due to the judgment of this Hon'ble Tribunal in the matter of *Vimal Bhai and Anr. v. Union of India and Ors.* (Appeal No. 7 of 2012) wherein vide order dated 7.11.2012 this Hon'ble Tribunal held that Stage-I Clearances were beyond the scope of Appeal and accordingly stated:

"29. Cumulative reading of Section 2 (A) of the FC Act and 16(e) of the NGT Act, leads to an irresistible conclusion that under the said Sections an Appeal is provided for only against an order passed by the State Government or other authorities. In other words, the Legislature in its wisdom has kept the order of approval/clearance passed by the Central Government under FC Act beyond the scope of Appeal."

61. That therefore, it is evident that Stage-I Clearance granted by the Central Government is beyond the scope of Section 16 of the NGT Act, 2010.

62. That the Appellant reserves the right to take the appropriate steps to undertake judicial action against the Final Approval of Forest Clearance granted to APSEZ by the State Government of Gujarat as per the provisions of Section 2 of the Forest (Conservation) Act, 1980.

63. Notwithstanding such judicial action, the Appellant has submitted on record various infirmities in the EIA Report and the EC granted to AEL which are patently evident as per submissions made by the Appellant. It is therefore submitted, that in light of the above mentioned submissions, that this Hon'ble Tribunal may be pleased to quash the Environmental Clearance dated 8.05.2020 granted to AEL for the impugned project.

Pass any such Order deemed fit by this Hon'ble Tribunal in the facts and circumstances of the case.



APPELLANT

THROUGH



RITWICK DUTTA



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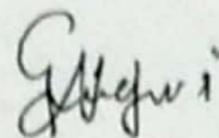
VERIFICATION

I, Naran Bharubhai Gadhvi, President of Kheti Vikas Seva Trust, r/o Village Zarpura, Taluka Mundra, District Kutch, Gujarat – 370405 do hereby solemnly affirm and state as under:

1. That I am the Present and Authorized Representative of the Appellant in the above titled Appeal and I am conversant with the facts and the circumstances of the case and competent to swear this affidavit.
2. That that the contents of the present Rejoinder are true to my knowledge and/ or based on information, and/or the contents are based on the legal submission and/or inferences of facts, which I believe to be true.

Date: 14/09/2021

Place: Mundra



APPELLANT

BEFORE THE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH AT PUNE
APPEAL NO. 35 OF 2020

IN THE MATTER OF:

Kheti Vikas Seva Trust

...APPELLANT

VERSUS

Adani Enterprises Ltd. & Ors.

... RESPONDENTS

AFFIDAVIT

I, Naran Bharubhai Gadhvi, President of Kheti Vikas Seva Trust, r/o Village Zarpura, Taluka Mundra, District Kutch, Gujarat – 370405 do hereby solemnly affirm and state as under:

- 1. That I am the Present and Authorized Representative of the Appellant in the above titled Appeal and I am conversant with the facts and the circumstances of the case and competent to swear this affidavit.
- 2. That the contents of the accompanying Rejoinder are true and correct and nothing material has been concealed therefrom.

Gadhvi

DEPONENT

VERIFICATION

Verified on this ^{13th} day of SEPTEMBER 2021 that the contents of the above mentioned affidavit are true and correct and nothing material has been concealed therefrom.

A C 5064 4010 3414

SOLEMNLY AFFIRMED
BEFORE ME

Gadhvi

DEPONENT



Pankaj Kumar C. Shah
Advocate & Notary
Jaysukh Niwas, Bundar Road,
Mundra, Kutch (Gujarat)
NR: 577/2021



IN THE HIGH COURT OF GUJARAT AT AHMEDABAD

WRIT PETITION (PIL) NO. 12 of 2011

FOR APPROVAL AND SIGNATURE:

HONOURABLE THE ACTING CHIEF JUSTICE MR. VIJAY MANOHAR
SAHAI

and

HONOURABLE MR.JUSTICE R.P.DHOLARIA

-
- 1 Whether Reporters of Local Papers may be allowed to see the judgment ?
 - 2 To be referred to the Reporter or not ?
 - 3 Whether their Lordships wish to see the fair copy of the judgment ?
 - 4 Whether this case involves a substantial question of law as to the interpretation of the Constitution of India or any order made thereunder ?

KHETI VIKAS SEVA TRUST THROUGH ITS OFFICE BEARERS - NARAN &

2....Applicant(s)

Versus

STATE OF GUJARAT & 5...Opponent(s)

Appearance:

MR SIRAJ R GORI, ADVOCATE for the Applicant(s) No. 1 - 3

MR PARTH BHATT, AGP for the Opponent(s) No. 1 , 3

MS DHARMISHTA RAVAL, ADVOCATE for the Opponent(s) No. 2

MR MIHIR THAKORE, SENIOR ADVOCATE assisted by MR ABHISHEK

MEHTA AND MR VIVAN SHAH FOR M/S TRIVEDI & GUPTA, ADVOCATE for the Opponent(s) No. 4

MR MIHIR THAKORE, SENIOR ADVOCATE assisted by MR SHAMIK BHATT
FOR SINGHI & CO, ADVOCATE for the Opponent(s) No. 5
MR SHAKEEL A QURESHI, ADVOCATE for the Opponent(s) No. 6

=====

**CORAM: HONOURABLE THE ACTING CHIEF JUSTICE MR.
VIJAY MANOHAR SAHAI
and
HONOURABLE MR.JUSTICE R.P.DHOLARIA**

Date : 17/04/2015

CAV JUDGMENT

(PER : HONOURABLE MR.JUSTICE R.P.DHOLARIA)

1. The present writ petition in the nature of Public Interest Litigation is filed by the petitioner - Kheti Vikas Seva Trust as the respondent authorities have accorded permission to respondent Nos.4 and 5 to construct a power generation station as well as Port and SEZ in the area, where the members of the petitioner association are having their agricultural lands, in violation of the Environmental Laws and this writ petition is also filed in the interest of villagers of villages viz., Zarpara, Dhrob, Navinar, Siracha and Kandagara situated in Mundra Taluka, District Kutch, as the valuable and fertile agricultural land has so far badly affected because of the project undertaken by respondent Nos.4 and 5 and serious environmental issues have cropped up due to violation of laws by respondent Nos.4 and 5. The petitioner has

also raised the issue of profiteering by respondent No.4 who after purchasing the land from various Government authorities at a throw away price is arbitrarily selling the land to various industries by earning a huge profit which amounts to unjust enrichment.

2. The facts of the case of the petitioner are that the petitioner association is consisting of more than 200 villagers of the local vicinity where certain projects are undertaken by respondent Nos.4 and 5. Against the activity carried out by respondent Nos.4 and 5, the villagers have made certain representations before the respondent authorities, however the authorities have not paid any heed to their representations and as such have not taken any action against the respondents. It is the case of the petitioner that since a larger public interest is involved qua various issues, the petitioner has approached this Court by way of this present writ petition in the nature of Public Interest Litigation.

3. It is the case of the petitioner that respondent Nos.4 and 5 are carrying out excavation on a large scale which has caused serious hazard not only to the environment but also to the human habitation as well within the

jurisdiction of respondent No.3 - District Collector who has made allotment of the land in favour of the respondent company at throw away price. It is the case of the petitioner that respondent No.5 is a company incorporated under the Companies Act and, after getting conditional clearance from the respondent authorities, has established a huge power plant with the established capacity of generation of 4600 MW. The respondent No.5 company has already started its operation of power generation at its plant situated within the SEZ being developed by respondent No.4.

4. It is further case of the petitioner that for the purpose of development of Special Economic Zone as per the project submitted by respondent No.4, the State Government carried out necessary exercise and, as such, huge Government land including government waste land as well as pasture land were allotted to respondent No.4. Over and above the Government waste land and pasture land, respondent No.4 was in need of other huge chunk of the land, therefore the State Government has acquired a huge parcel of land of various villages of Mundra Taluka from the agriculturists. The respondent No.4 in its SEZ allotted the land to respondent No.5 company for establishing a power plant with the capacity of

4620 MW of power. The respondent No.5 company was required to take various clearance from the authorities for establishing the power plant within the SEZ. The respondent no.5 company started the execution of its project in the year 2008 and it has achieved its substantial capacity of the power generation in the last quarter of 2010. For execution of the said project, respondent No.5 has over looked the necessary requirement as well as the conditions under which the permissions were accorded to it and committed blatant violation of the Environmental Laws, which has resulted into hardship to the local villagers within whose vicinity respondent No.5 has established its power plant.

5. It is further case of the petitioner that the area in question which is affected by the operation of the project by respondent No.5 is the following villages of Mundra Taluka, District Kutchhh. i) Zarpara, ii) Navinar, iii) Siracha, iv) Kandagara, v) Dhrob and vi) the city of Mundra as well. The above villages of Mundra Taluka are known for its fertile land where a rare species of Indian Dates (Kachchhi Kharek) grow. Over and above the plantation of Indian Dates, the villagers were having orchards of chiccku, coconut, lemon and bijora etc. The villagers were also taking various crops from the

fertile land namely crops of wheat, bajara, cotton, corn etc. The entire Mundra Taluka of District Kutch is having fertile land and the same is known as Green Belt of Kutch. The farmers of the aforesaid villages were taking two to three crops in a year. A substantial part of the above villages were having irrigation facilities and as such the agriculturists were reaping the benefits of such irrigation facilities over their fertile land and the agriculturists were earning substantial part of their income from the production of Indian Dates. Looking to the importance of fruit bearing trees of Indian Dates and its rare qualities, the Sardar Dantiwada Krushi University established its Date Palm Research Station over 51 hectares of land in Mundra Taluka. Such Date Palm Research Station was established in Mundra Taluka as in the entire country Mundra Taluka is the only place where the orchards of Indian Dates (Kharekh) are found. Nowhere in the country there is any other Date Palm Research Centre is established. Since the State Authorities were inclined to sell the entire parcel of land of Date Palm Research Station admeasuring 51 hectares to respondent No.4, the petitioner association addressed a letter to the Sardar Dantiwada Krushi University seeking certain information and pursuant thereto, the Date Palm Research Station, Sardar Dantiwada

Krushni University replied that they are unable to give any details with respect to the same.

6. It is the case of the petitioner that the major part of the agricultural income of the agriculturist of the area was coming from Indian Dates (Kachhchhi Kharekh) and chiccku as the area in question was having orchards of the said fruits spread over hundreds of acres of the land and the farmers used to export the fruits of Indian Dates to various parts of the country as well as the best of the quality of Indian Dates was having market in the foreign countries also. Apart from the fruit bearing trees of Indian Dates, the orchards of chicckus were the another substantial earner of revenue for the agriculturist of the above villages. The main market of excellent quality chiccku from the orchards of the above villages was APMC, Jamnagar, Rajkot and Anjar, from where the agriculturist used to get a return of their hard work in developing the orchards of Indian Date and Chiccku.

7. It is the case of the petitioner that after the activities of respondent No.4 were started for developing the port and the establishment of power project by respondent no.5, there is a huge shortfall in the production

of Indian Dates and Chiccku and annual yield from orchards of coconut, lemon and other fruits as well as yield from the agricultural fields of various crops namely wheat, bajra, corn etc. have also been badly affected and, as such, there is a sharp decline in the production from fruit bearing trees and agricultural fields.

8. As per the case of the petitioner, because of violation committed by respondent Nos.4 and 5 in establishing their projects, serious ecological issues have been cropped up which has resulted into shortfall of agricultural produce in the Taluka of Mundra for which, the petitioner, other villagers as well as the other bodies have raised various issues with the Government authorities ventilating their grievance. So far as the project of respondent No.4 affecting the cattle is made subject matter of litigation before this Court in the PIL being Special Civil Application No.7254 of 2008. So far as the other issues concerning the fishermen are concerned, various representations are made by the bodies of the fishermen and the said issues affecting the fishermen, as per best of the knowledge of the petitioner, are still pending with the authorities.

9. It is the case of the petitioner that

two main projects, which have posed serious danger from the environmental point of view, are the construction and development of west and north ports by respondent No.4 and the activities of respondent No.5. The activities of respondent Nos.4 and 5 seriously affecting from the ecological point of view are :

i) Dredging of the sub soil of the sea for filling up the creeks which are in existence since thousands of years.

ii) Large scale cutting of mangrove trees.

iii) Destroying the mangrove forests by constructing wall between the mangrove forests and the sea.

(iv) Over the area of east port, the entire mangrove forest is destroyed by respondent No.4.

(v) Respondent No.5, for the purpose of its power plant which is situated at the distance of four to five kilometers from the sea, is bringing sea water without construction a concrete canal which has wrecked havoc so far as quality of underground water is concerned.

(vi) Respondent No.5 has dug a huge pond to store the sea water for its use in the power plant. The pond is having the depth of approximately 40 meter and width of 1500 meters. Hence, it is evident that respondent No.5 is storing water drawn from sea in a very larger quantity in the huge pond for the purpose of power plant.

(vii) Large scale excavation of land by respondent Nos.4 and 5 at various places in the above villages has resulted into seepage of saline water in the area and as such the land situated in the entire area is badly affected due to the same.

(viii) Fly ash which is the byproduct of power plant has badly affected the environment of the area in question.

(ix) The respondent No.5 has not created any storage facility or any facility for disposal of the fly ash resulting into heaps of such fly ash found on the road as the same are stacked at various places near the villages, road and on the open ground without following the Provisions of Air Act, 1981.

(x) The respondent No.4 has illegally carried out the activity of dredging and has reclaimed land by filling the creeks and destroying mangrove forest in blatant violation at CRZ Notification, 1991.

(xi) The respondent No.4 is going on with the activity of destroying sand dunes which are the identity of the area. Sand dunes are having it's own importance from the ecological and religious point of view. Such sand dunes are situated in the area which falls with the jurisdiction of the Forest Department and as such the same are spread over nearly 3000 acres of land, out of which as per the best of the knowledge of the petitioner nearly 1800 acres of land is handed over to respondent No.4 for development of SEZ. In turn, respondent No.4 with a view to level the ground is in the process of

destroying such sand dunes which are at places 40 to 50 feet high. In the said sand dunes, places of religious importance for Hindu and Muslim community are situated, namely temple of Khetar Pal Dada, Kakkarwado Peer, Kadi Peer, Gebi Peer, Bavdi Peer, Dhajawala Peer and temple of Bal Bhramani Maa. The above referred religious places situated within sand dunes portray uniqueness of Kutch culture which in its true spirit maintains the secular character of our Constitution.

(xii) There are large number of trees are found at the sand dunes which makes it ideal for various species of animals namely, deer, blue bulls and other animals of dog family. Near the area of sand dunes good quality grass for the cattle grows naturally and if the sand dunes are destroyed the same will result into ecological imbalance in the area.

(xiii) Mangrove forests and sand dunes are the only natural wall against salinity. However, the activity of respondent Nos.4 and 5 has posed a serious threat to the existence of both of them.

10. It is the case of the petitioner that in the nearby area another power project namely CGPL (Coastal Gujarat Power Limited) has been developed by another corporate giant - TATA having the capacity of generation of 4000 MW of power. In stark contrast to unmindful development by respondent No.5 of its power project, CGPL has taken all the required measures to curtail

ingress of salinity of water in the local area. It is submitted that the aforesaid CGPL is also taking water from sea by constructing a Pakka Concrete Canal with a view to preserve the land and to protect the land of the nearby area against salinity. It is submitted that the said CGPL has also constructed three huge ponds for storing sea water for its subsequent use in the cooling tower of the power project. In stark contrast to the above, the photographs taken from the facility created by respondent No.5 clearly demonstrate that respondent No.5 is drawing water from the sea which is situated at the distance around four to five kilometers from its project by creating a Kachcha Channel which leads to spreading salinity in the surrounding areas. The resultant effect of sea water stored in the huge water body created by respondent No.5 in form of a Kachcha Pond would be damaging the under ground water as the seepage of the sea water takes place from the Kachcha Pond. As per the best of the knowledge of the petitioner, conditional permission was given to respondent No.5 to construct a pakka concrete canal to bring sea water for the purpose of cooling tower constructed at the site. However, in blatant breach and violation of the conditions, respondent No.5 has caused the damage not only to the ecology but also to the public at large. The

saline water used by the respondent company in its cooling tower is also discharged in sea by another kachcha channel. It is averred that such illegal activities carried out by respondent No.5 has led to steep decline of production from the orchards of Indian Dates, Chiccku and coconuts as well as it has affected the quality of the above fruits. It is averred that because of the salinity which has spread due to unmindful, illegal and haphazard developmental activities of respondent Nos.4 and 5, the quality of the land has also been deteriorated. Because of the salinity as well as fly ash which is resultant effect of the project of respondent No.5, almost 70% of the Chiccku trees of the area are destroyed. It is averred that due to the effect of the pollution caused by the power plant of respondent No.5, chiccku trees have over night dried down and the farmers were compelled to cut it down and the same has also caused damage to farming of Indian Dates. The existing orchards of Indian Dates has suffered a serious blow in terms of production and at the same time the quality of the Indian Dates have also been deteriorated because of the activities of respondent No.5. It is averred that before the entry of respondent Nos.4 and 5, in the local area the agricultural economy of the above villages was booming. However, as stated hereinabove because of the

spread of salinity of the underground and ground water caused by the activities of respondent Nos.4 and 5, the poor farmers who were heavily dependent upon their agricultural income are facing the challenge of their existence and if the situation worsens, then the villagers will not have any choice but to migrate.

11. It is averred that valuable fertile land of the villagers have been badly affected due to reckless and haphazard developmental activities carried out by respondent Nos.4 and 5 in the Mundra Taluka. It is averred that agriculturists have filed their respective affidavits stating therein that their bore wells and wells are affected due to the fact that respondent Nos.4 and 5 companies are digging the pits at various places for their purposes and because of the same saline water has entered in their bore wells and wells. Since the bore wells in the fields of the agriculturists have become saline, agriculturists are now unable to take the second crop in the year.

12. It is averred that Sardar Dantiwada Krushi University is running Date Palm Research Station, wherein the best quality Indian Dates are being developed, the petitioner came to know that, the State Government is in the process of

selling the said land of Date Palm Research Station to the SEZ developer. Hence, when the petitioner tried to make an inquiry about the same, the petitioner received a tight lipped response and as such the Date Palm Research Station expressed its inability to give any detail. It is submitted that in the larger public interest the activities of the Date Palm Research Station at Mundra, Kachchh is required to be preserved and the Government is required to be directed not to shift the Date Palm Research Station from the region which is most suitable for trees of Date Palm (Katchchhi Kharek).

13. It is the case of the petitioner that though as per the necessary permission issued by respondent authorities to respondent No.5 company to appropriately dispose of the fly ash, in blatant violation of the condition attached to the permission issued by the authorities, respondent No.5 company is stacking the same either on the side of the road or on the open ground without making any provision for maintaining SPM level stipulated under the Provisions of Air Act. To the best of the knowledge of the petitioner, the respondent GPCB has not initiated any action against the erring Company under the provisions of Air Act.

14. It is the case of the petitioner that though necessary conditional permissions were given to respondent No.4 for development of various ports, respondent No.5 has committed blatant violation of the conditions by causing serious damage to the coastal area. On the coastal line of Mundra Taluka, lush green mangrove forests were existing. In a haste to develop the port over a huge tract of land on the coastal area, respondent No.4 has destroyed mangrove forest from a huge area and as such reclaimed lands by filling the dredging material. The modus operandi adopted by the respondent SEZ developer was first of all to create a clay wall so that the sea water may not enter the area of mangrove forest and the resultant effect in the instant case is total destruction of mangrove forest in the area which is known as East Port. At present, respondent No.4 herein is developing the port on the Western Side which is known as the West Port. The recent photographs taken from the site where the mangrove forests were in existence clearly indicate that the same are almost entirely destroyed. So far as East Post is concerned, the office bearers of the petitioner were not allowed to take any photographs of the same. However, recent photographs taken at the site of the West port where the work is in progress clearly go to show

that the mangrove forests are badly damaged. Many of the mangrove trees have already died down which is causing serious damage to the ecology. Once upon a time the mangrove forests were lush green and as such mangrove forests are the natural wall against spreading of salinity and the same protects the main land at the time of hurricane and tsunami. It is averred that even geographical position of the area is also altered by respondent No.4 company by reclaiming land of the coastal area.

15. It is averred in the petition that in fact, at present, the work is in progress at the West Port. In the area near the West Port, number of natural creeks are in existence since thousands of years. The three major creeks situated near the area are Kotadi, Navinal and Thragdi creeks. At present, the activity of filling up the creeks is going on which is likely to have a long term impact on the ecology of the area in question. The respondent No.4 is carrying out the dredging activity on a very large scale by installing heavy machinery for the same. It is stated that the recent photographs taken from the site reveal the existence of heavy duty pipes leading to the area of creeks which is sought to be filled in by the respondent SEZ developer. By filling up the creeks, respondent

No.4 is creating reclaimed land and over which the respondent is carrying out its various activities.

16. It is further case of the petitioner that respondent No.4 has submitted its proposal for the proposed expansion of Mundra Port and SEZ by which it is evident that the company is carrying out its expansion project over the coastal area of the Mundra Taluka. As such, respondent No.4 company has proposed for expansion and construction of four ports namely West, South, North and East ports. The map showing the strategic location of the proposed expansion of the above four ports are clearly indicated in Annexure-Q to the main writ petition. Out of four ports, respondent No.4 company has almost completed the construction and development of East Port. The respondent No.4 company is at present carrying out its activity for the development of West Port and North Port. As stated hereinabove, for the development of East Port, respondent No.4 company has almost destroyed that lush green and thick mangrove forests and at present the company is adopting the same tactic over the area of West Port and North Port. It is stated that for the local villagers mangrove trees were like Kalp Vruksh and the fruits of mangrove trees were used by the

farmers for their cattle. The agriculturists from the villages Zarpara, Dhrob, Mundra, Baroi, Navinal, Siracha etc. were used to collect the fruits of the mangrove trees which were generally used as cattle feed which results into giving good amount of milk, however, because of the destruction of the mangrove forests even the milk production has been badly affected.

17. It is averred that for the purpose of destroying the mangrove forests, respondent No.4 company has adopted various methods which have lead to large scale destruction of mangrove forest. The respondent No.4 company has also deployed heavy equipments to cut down and remove the mangrove trees. In Annexure-S to the writ petition, one of the photographs clearly indicates the small stumps of mangrove trees standing at the site after the forest was destroyed by the respondent company. It is averred that photograph taken from a website - Google shows the pre-existing mangrove forest over the coastal area of Anjar and Mundra Taluka. However, the lush green mangroves forests which were there in existence in the coastal area of Mundra Taluka since hundreds of years have been deliberately and systematically either destroyed or badly damaged, which has lead to serious ecological imbalance in the area.

18. It is averred that regarding the contention made hereinabove with respect to manifest violations of the norms by the respondent company was noticed by the team consisting of eight different officials from various authorities. Bare reading of the independent report based on the site visit by the subject experts clearly shows that the respondent company has carried out systematic and deliberate operation of destruction of natural resources badly affecting the ecology. The said report was submitted by the committee lead by Dr.A.Senthil Vel, Additional Director, Ministry of Environment and Forests and the other officers of GPCB and Gujarat Ecology Commission. The said committee carried out the visit of the site of respondent company pursuant to the representation made by Machimar Adhikar Sangharsh Sangathan (MASS), Gujarat. The above report submitted by the committee of Dr.Senthil Vel addresses the issues of manifest violation of the environmental norms by respondent No.4 company as well as another entity namely M/s. OPG Power Gujarat Private Limited. It is averred that it transpires from the bare reading of the report that the aforesaid M/s OPG Power Gujarat Private Limited has committed breach of many conditions. Though the committee has not visited the site of respondent

No.5 company, almost all observations made by the committee with respect to breach of condition and violation of norms by M/s OPG Power Gujarat Private Limited, can be made applicable in respect to respondent No.5 company as well.

19. It is averred that pursuant to the site visit carried out by the committee led by Dr.Senthil Vel, Additional Director, Ministry of Environment and Forest, a show cause notice has also been issued to respondent No.4 company on 15.12.2010. Even after receipt of show cause notice, respondent No.4 company has not stopped its operation which tantamount to wide spread destruction of mangrove forests. The aforesaid report of the committee as well as the show cause notice dated 15.12.2010 have not taken into account the other serious issues stated in the foregoing paragraphs namely the issues relating to excavation of clay in the local area to create a huge pond without any concrete lining as well as digging up of a Kachcha channel having the width of nearly 100 meters and depth of almost 30 to 40 meters to bring sea water (saline water). Such other issues like destruction of sand dunes which are also in existence since hundreds of year are also not the part of the report/show cause notice.

20. It is averred that another issue which the petitioner agitates in the larger public interest is the issue relating to profiteering by respondent No.4 by selling the land to other entities at different discriminatory rates. The respondent No.4 company, though is a company duly constituted under the Companies Act is required to maintain transparency in its transactions. It would be relevant to note that for the purpose of establishment of SEZ, the respondent company has purchased valuable Government land from the State Government at throw away prices. Other part of land which were of the private ownership were acquired by the State Government from the original owners/agriculturists. Even the compensation awarded for the acquired land was a very meager amount. The Government in case of respondent No.4 has acted in haste and allotted thousands of acres of land to the company hardly at Rs.2/- to Rs.4/- per square meter. A huge tract of lands from Mundra Taluka which were earmarked for the purpose of Gauchar (Pasture land) were overnight de-notified and allotted to respondent No.4 company by the State Government for the reasons best known to it. Over and above the Gauchar land, the State Government has also allotted its waste land to respondent No.4 for the development of SEZ at throw away price. The Government has also taken back the pre-existing

lease of the salt pan owners and assigned the same to respondent No.4 company for its project. Thousands of acres of lands which were purchased by respondent No.4 company from the Government at throw away price were sold to other companies at different rates by resorting to profiteering. As per the information available with the petitioner, the respondent company has purchased various lands from the Government at the rate of Rs.2/- to Rs.4/- per square meter, however the same has sought to be sold to various companies at the rate of Rs.600/- to Rs.750/- per square meter, which amounts to huge loss to public exchequer. Apparently, respondent No.4 company has connived with the Government machinery and used the same for its own purpose to purchase various parcels of land at throw away price and/or to get the land acquired from their original owners/farmers. Some of the transactions of respondent No.4 company clearly suggest that the interest of the State revenue is compromised in terms of making payment of stamp duty. Hence, the present writ petition is filed.

21. We have heard Mr.Siraj Gori, learned counsel for the petitioners, Mr.Parth Bhatt, learned AGP for respondent Nos.1 and 3, Ms.Dharmishtha Raval, learned counsel for respondent No.2, Mr.Mihir Thakore, learned senior

counsel assisted by Mr.Abhishek Mehta and Mr.Vivan Shah, learned counsel for M/s Trivedi & Gupta for respondent No.4, Mr.Mihir Thakore, learned counsel assisted by Mr.Shamik Bhatt, learned counsel for Singhi & Company for respondent No.5 and Mr.Shakeel Qureshi, learned counsel for respondent No.6.

22. Heard learned counsel for both the parties at length. Learned counsels for both the parties took us to various maps, revenue records, large number of photographs, reports and other records germane to this matter. Since the question raised in this writ petition fundamentally relates to alleged environmental violations, we thought it to be deemed fit and proper to keep the judgment reserved vide order dated 10.2.2015.

23. On going through the paper-book and other records made available to us, it is noticed that affidavit-in-reply has been filed by respondent No.2-Gujarat Pollution Control Board on 21.4.2011, *inter-alia*, submitting that the Board has given consent to establish Thermal Power plant to the respondent-company under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981

and the Ministry of Environment and Forest, Government of India has granted environmental clearance to the respondent-company. They have further submitted that at the time of inspection visit, it was observed that there were certain fugitive emission occurring due to movement of fly ash loaded dumper and other heavy vehicles, hence, directions under Section 31(A) of the Air (Prevention and Control of Pollution) Act, 1981 were issued to the respondent-company that regular sprinkling of water shall be ensured on such roads so that no dust is generated due to vehicular movement and there shall be regular cleaning and wetting of ground in this area so as to prevent fugitive emission. During the course of inspection visit, it was further noticed that the respondent-company was using open channel reservoir to store sea-water, hence, directions under Section 33(A) of the Water (Prevention and Control of Pollution) Act, 1974 were issued to the respondent-company directing them to carry out study and detailed assessment of quality of underground water in the surrounding area of the project site for groundwater contamination including salinity ingress through an independent external agency of national repute like National Productivity Council/NEERI or IIT Bombay, etc.

24. It can further be noticed from the

record that the petitioner has filed affidavit-in-rejoinder to the reply filed by respondent No.2-Gujarat Pollution Control Board, *inter-alia* submitting that the respondent-company has violated many conditions stipulated in various Government orders as well as CCA issued by respondent No.2. During the course of public hearing, the respondent-company has, in fact, made commitment for proper handling of the fly ash. However, the respondent-company is deliberately not complying with its commitment. The site inspection report prepared by respondent No.2-Gujarat Pollution Control Board is misleading and, as such, they are showing undue favours to the respondent companies. Even after filing this petition, the respondent companies are, in fact, throwing the fly ash generated in the power plant at various places in blatant violation of the provisions of the Act and the specific as well as general conditions imposed by the authorities. Bare reading of the affidavit-in-reply filed by respondent No.2 - Gujarat Pollution Control Board clearly shows that there is nexus between respondent No.2-Board and respondent companies as the subsequent reports prepared by respondent No.2 are inclusive.

25. It is further noticed that the petitioner has *inter-alia* vide affidavit dated

11.7.2011 averred that the power plant of the respondent company is actually built over the way of local Shiracha river and one arm of the river is totally blocked which may have serious impact on the lives of the public at large as well as the environment, leading to serious ecological imbalance. Therefore, serious issues posed in the present petition deserves to be studied and examined by some independent institutions having impeccable reputation in the field. The petitioner has further averred that certain parcels of land which was declared as "Reserved Forest" are allotted to the respondent SEZ developer.

26. It can further be noticed that respondent No.4-Company has filed affidavit-in-reply on 11.7.2011 denying the allegations made in the captioned writ petition and *inter-alia* submitted that they are running the port at Mundra since the year-1998 and as on 31.3.2011 they have invested Rs.23,586/- crores in Port and SEZ. Mundra Port is a multi user port servicing a diverse group of industries. The port is the closest sea port to the northern hinterland offering significant economical advantage to its user by way of transportation distance. Multi capability of the port enables it to handle all kinds of cargo, containers, crude oil, petroleum,

edible oils, food grains, fertilizers and other essential commodities. Several export oriented units use it as the mainstay port for exports. In addition to several commercial activities, it shall create secondary and tertiary job catalyzing the effect in the social infrastructure development of Mundra taluka. It is estimated that 2.91 lacs people will get employment and at present almost 15,921 persons are employed directly or indirectly.

27. The respondent No.4-Company has further submitted that they have obtained necessary permissions including environmental and CRZ clearances for the development and construction of the port and related back up facilities. They have carried out Environmental Impact Assessment studies before seeking such permissions. The Ministry of Environment and Forests, Government of India, after examining the Environmental Impact Assessment reports and after being satisfied about the fulfillment of the procedure have granted such clearances. Apart from the above, they have also obtained required permissions from the Gujarat Pollution Control Board. Lastly, they have submitted that not a single activity is pointed out which may amount to violation of environmental laws and as such respondent No.2 has already visited the premises

of respondent No.4-Company and has issued show cause notice to them.

28. The respondent No.5 has also filed affidavit-in-reply at page 713 of the compilation. In their affidavit-in-reply, amongst other contentions, they have stated that they are a company *inter-alia* engaged in the business of generation of electricity and has a power plant located within the SEZ developed by respondent No.4 in Mundra Taluka of Kutch District. They have further submitted that the power plant is in 3 phases. Phase I consists of 2 units, Phase II consists of 4 units and Phase III consists of 3 units and for all the phases, the Gujarat Pollution Control Board has granted consent to establish and Ministry of Environment and Forests, Government of India has granted environmental clearances separately. They have further submitted that water requirements of the power plant was to be met from sea-water which would be conveyed through a sea-water intake channel and effluent discharge, if any, would be through an outfall facility. After securing necessary permissions from the concerned authorities, they have entered into a user agreement with respondent No.4 which permits them to use the intake and outfall facilities of respondent No.4 and as at present there is no

effluent discharge, there is no requirement for outfall facility for the present. They have further submitted that the sea-water is brought into the reservoir via the common intake channel and such sea-water is mainly utilized within the plant for generation of steam and for cooling purpose. Part of the blow-down from the plant is treated in the effluent treatment plant and is utilized in the dust suppression system within the plant and other part of the blow-down is once again utilized within the plant for generation of steam and for cooling purpose along with additional sea-water from the reservoir. They have installed various equipments/facilities for environment management, such as, Electrostatic Precipitator, Chimney, Ash Handling System, Effluent treatment plant, Dust Extraction and Suppression System, Sewage Treatment Plant, etc and has invested about Rs.1225 crores and is incurring expenditure of about Rs.12 crore per annum for the maintenance of the said equipments.

29. In their affidavit-in-reply, respondent No.5 has further submitted that during the course of inspection on 8.4.2011, the Gujarat Pollution Control Board observed that fugitive emission is occurring due to movement of fly ash loaded dumper and other heavy vehicles and therefore issued directions under Section 31(A) of the Air

(Prevention and Control of Pollution) Act, 1981 to sprinkle water regularly on such roads so that no dust is generated due to vehicular movement and also directed for regular cleaning and wetting of ground in the area to prevent fugitive emission. In response, they have informed the Gujarat Pollution Control Board that they have installed 5 permanent ambient air quality monitoring stations, where sampling and monitoring is being carried out twice a week at each location by external third party agency and all monitoring results are within statutory limits and such monitoring reports are regularly submitted to the Gujarat Pollution Control Board. They have also engaged 4 mobile water sprinklers for regular water spraying on roads for dust suppression on all roads used for movement of material and has also dedicated mobile water sprinkler to spray water on roads used by fly ash loaded dumpers and other heavy vehicles and a mobile mechanical road sweeping machine for cleaning the area.

30. At this stage, it is pertinent to note that the Gujarat Pollution Control Board had also issued notice under Section 33(A) of the Water (Prevention and Control of Pollution) Act, 1974 alleging that during the inspection, it was observed that respondent No.5 has provided

kachcha open channel and kachcha reservoir for storage of sea water and directed them to carry out study and detailed assessment of quality of underground water in the surrounding area of the project site for groundwater contamination including salinity ingress through an independent external agency of national repute like National Productivity Council/NEERI or IIT Bombay, etc. In response thereto, they have informed the Gujarat Pollution Control Board that they have been carrying out environmental monitoring including ground water quality monitoring in surrounding villages through third party external agency and the monitoring results are regularly submitted to the Gujarat Pollution Control Board on regular basis which do not show deterioration of ground water quality in the said villages. Thereafter, they have further informed that they have engaged National Productivity Council as third party external expert agency to carry out detailed assessment of quality of underground water in the surrounding area of the project site for ground water contamination including salinity ingress.

31. Affidavit-in-reply is filed by Mr.Sujoy Banerjee, Divisional Forest Officer, on behalf of respondent No.6 on 27.1.2012 *inter-alia* submitting that fresh proposal for diversion of 1840 ha and 168.41 ha of reserved forest land for

development of port based Special Economic Zone in Mundra taluka in Kutch East Forest Division in favour of M/s.Mundra Port & Special Economic Zone was received from the Government of Gujarat vide their letter dated 22.1.2009. Upon consideration and examination, the Ministry of Environment and Forest, Government of India, New Delhi granted in principle approval to the proposal on 27.2.2009 and final approval was granted on 30.9.2009 subject to certain usual conditions. He has further submitted that this Court has vide order dated 26.4.2011 passed in Special Civil Application No.10104 of 2010 directed the Ministry of Environment and Forest, Government of India, New Delhi to constitute a team of independent experts to undertake physical verification of the site. Pursuant to this order, a committee was constituted vide order dated 7.7.2011 with following composition:-

1. Shri J.C.Kala, IFS(Retd), Former DGF & SS, Government of India.

2. Dr.A.S.Dogra, IFS(Retd), Former PCCF, Punjab.

3. Dr.Kamal Naidu, IFS(Retd), Former PCCF, Andhra Pradesh.

4. Prof.Ashwani Kumar, Dept. of Earthquake Engineering, IIT Roorkee, Uttarakhand.

32. Thereafter, vide order dated 12.7.2011 passed in Special Civil Application No.10104 of 2010, this Court further observed as under:

"In view of the fact that the Central Government has now constituted a Committee with regard to diversion of forest land in Mundra Taluka of Kutch district and that the said Committee is now looking into the matter, we are inclined to adjourn the matter to go through the expert opinion, if any, submitted by the Committee. However, we want to add that it will be better if the Central Government also obtain some expert opinion on the viability of projects in the sea coast area of seismic zone of Gujarat (Kutch) and if the Committee can suggest which type of industries can be located within the seismic zone and which type of industries which cannot be located in such zone. It may also decide the minimum distance of such industry from the coastal area. It will be open to the Committee to give hearing to the developers and other affected persons including the petitioners."

33. The aforesaid Committee visited the site on 8th to 10th August, 2011, however, could not verify the site completely because of rough sea weather and only an interim report could be prepared which is, as such, inconclusive. He has further submitted that, further information will be filed after receipt of site inspection report to be submitted by the Committee constituted by Ministry of Environment and Forest, Government of

India, New Delhi.

34. A further affidavit-in-reply is filed by Mr.A.Mehrotra, Director, Ministry of Environment and Forest, Regional Office, Bhopal, on behalf of respondent No.6, *inter-alia*, submitting that the Ministry of Environment and Forest, Government of India, New Delhi received the representation from one Shri Bharat Patel, General Secretary, Machimar Adhikar Sangharsh Sangathan, Gujarat, and on the basis of the said complaint, necessary action was taken and a show cause notice was issued on 15.12.2010 to M/s.Mundra Port Special Economic Zone Limited and in the said show cause notice, directions were issued for compliance by the Gujarat State Coastal Zone Management Authority (GSCZMA) constituted as per directions of the Hon'ble Supreme Court in Writ Petition No.664/1993 vide letter dated 16.5.2011. GSCZMA directed the M/s.Mundra Port Special Economic Zone Limited to expedite the matter for obtaining the CRZ maps as desired by the Ministry of Environment and Forest, Government of India, New Delhi and also to request the Ministry to extend the time limit and to inform that GSCZMA would be able to submit its final report as and when maps are received from M/s.Mundra Port Special Economic Zone Limited.

35. It is further noticed that the affidavit has been filed by the petitioner on 19.6.2012, *inter-alia* submitting that the respondent companies are continuing destruction of mangrove forest and are blocking the creeks in violation of environmental laws. He has also annexed various photographs in support of his say. He has further submitted that, in view of such position, the present writ petition deserves to be studied and examined by some independent institution having impeccable reputation in the field. Further affidavit has also been filed by the petitioner on 5.3.2013 *inter-alia* submitting that during the pendency of this writ petition, the Ministry of Environment and Forest, Government of India, New Delhi has appointed a committee by way of office memorandum dated 14.9.2012 with broad terms of reference and requested this Court to defer the hearing of the present writ petition till submission of the report by the Committee.

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36. An additional reply affidavit on behalf of Ministry of Environment and Forest has been filed by Mr.Thirunavukkarasu, Deputy Director, Ministry of Environment and Forest, Government of India, stating that in compliance of the order dated 3.7.2013 passed by this Court, they have constituted a committee under the Chairmanship of

Ms.Sunitha Narain to examine the allegations and to submit a report. The Committee has submitted its report on 18.4.2013. The report has pointed out serious violations and made recommendations for effective deterrence for non-compliance and remedial measures which includes creation of an Environment Restoration Fund, mangrove conservation, strengthening the monitoring abilities, preservation of the creeks, maintenance of inter-tidal action, fly ash management and disposal, lining of intake and outfall channels, ground water quality monitoring, CSR activities for fishermen and cancellation of North Port project etc. The recommendations of the Committee have been accepted by the Ministry of Environment and Forest, Government of India, New Delhi.

37. Accordingly, show cause notices to M/s.Adani Port and SEZ Pvt. Ltd and Gujarat Maritime Board, letter to Principal Secretary, Environment Department, Government of Gujarat, letter to Gujarat Coastal Zone Management Authority have been issued with various directions. Following were the directions issued to M/s.Adani Port and SEZ Pvt. Ltd.:-

- (i) North Port area and Bocha Island should be declared as conservation zone and the area should be protected. All the creeks, water

bodies and reclaimed land in these areas should be restored and brought back to pre-2005 status within six months.

- (ii) Submit details of the airstrip/aerodrome including the location with coordinates, facilities, dimension etc. along with the details of clearances obtained.
- (iii) Ensure that all the projects constructed within the SE1 should possess EC under EIA Notification, 2006 as applicable. The details shall be submitted.
- (iv) Prepare a specific action plan to protect the livelihood of fishermen whose marine ecology and catch and access to the sea have been seriously affected by the violations committed by the Project Proponent within six months with a specific plan for fishermen, their access and protection of their livelihood. The plan should include a clear schedule of implementation and monitoring. Further APSEZ Ltd. shall provide necessary support for the development of exclusive fishing harbor at Badreshwar.
- (v) Shall consider the voluntary return of Gauchar or village common land and also invest in improving productivity of this land with villagers.
- (vi) APSEZ Ltd shall submit Disaster Management Plan of the different projects to the State Government so as to enable the State Government to put in place a District Disaster Management Plan to ensure human safety in and around the project area.
- (vii) As a deterrent for non-compliance and violations, APSEZ Ltd shall set up an Environment Restoration Fund- distinct and separate from CSR activities under Company Law-amounting to Rs.200 crores or 1% of

project cost, whichever is higher, to be used for remediation of environmental damage in Mundra. The Fund will be operated under the Chairmanship of Secretary E&F, and will include following activities as enumerated by the Committee.

- (a) Protection of marine ecology;
- (b) Protection and conservation of mangroves including development of new mangrove conservation areas;
- (c) Restoration and conservation of creeks;
- (d) Independent studies and monitoring of the entire project areas, including cumulative impacts and public data disclosure systems;
- (e) Social infrastructure and livelihood support for fishers community including development of access of fishers from their temporary settlements to villagers.

38. The Gujarat Maritime Board has been directed to submit a time-bound action plan with cost estimates for restoration of mangroves and creeks in North Port site to their original status. The action plan should also contain provisions for conservation and maintenance of the restored ecosystems including declaration of Bocha Island as conservation zone. Pending decision on the Show Cause Notice, the status quo ante for any constructions/development in the site as on date should be maintained.

39. The Gujarat Coastal Zone Management

Authority has been directed to:-

- (i) Review and make assessment of the matter relating to Samundra township/Sterling hospital. New and verifiable coordinates should be mapped and supplied to MoEF, and also put in public domain for verification. This assessment should be based on site visit and fresh collection of co-ordinates through a joint team.
- (ii) A joint Monitoring Committee of GCZMA, GPCB and RO Bhopal may be put in place for at least two years or as per requirement to monitor the developments/compliance of conditions and directions.

40. Following were the directions issued to the State Government :-

- (i) As a deterrent for non-compliance and violations, M/s.APSEZ Ltd is directed to set up an Environment Restoration Fund- distinct and separate from CSR activities under Company Law- amounting to Rs.200 crores or 1% of project cost, whichever is higher, to be used for remediation of environmental damage in Mundra. The Fund will be operated under the chairmanship of Secretary E&F, and will include activities as enumerated by the Committee. In this regard a committee under the Principal Secretary (Env), Government of Gujarat be set up by Government of Gujarat including representative by MoEF (Ro, Bhopal) to finalise the action plan and modalities of the Environmental Restoration Fund and periodically report the progress to Secretary (E&F).

- (ii) The State Government should initiate necessary action to build exclusive fishing harbours for the livelihood support of the fishermen of Bhareshwar in a period of two years.
- (iii) The State Government shall consider linking Disaster Management Plan of the different project proponents of APSEZL to the "District Disaster Management Plan" in the interest of the vulnerable people in and around the project area to ensure human safety with early warning practices.
- (iv) The State Government should review the policy of acquisition and transfer of Gauchar or village common lands with specific reference to environmental impact and livelihood.
- (v) The State Government shall guide and supervise the Cumulative Impact Assessment studies to be undertaken by the APSEZPL for the projects already granted so that future developments can be assessed for clearance based on cumulative impacts.

41. It is also noticed that a further affidavit was filed by the petitioner on 24.4.2013 submitting that the committee constituted by the Ministry of Environment and Forest, Government of India, New Delhi has submitted its report. Bare reading of the recommendations of the committee goes to show that the respondent companies have flouted the norms and has committed blatant breach and, as such, has acted in a way which is detrimental to

the interest of the villagers due to their unmindful developmental activities.

42. It is further noticed that an additional reply affidavit has been filed on behalf of Ministry of Environment and Forests and Climate Change, Government of India, on 26.9.2014 by Mr.Thirunavukkarasu, Joint Director, Ministry of Environment and Forests and Climate Change, Government of India, *inter-alia* stating that the APSEZ Ltd has submitted its reply on 14.10.2013 in response to the Show Cause Notice of MoEF. GMB has submitted reply on 25.10.2013. The Director, Environment Department, Government of Gujarat/Member Secretary, GCZMA has submitted reply on 13.10.2014. Since the matter involves various complex issues, the examination took time. It is expected that the final order in the matter could be issued within three months.

43. Thereafter, a further affidavit is filed by the petitioner on 4.12.2013 *inter-alia* submitting that the report of the committee constituted by the Ministry of Environment and Forest, Government of India, New Delhi does not cover all issues raised in this writ petition. One of the core issues of ingress of salinity is not dealt with by the committee. He has therefore requested to appoint an independent committee

consisting of a body having impeccable reputation in the field of environment wherein the representative from the petitioner's trust may also be a member. A further affidavit is also filed by the petitioner on 25.9.2014 *inter-alia* stating that they are sought to be wrongly implicated in fake criminal cases at the instance of the respondent companies and they are apprehending threat to their life. They have also invoked judicial process/machinery against such fake cases.

44. Mr. Siraj Gori, learned advocate for the petitioner vehemently argued that all members of the petitioner association are farmers having their agricultural land in the area where the respondent authorities have accorded permission to respondent Nos.4 & 5 to construct power generation station as well as port and SEZ. The fertile land of the farmers has been badly affected due to the activities of the respondent companies and serious environmental issues have cropped up due to blatant violation of environmental norms. Mangrove forests has been destroyed as well as certain rare species of plants have been destroyed or are on the verge of extinction. Mundra Taluka is known for rare species of Indian Dates and orchards of chiku, coconut, lemon and other various crops. However,

due to activities of the respondent companies, there is sharp decline in production from fruit bearing trees and agricultural fields. Mr.Gori has further submitted that the respondent companies are drawing sea-water through kachchha channel without construction of concrete canal and they are storing such sea water in a huge kachcha pond, thereby resulting in seepage of saline water in the area. They have not created any storage or any facility for disposal of fly ash in contravention of the provisions of Air Act, 1981.

45. Mr.Gori, learned advocate for the petitioner has further submitted that the respondent companies are going on with the activity of destroying sand dunes which are very important from the ecological as well as religious point of view as many religious places are situated within the sand dunes. Saline water has entered the bore wells and other wells of farmers, thereby affecting various farm yields due to unmindful activities of respondent companies. Even power project is constructed on the Siracha river. Mr.Gori has also submitted that manifest violations of the norms by the respondent companies has been noticed by various authorities and show cause notice was issued by the Ministry of Environment and Forests,

Government of India on 15.12.2010 which is still undecided. However, in spite of such show cause notice, the respondent companies are continuing wide spread destruction of mangrove forests. It is pertinent to submit that the aforesaid show cause notice is silent about the issues like digging kachcha channel to draw sea water or destruction of sand dunes. Therefore, in order to have a comprehensive examination of the issues raised in this writ petition, Mr.Gori has requested to appoint an independent committee of persons with impeccable repute in the field of environment. Lastly, in support of his submissions, Mr.Gori has placed reliance on the decision of the Hon'ble Supreme Court in the case of **Indian Council for Enviro-Legal Action v. Union of India and Ors.** reported in (2011) 8 SCC 161. The Hon'ble Supreme Court has observed in para 4, 37, 38, 149, 150, 161, 162, 194, 195, 196 and 197 are as under:-

"4. It seems that the court was prophetic when it made observation that at times men with means are successful in avoiding compliance of the orders of this court. This case is a classic illustration where even after decade and a half of the pronouncement of the judgment by this court based on the principle of 'polluter pays', till date the polluters (concerned industries in this case) have taken no steps to ecologically restore the entire village

and its surrounding areas or complied with the directions of this court at all. The orders of this court were not implemented by keeping the litigation alive by filing interlocutory and interim applications even after dismissal of the writ petition, the review petition and the curative petition by this court."

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"37. All issues raised in this application have been argued and determined by an authoritative judgment of this Court about fifteen years ago. This application has been filed to avoid liability to pay the amount for remediation and costs imposed by the Court on the settled legal principle that polluter pays principle. In other words, the applicant through this application is seriously making an effort to avoid compliance of the order/judgment of this Court delivered fifteen years ago. The tendency must be effectively curbed. The applicant cannot be permitted to avoid compliance of the final order of this court by abusing the legal process and keep the litigation alive.

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38. The applicant is in business where sole motto of most businessmen is to earn money and increase profits. If by filing repeated applications he can delay in making payment of huge remediation costs then it makes business sense as far as the applicant is concerned but the Court must discourage such business tactics and ensure effective compliance of the Court's order. It is also the obligation and

bounden duty of the court to pass such order where litigants are prevented from abusing the system."

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"149. It is settled principle of law that no one can take advantage of his own wrong. Unless courts disgorge all benefits that a party availed by obstruction or delays or non-compliance, there will always be incentive for non compliance, and parties are ingenious enough to come up with all kinds of pleas and other tactics to achieve their end because they know that in the end the benefit will remain with them.

150. Whatever benefits a person has had or could have had by not complying with the judgment must being disgorged and paid to the judgment creditor and not, allowed to be retained by the judgment-debtor. This is the bounden duty and obligation of the court. In fact, it has to be looked from the position of the creditor. Unless the deprivation by reason of delay is fully restituted, the creditor as a beneficiary remains a loser to the extent of the un-restituted amount."

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"161. The terms 'unjust enrichment' and 'restitution' are like the two shades of green - one leaning towards yellow and the other towards blue. With restitution, so long as the deprivation of the other has not been fully compensated for, injustice to that

extent remains. Which label is appropriate under which circumstances would depend on the facts of the particular case before the court. The courts have wide powers to grant restitution, and more so where it relates to misuse or non-compliance with court orders.

162. We may add that restitution and unjust enrichment, along with an overlap, have to be viewed with reference to the two stages, i.e., pre-suit and post-suit. In the former case, it becomes a substantive law (or common law) right that the court will consider; but in the latter case, when the parties are before the court and any act/omission, or simply passage of time, results in deprivation of one, or unjust enrichment of the other, the jurisdiction of the court to levelise and do justice is independent and must be readily wielded, otherwise it will be allowing the Court's own process, along with time delay, to do injustice."

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"194. We reiterate that the finality of the judgment of the Apex Court has great sanctity and unless there are extremely compelling or exceptional circumstances, the judgments of the Apex Court should not be disturbed particularly in a case where review and curative petitions have already been dismissed.

195. This Court has consistently taken the view that the judgments delivered by this Court while exercising its jurisdiction under Article 136 of the

Constitution cannot be reopened in a writ petition filed under Article 32 of the Constitution. In view of this legal position, how can a final judgment of this Court be reopened by merely filing interlocutory applications where all possible legal remedies have been fully exhausted? When we revert to the facts of this case, it becomes abundantly clear that this Court delivered final judgment in this case way back in 1996. The said judgment has not been permitted to acquire finality because the respondent Nos.4 to 8 had filed multiple interlocutory applications and has ensured non-compliance of the judgment of this Court.

196. On consideration of pleadings and relevant judgments of the various courts, following irresistible conclusion emerge:

i) The judgment of the Apex Court has great sanctity and unless there are extremely compelling, overriding and exceptional circumstances, the judgment of the Apex Court should not be disturbed particularly in a case where review and curative petitions have already been dismissed.

ii) The exception to this general rule is where in the proceedings the concerned judge failed to disclose the connection with the subject matter or the parties giving scope of an apprehension of bias and the judgment adversely affected the petitioner.

iii) The other exception to the rule is the circumstances incorporated in the review or curative petition are such that they must inevitably shake public

confidence in the integrity of the administration of justice if the judgment or order is allowed to stand.

These categories are illustrative and not exhaustive but only in such extremely exceptional circumstances the order can be recalled in order to avoid irreparable injustice.

197. The other aspect which has been dealt with in great details is to neutralize any unjust enrichment and undeserved gain made by the litigants. While adjudicating, the courts must keep the following principles in view.

1. It is the bounden duty and obligation of the court to neutralize any unjust enrichment and undeserved gain made by any party by invoking the jurisdiction of the court.

2. When a party applies and gets a stay or injunction from the court, it is always at the risk and responsibility of the party applying. An order of stay cannot be presumed to be conferment of additional right upon the litigating party.

3. Unscrupulous litigants be prevented from taking undue advantage by invoking jurisdiction of the Court.

4. A person in wrongful possession should not only be removed from that place as early as possible but be compelled to pay for wrongful use of that premises fine, penalty and costs. Any leniency would seriously affect the credibility of the judicial system.

5. No litigant can derive benefit from

the mere pendency of a case in a court of law.

6. A party cannot be allowed to take any benefit of his own wrongs.

7. Litigation should not be permitted to turn into a fruitful industry so that the unscrupulous litigants are encouraged to invoke the jurisdiction of the court.

8. The institution of litigation cannot be permitted to confer any advantage on a party by delayed action of courts."

46. On the other hand, Mr. Mihir Thakore, learned Senior Counsel appearing for the respondent company vehemently contended that they have carried out their activities on the land allotted to them, as demarcated in the maps of the revenue department and as per the terms and conditions laid down in the allotment orders and environmental clearance certificates and in any case, the Committee constituted by the Ministry of Environment and Forests, Government of India, to look into the allegations has submitted their report with recommendations and it is for the Government to take any remedial or decisive action and they would abide by such directions. In support of his submissions, Mr. Thakore has placed reliance on following decisions:-

1. In Judgment dated 8.12.2014

passed in **Writ Petition (PIL) No.199 of 2014**, in the matter between **Kheti Vikas Seva Trust v. State of Gujarat & ors.**, this Honourable Court has observed in para 3, 4, 5 and 6 as under:-

"3. During the course of hearing, Mr.Gori, learned counsel for the petitioners has taken us through various environmental clearance certificates which came to be issued by the Ministry of Environment and Forest, Government of India vide various orders passed since 2007 in favour of two different respondent companies. We have also been taken to various conditions which came to be imposed as part of environmental clearance certificates alleged to have been breached by the respondent companies. On taking through the aforesaid alleged breach of special and general conditions of the environmental clearance certificates, learned counsel for the petitioners seeks revocation of conditional environmental clearance and proper implementation and monitoring of the same.

4. On going through the aforesaid environmental clearance certificates, it clearly reveals that the aforesaid specific and general conditions have been imposed for compliance thereof on the part of the respondent companies and in case of any breach thereof, it was open to the aggrieved person to file the complaint before the Ministry of Environmental and Forest for its due compliance thereof and if the person aggrieved is not satisfied with the action or reasons given by the Ministry of Environmental and Forest, then further remedy is

provided under the earlier provisions of section 11 of the National Environment Appellate Act 1997 and after its repeal, under section 16(h) of the National Green Tribunal Act 2010.

5. Indisputably, on going through the material available on record, the petitioners have neither approached the Ministry of Environment and Forest, New Delhi nor the Green Tribunal for ventilating their grievance as regards the alleged breach of special as well as general conditions by the respondent companies.

6. As narrated above, efficacious remedy is provided under the provisions of the aforesaid Act and Special Tribunal is also constituted under the provisions of the National Green Tribunal Act, 2010 where the petitioners can point out their grievance by leading the evidence and after examining the rival claims along with the documentary evidence if adduced by either party, the concerned authority or the Tribunal can pass appropriate order. In this view of the matter, the present appeal in the nature of Public Interest Litigation is not maintainable. Therefore, the petition is dismissed. Notice is discharged. There shall be no order as to costs."

2. In Judgment dated 6.1.2015 passed in **Writ Petition (PIL) No.247 of 2014**, in the matter between **Mangal Murji Ghadavi v. State of Gujarat & ors.**, this Honourable Court has observed in para 3, 4 and 5 as under:-

"3. During the course of hearing, learned advocate for the respective parties taken us to the material available on record. Material available on record clearly indicates that grievances, precisely raised by the present petitioner are concerning the environmental issue, arisen due to the alleged actions undertaken by respondent No.4. After having received the environmental clearance certificate, respondent No.4 Company has constructed a channel in the year 2009. Respondent No.4 - Company is using sea water for its power plant through intake channel which is not constructed but it is in a raw form and natural form. According to the petitioner, it should be a permanent pakka channel made of cement. This amounts to challenging the Environmental Clearance Certificate granted to respondent No.4.

4. Learned advocate for the respondents has made reference to Section 16 (h) of the National Green Tribunal Act, 2010, which reads thus :

"16. Tribunal to have appellate jurisdiction. (h) an order made, on or after the commencement of the National Green Tribunal Act, 2010, granting environmental clearance in the area in which any industries, operations or processes or class of industries, operations and processes shall not be carried out or shall be carried out subject to certain safeguards under the Environmental (Protection) Act, 1986 (29 of 1986)."

5. Therefore, without entering into the merits of the case, we dismiss this petition on the ground that the petitioner

is having alternative remedy under Section 16 (h) of the National Green Tribunal Act, 2010. Petition is dismissed accordingly. Notice discharged. There shall be no order as to costs."

3. In CAV Judgment dated 21.1.2015 delivered in **Writ Petition (PIL) No.122 of 2013**, in the matter between **Aasariya Lakha Gilva v. Union of India & ors.**, this Honourable Court has observed in para 18.1, 19 and 20 as under:-

"18.1 As regards the contention that the report has been filed without relying upon experts opinion, we do not find any force in the said contention as the Committee constituted by the Collector, Bhuj comprises of high ranking Government officials having adequate technical expertise. As regards the contention for appointing an independent fact finding commission to look into the matter as the report of the aforesaid committee is not satisfactory, in our view and in our reading of the report, no blockage, obstruction and bunding to the natural flow of above 14 rivers in question are found. Prima-facie, in our opinion, there is no cause or concern to appoint an independent fact finding commission to look into the matter. We are also apprised of the facts that the respondent-company has been granted phase-wise Environmental Clearance beginning the year 1995 by the Ministry of Environment and Forests (MOEF), Government of India, New Delhi for their project and the State Government has allotted various parcels of lands to the respondent-company and

they have developed the area pursuant to such Environmental Clearance and allotment of lands. Therefore, we cannot accede to the above request made by the learned counsel for the petitioners.

19. We have gone through the decisions of this Court as well as of the Hon'ble Supreme Court relied upon by the learned Senior Counsel for the petitioners. We do not find the *ratio decidendi* propounded by the said decisions will be of any help to the petitioners in the facts and circumstances of the present case. The prime contention or concern which appears on the part of the petitioners is that 14 rivers were flowing and due to allotment of the land and resultant development, the respondent-company has blocked natural flow of water in above 14 rivers which has resulted into bunding of rivers. However, as narrated above, the report submitted by the Committee constituted by the Ministry of Environment and Forests (MoEF), New Delhi as well as the report of the inspection carried out by high ranking Government officials clearly reveals that no where natural flow of rivers is blocked or obstructed in such a way that it may result into bunding. Even otherwise also, 14 rivers appear to be seasonal in nature and so during rainy season, there may be flowing water and during the end of winter and summer, they must be getting dry. The nature of flowing water is such if there is any blockage in the way of canal, then naturally, it may result into bunding of adjacent land, but in both the reports referred above, nowhere bunding is noticed which itself clearly indicative that the respondent company has not done material change in the flow of water and river-bed by which major

blockage results into bunding. In view of the aforesaid observations made by the committee, we are convinced that no direction is required to be issued in the matter and the complaint and grievance raised by the petitioners appears to be baseless.

20. In view of the aforesaid discussion, we do not find any merit in the writ petition. The writ petition fails and is accordingly dismissed. Notice stands discharged. No order as to cost."

47. Mr.Shakeel Qureshi, learned advocate for respondent No.6 submitted that the additional reply affidavit dated 26.9.2014 filed on behalf of Ministry of Environment and Forests and Climate Change, Government of India clinches the issue. On the basis of the report submitted by Sunitha Narain Committee, show cause notices have been issued to M/s.Adani Port and SEZ Pvt. Ltd and Gujarat Maritime Board and letters have been addressed to Principal Secretary, Environment Department, Government of Gujarat, and Gujarat Coastal Zone Management Authority with various directions. They have duly submitted their response. However, as the matter involves complex issues, the examination took time and it is expected that the final order in the matter could be issued within three months.

48. Having heard both the parties and upon minutely perusing the records made available to

us, it is evidently clear that the main grievance raised by the petitioner in this writ petition is to direct the respondent authorities to take effective steps against the respondent companies who are causing large scale damage to the ecosystem of the coastal area and also to take effective measures to protect and preserve the mangrove forests, areas, and to appoint an independent committee to examine the serious issues raised in the present writ petition. The petitioner has also prayed to restrain the respondent companies from drawing sea water by using kachcha channel, and storing saline water in kachcha pond dug at the site, and reclaiming the lands by filling up the creeks.

49. As regards the grievance for inadequate fly ash management and disposal and prayer to restrain the respondent companies from drawing sea water by using kachcha channel and storing saline water in kachcha pond dug at the site, it is noticed from the affidavit-in-reply filed by respondent No.5 that pursuant to the directions issued by the Gujarat Pollution Control Board under Section 31(A) of the Air (Prevention and Control of Pollution) Act, 1981, they have installed 5 permanent ambient air quality monitoring stations, where sampling and monitoring is being carried out twice a week at

each location by external third party agency and all monitoring results are within statutory limits and such monitoring reports are regularly submitted to the Gujarat Pollution Control Board. They have also engaged 4 mobile water sprinklers for regular water spraying on roads for dust suppression on all roads used for movement of material and has also dedicated mobile water sprinkler to spray water on roads used by fly ash loaded dumpers and other heavy vehicles and a mobile mechanical road sweeping machine for cleaning the area.

50. It is further noticed from the affidavit-in-reply filed by respondent No.5 that pursuant to the notices issued by the Gujarat Pollution Control Board under Section 33(A) of the Water (Prevention and Control of Pollution) Act, 1974 alleging that during the inspection, it was observed that respondent No.5 has provided kachcha open channel and kachcha reservoir for storage of sea water and directed them to carry out study and detailed assessment of quality of underground water in the surrounding area of the project site for groundwater contamination including salinity ingress through an independent external agency of national repute like National Productivity Council/NEERI or IIT Bombay, etc. In response thereto, they have informed the Gujarat

Pollution Control Board that they have been carrying out environmental monitoring including ground water quality monitoring in surrounding villages through third party external agency and the monitoring results are regularly submitted to the Gujarat Pollution Control Board on regular basis which do not show deterioration of ground water quality in the said villages. Thereafter, they have further informed that they have engaged National Productivity Council as the third party external expert agency to carry out detailed assessment of quality of underground water in the surrounding area of the project site for ground water contamination including salinity ingress.

51. In view of the above position, we are convinced that adequate measures are being undertaken by the respondent company to tackle the menace of fly ash management and disposal and issue of salinity ingress.

52. As regards the contention of the learned counsel for the petitioner that even power project is constructed on the Siracha river, we have come across such similar contention while deciding Writ Petition (PIL) No.122 of 2013 and other cognate matters. The prime contention or concern on the part of the petitioner in the aforesaid matter was that 14 rivers were flowing

and due to allotment of the land and resultant development, the respondent-company has blocked natural flow of water in above 14 rivers which has resulted into bunding of rivers. A committee of high ranking Government officials was constituted by the Collector, Bhuj and the said committee conducted a site inspection on 19.9.2014 and prepared rojkam and has also taken photographs. The Committee found that there is no bunding and obstruction to the natural flow of water by the national highway / state highway, railway bridge with APSEZ area.

53. As regards Siracha river, the Committee, after site inspection, had come to following conclusion:

Sr. No.	Name of the river	Remarks
1	Shiracha Chhello:	No wall has been constructed in Shiracha Chhello. In the river portion, barbed wire fencing can be seen. From the photographs it is clearly visible that the water can flow through the culvert of the Adani Railway Road Bridge, No type of obstruction or bunding could

Sr. No.	Name of the river	Remarks
		be seen in such passages.

54. Upon examining the issues raised in the aforesaid Writ Petition, this Court came to the conclusion that "even otherwise also, 14 rivers appear to be seasonal in nature and so during rainy season, there may be flowing water and during the end of winter and summer, they must be getting dry. The nature of flowing water is such if there is any blockage in the way of canal, then naturally, it may result into bunding of adjacent land, but in both the reports referred above, nowhere bunding is noticed which itself clearly indicative that the respondent company has not done material change in the flow of water and river-bed by which major blockage results into bunding. In view of the aforesaid observations made by the committee, we are convinced that no direction is required to be issued in the matter and the complaint and grievance raised by the petitioner appear to be baseless.

55. In that view of the matter, we are convinced that the contention of the learned counsel for the petitioner that even power project is constructed on the Siracha river appears to be baseless and misplaced.

56. As regards other contention of the learned counsel for the petitioner that issues like destruction of sand dunes which are in existence since hundreds of years are not part of the report/show cause notice, we had also come across such similar issues while deciding *Writ Petition (PIL) No.210 of 2014*. This Court, while dealing the aforesaid issues, came to the following conclusions at para 20 & 21 of the judgment delivered 18.2.2015:-

"20. The prime contention or concern which appears on the part of the petitioner is that the respondent No.2 company has been carrying on construction / demolition / flattening activities on all sand dunes in and around Tunda and Vandh villages, Taluka : Mundra, Kutch, without any kind of permission from any authority, causing tremendous damage to the ecology of the region and continuation of such activities will lead to a situation where the loss caused to the environment will be irreversible. The sand dunes have never been allotted to the respondent No.2 company and inspite of that, they are clandestinely flattening the dhuva backwards and claiming that the land is created as a result of reclamation activities by dumping dredge spoils. However, as narrated above, the reports submitted by the Collector, Kutch, pursuant to this Court's directions clearly reveals that Bharadi Mata Dhuva, Vekri Dhuva and Bet Dhuva are not allotted to the User Agency,

however, the area forming the part of the Mor Dhuva has been allotted to the User Agency in the year 2009 and during the site visit of the Committee constituted by the Collector, Kutch, it is noticed that the company has made a temporary road and on the northern side, a channel for discharge of water is seen. No other work is seen in this area. No construction activities are seen at the site proposed for ship recycling facility. This conclusion is also confirmed during the site inspection carried out by the Regional Office of the Ministry of Environment and Forests (MoEF) at Bhopal on 25.9.2014, as detailed in their affidavit dated 3.11.2014. Moreover, the committee constituted by the Ministry of Environment and Forests (MoEF), New Delhi to look into the complaints regarding severe impact upon environment safety and integrity committed by M/s.Adani Port and SEZ Ltd has submitted its detailed report with recommendation to the Government of India and the same is under consideration of the competent authorities. In view of the aforesaid observations made by the committee, we are convinced that no directions is required to be issued in the matter and the complaint and grievance raised by the petitioner appears to be misplaced.

21. In view of the aforesaid discussion, we do not find any merit in this writ petition. This writ petition fails and is accordingly dismissed. No order as to cost."

57. In view of the aforesaid position, we find no force in the contention raised by the

learned counsel for the petitioner that the respondent company is going on with the activity of destroying sand dunes which are in existence since hundreds of years.

58. On going through the records, we have noticed that a copy of report of the committee constituted by the Ministry of Environment & Forests, Government of India, New Delhi to look into the complaints regarding severe impact upon environment safety and integrity committed by M/s.Adani Port and SEZ Ltd is filed in this writ petition. It is further noticed that upon receiving various complaints regarding alleged severe impact upon environmental safety and integrity in Mundra Port and SEZ Limited in Mundra - Kutch committed by M/s.Adani Port and SEZ Ltd., and in view of the present Writ Petition in the nature of Public Interest Litigation filed in this Court alleging violation of Environmental Clearance by M/s.Adani Port and SEZ Ltd., the Ministry of Environment & Forests, Government of India, vide Office Memorandum dated 14/9/2012 constituted a Committee for inspection of M/s.Adani Port and SEZ Ltd., Mundra to look into the complaints regarding severe impact upon environment safety and integrity committed by M/s.Adani Port and SEZ Ltd. The said committee consisted of following members:-

1. Ms.Sunita Narain, Chairperson
2. Shri Anthony Gnanamuthu, Member
3. Prof. R.Ramesh, Member
4. Dr.A.Mehrotra, Member
5. Shri Lalit Kapur, Member.

59. The broad terms of reference of the Committee for inspection of M/s.Adani Port and SEZ Ltd., are to examine:-

(a) the allegations regarding bunding /diversion / blocking of creeks and reclamation etc. and thereby distortion of original HTL.

(b) the HTL submitted by the Proponent and HTL of approved Coastal Zone Management Plan.

(c) whether construction of Mundra port, roads, railway was taken up prior to grant of Forest/ Environment Clearance.

(d) the development of port with respect to the approved components.

(e) compliance of the conditions of the Environmental and CRZ clearance granted for the port development.

(f) the destruction of mangroves and levelling of sand dunes.

(g) the development of Power Plant with respect to the approved components.

(h) compliance to the conditions of the

Environmental clearance granted for the Power Plant.

(i) the likely impacts on agriculture due to ingress of salinity due to creation of huge water body of sea water for Adani Power Plant at Mundra Taluka.

(j) the issues related to handling of fly ash by Adani Power Limited and particularly with reference to the Notification on utilisation of fly ash.

(k) the issues related to earthquake / Tsunami/ other natural calamities and soil liquefaction which may be impacted adversely by the project.

60. The said Committee visited the site and submitted its report to the Government of India on 18/4/2013. On going through the report, it is noticed that the Committee has observed at page 12 of their report that in all conditions for clearance it has been made clear that no creeks are to be blocked during the construction and operation of the project. It has also been repeatedly conveyed that the natural drainage of the area should not be affected due to the project and no filling/reclamation of creeks is allowed. Lastly, the said Committee has come to the conclusion that the Adani Waterfront and Power Plant Project, which has been granted clearance in different phases beginning the year-

1995 has led to massive ecological changes with adverse impacts. Amongst the several reformatory measures cited, the Committee has recommended following measures for project clearance conditions and post clearance monitoring:

1. The current regulatory system is not able to handle the complexity and size of projects of this nature. There is an urgent need to strengthen the monitoring abilities and to bring in public oversight.
2. The monitoring and auditing of such a large project is only possible, if the clearance conditions are specific and detailed, geo-referenced and there is a landsat imagery analysis to benchmark the project area, pre-construction. Without these benchmarks, it is not possible, to ascertain the extent and scale of the violations committed during construction and operation phase.
3. More, importantly, a system should be developed so that all monitoring data is widely accessible by local communities to use and comprehend in terms of impacts.

61. Lastly, the Committee has recommended that there is a need to create a monitoring system to ensure that corrective action suggested by this report is taken within a time-bound manner. While handing over the report to the Hon'ble Minister, Ministry of Environment and Forests, New Delhi, the Committee observed that they are aware that the issues before them are important in terms of safeguarding coastal ecology as well as livelihoods of people and that this report will help to settle the controversy and conflict to a large extent, by presenting factual information and analysis on what has gone wrong, as well as detailed recommendation on the future plan for remedial action, and that their overall assessment is that there are instances of violations and non-compliance with environmental conditions, which need to be addressed and effective deterrents are required to be placed for the future and urgent steps are required to be taken to repair damage and to mitigate future harm.

62. As regards the grievances of the petitioner regarding destruction of mangrove forests, handling of fly ash, reclamations of the lands by filling up the creeks and to take effective measures to protect and preserve the

mangrove forests and sand dune areas, and also to direct the respondent authorities to take effective steps against the respondent companies who are causing large scale damage to the ecosystem of the coastal area, we have noticed that the said grievance forms the terms of reference to the aforesaid Committee constituted for inspection of M/s.Adani Port and SEZ Ltd. The Committee is seized of the matter and has given suitable recommendations for decisive action and/or remedial action to all concerned in the matter.

63. As regards the request made by the petitioner to appoint an independent committee consisting of a body having impeccable reputation in the field of environment wherein the representative from the petitioner's trust may also be a member to examine the serious issues raised in this writ petition, we have noticed that the committee constituted by the Ministry of Environment and Forests, Government of India, New Delhi, to look into the complaints regarding severe impact upon environment safety and integrity committed by M/s.Adani Port and SEZ Ltd have come to the conclusion that the Adani Waterfront and Power Plant Project, which has been granted clearance in different phases beginning the year-1995 has led to massive

ecological changes with adverse impacts. Amongst the several reformatory measures cited, the Committee has also recommended many measures for project clearance conditions and post clearance monitoring. The Committee has also recommended that there is a need to create a monitoring system to ensure that corrective action suggested by this report is taken within a time-bound manner. While handing over the report to the Hon'ble Minister, Ministry of Environment and Forests, New Delhi, the Committee observed that they are aware that the issues before them are important in terms of safeguarding coastal ecology as well as livelihoods of people and that this report will help to settle the controversy and conflict to a large extent, by presenting factual information and analysis on what has gone wrong, as well as detailed recommendation on the future plan for remedial action, and that their overall assessment is that there are instances of violations and non-compliance with environmental conditions, which need to be addressed and effective deterrents are required to be placed for the future and urgent steps are required to be taken to repair damage and to mitigate future harm. Thus, an independent committee has already been constituted and the said committee has also submitted its report and the same is under consideration of the competent authorities.

Therefore, *prima facie*, in our considered opinion, there is no cause or concern to appoint another independent committee to look into the matter. We are also apprised of the facts that the respondent company has been granted Environmental Clearance by the Ministry of Environment and Forests (MoEF), Government of India, New Delhi, for their project and the State Government has allotted various parcels of lands to the respondent company and they have developed the area pursuant to such environmental clearance and allotment of lands. Therefore, we cannot accede to the request made by the learned counsel for the petitioner to appoint an independent committee to look into the matter.

64. We have gone through the decision of Hon'ble Supreme Court relied upon by the learned Counsel for the petitioner in support of his submissions. We do not find the *ratio decidendi* propounded by the said decision will be of any help to the petitioner in the facts and circumstances of the present case. We are also apprised of the facts that the respondent-company has been granted phase-wise Environmental Clearance beginning the year-1995 by the Ministry of Environment and Forests (MOEF), Government of India, New Delhi for their project and the State Government has allotted various parcels of lands

to the respondent-company and they have developed the area pursuant to such Environmental Clearance and allotment of lands. The committee constituted by the Ministry of Environment and Forests (MoEF), New Delhi to look into the complaints regarding severe impact upon environment safety and integrity committed by M/s.Adani Port and SEZ Ltd has submitted its detailed report with recommendation to the Government of India and the same is under consideration of the competent authorities. In view of the aforesaid observations made by the committee, we are convinced that no directions is required to be issued in the matter and the complaint and grievance raised by the petitioner appears to be misplaced.

65. In view of the aforesaid discussion, we do not find any merit in this writ petition. This writ petition fails and is accordingly dismissed. No order as to cost.

(V.M.SAHAI, ACJ.)

(R.P.DHOLARIA,J.)

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IN THE HIGH COURT OF GUJARAT AT AHMEDABAD

WRIT PETITION (PIL) NO. 199 of 2014

FOR APPROVAL AND SIGNATURE:

HONOURABLE THE ACTING CHIEF JUSTICE MR. VIJAY MANOHAR SAHAI

and

HONOURABLE MR.JUSTICE R.P.DHOLARIA

-
- 1 Whether Reporters of Local Papers may be allowed to see the judgment ?
 - 2 To be referred to the Reporter or not ?
 - 3 Whether their Lordships wish to see the fair copy of the judgment ?
 - 4 Whether this case involves a substantial question of law as to the interpretation of the Constitution of India, 1950 or any order made thereunder ?
 - 5 Whether it is to be circulated to the civil judge ?

KHETI VIKAS SEVA TRUST & 1....Applicant(s)

Versus

STATE OF GUJARAT & 4....Opponent(s)

Appearance:

MR SIRAJ R GORI, ADVOCATE for the Applicant(s) No. 1 - 2

MR PARTH BHATT, AGP for the Opponent(s) No. 1

MR BIREN A VAISHNAV, ADVOCATE for the Opponent(s) No. 2

MR DEVANG VYAS, ADVOCATE for the Opponent(s) No. 3

MR RS SANJANWALA, SR.ADVOCATE WITH MR SANDIP SINGHI FOR SINGHI & CO, ADVOCATE for the Opponent(s) No. 4-5

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CORAM: **HONOURABLE THE ACTING CHIEF JUSTICE MR. VIJAY MANOHAR SAHAI**
and
HONOURABLE MR.JUSTICE R.P.DHOLARIA

Date : 08/12/2014

ORAL JUDGMENT

(PER : HONOURABLE MR.JUSTICE R.P.DHOLARIA)

1. This petition in the nature of Public Interest Litigation has been filed by the petitioners claiming the following reliefs.

"12.A That the petitioner prays that this Hon'ble Court may be pleased to issue a Writ of Mandamus of a writ in the nature of Mandamus or any other appropriate writ, order or direction directing the respondent authorities to take effective steps against the respondent companies who has failed to comply with the conditional environmental clearance.

B. That this this Hon'ble Court may be pleased to issue appropriate writ, order or direction directing the respondent authorities to revoke the conditional environmental clearance as evidently the Respondent No.5 company has failed to comply with the conditional environmental clearance.

C. That during the pendency of the present petition this Hon'ble Court may be pleased to issue appropriate

direction directing the respondent no.5 company not to discharge waste water in the outfall channel without complying with the conditions stipulated in the environmental clearance issued by the MoEF.

D. That during the pendency of the present petition this Hon'ble Court may be pleased to issue appropriate direction to the respondent authorities as well as the respondent companies for effective implementation of the conditions stipulated in the environmental clearance accorded by the MoEF in the year 2010 which contemplates that the respondent shall create an endowment of Fishermen Welfare Fund so that their quality of life improves and creation of facilities for fish landing platforms/fishing harbour/cold storage and also to provide relief in case of emergency situations such as missing fishermen on duty due to rough seas, tropical cyclones and storms etc.

E. xxx xxx xxx"

2. We have heard Mr.Siraj Gori, learned counsel for the petitioners, Mr.Parth Bhatt, learned Assistant Government Pleader for respondent No.1, Mr.Biren Vaishnav, learned counsel for respondent No.2, Mr.Devang Vyas, learned Assistant Solicitor General of India for respondent No.3, Mr.R.S.Sanjanwala, learned senior counsel assisted by Mr.Sandip Singhi for respondent Nos.4 and 5.

3. During the course of hearing, Mr. Gori, learned counsel for the petitioners has taken us through various environmental clearance certificates which came to be issued by the Ministry of Environment and Forest, Government of India vide various orders passed since 2007 in favour of two different respondent companies. We have also been taken to various conditions which came to be imposed as part of environmental clearance certificates alleged to have been breached by the respondent companies. On taking through the aforesaid alleged breach of special and general conditions of the environmental clearance certificates, learned counsel for the petitioners seeks revocation of conditional environmental clearance and proper implementation and monitoring of the same.

4. On going through the aforesaid environmental clearance certificates, it clearly reveals that the aforesaid specific and general conditions have been imposed for compliance thereof on the part of the respondent companies and in case of any breach thereof, it was open to the aggrieved person to file the complaint before the Ministry of Environmental and Forest for its due compliance thereof and if the person aggrieved is not satisfied with the action or reasons given by the Ministry of Environmental

and Forest, then further remedy is provided under the earlier provisions of section 11 of the National Environment Appellate Act 1997 and after its repeal, under section 16(h) of the National Green Tribunal Act 2010.

5. Indisputably, on going through the material available on record, the petitioners have neither approached the Ministry of Environment and Forest, New Delhi nor the Green Tribunal for ventilating their grievance as regards the alleged breach of special as well as general conditions by the respondent companies.

6. As narrated above, efficacious remedy is provided under the provisions of the aforesaid Act and Special Tribunal is also constituted under the provisions of the National Green Tribunal Act, 2010 where the petitioners can point out their grievance by leading the evidence and after examining the rival claims along with the documentary evidence if adduced by either party, the concerned authority or the Tribunal can pass appropriate order. In this view of the matter, the present appeal in the nature of Public Interest Litigation is not maintainable. Therefore, the petition is dismissed. Notice is discharged. There shall be no order as to costs.

7. We, however, make it clear that as the petitioners have efficacious remedy under the provisions of the aforesaid Act as well as before the Ministry of Environment and Forest, we have not entered into the merits of the case. The petitioners shall be at liberty to avail remedy in accordance with law.

(V.M.SAHAI, ACJ.)

(R.P.DHOLARIA, J.)

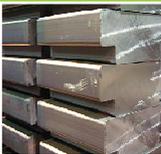
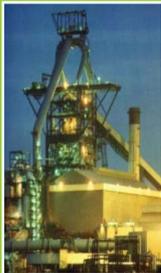
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TECHNICAL EIA GUIDANCE MANUAL FOR METALLURGICAL INDUSTRY

Prepared for
The Ministry of Environment and Forests
Government of India



by
IL&FS Ecosmart Limited
Hyderabad

August 2010

PROJECT TEAM

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Resource Person	<p>Mr. K.D. Choudhury Former GM (Environment), MECON</p>
Expert Core & Peer Committee Chairman	<p>Dr. V. Rajagopalan, IAS Additional Secretary Ministry of Chemicals & Fertilizers</p>
Core Members	<p>Dr. R. K. Garg Former Chairman, EIA Committee, Ministry of Environment and Forests</p> <p>Mr. Paritosh C. Tyagi Former Chairman, Central Pollution Control Board</p> <p>Prof. S.P. Gautam Chairman, Central Pollution Control Board</p> <p>Dr. Tapan Chakraborti Director, National Environmental Engineering Research Institute</p> <p>Mr. K. P. Nyati Former Head, Environmental Policy, Confederation of Indian Industry</p> <p>Dr. G.K. Pandey Former Advisor, Ministry of Environment and Forests</p> <p>Dr. Nalini Bhat Advisor, Ministry of Environment and Forests</p> <p>Dr. G.V. Subramaniam Advisor, Ministry of Environment and Forests</p> <p>Dr. B. Sengupta Former Member Secretary, Central Pollution Control Board</p> <p>Dr. R. C. Trivedi Former Scientist, Central Pollution Control Board</p>
Peer Member	<p>Prof. S.P. Mehrotra Director – National Metallurgical Laboratory</p>
Member Convener	<p>Mr. N. Sateesh Babu Project Director</p>

ANNEXURE VII
Guidance for Assessment of Baseline Components and Attributes

GUIDANCE FOR ASSESSMENT OF BASELINE COMPONENTS AND ATTRIBUTES*

Attributes	Sampling		Measurement Method	Remarks
	Network	Frequency		
A. Air				
<ul style="list-style-type: none"> ▪ Meteorological ▪ Wind speed ▪ Wind direction ▪ Dry bulb temperature ▪ Wet bulb temperature ▪ Relative humidity ▪ Rainfall ▪ Solar radiation ▪ Cloud cover 	<p>Minimum 1 site in the project impact area requirements</p> <p>Other additional site(s) are required depending upon the model applied or site sensitivities</p>	<p>Min: 1 hrly observations from continuous records</p>	<p>Mechanical / automatic weather station</p> <p>Rain gauge</p> <p>As per IMD</p> <p>As per IMD</p>	<p>IS 5182 Part 1-20 Sit-specific primary data is essential</p> <p>Secondary data from IMD, New Delhi for the nearest IMD station</p>
<p>Pollutants</p> <ul style="list-style-type: none"> ▪ SPM ▪ RPM ▪ SO₂ ▪ NO₂ ▪ CO ▪ H₂S* ▪ NH₃* ▪ HC* ▪ Fluoride* ▪ Pb* ▪ VOC-PAH* ▪ Mercury* <p>(parameters to be proposed by the proponent, in draft ToR, which will be reviewed and approved by EAC/SEAC)</p>	<p>10 to 15 locations in the project impact area</p>	<p>24 hrly twice a week</p> <p>8 hrly twice a week</p> <p>24 hrly twice a week</p>	<ul style="list-style-type: none"> ▪ Gravimetric (High – Volume) ▪ Gravimetric (High – Volume with Cyclone) ▪ EPA Modified West & Gaeke method ▪ Arsenite Modified Jacob & Hochheiser ▪ NDIR technique ▪ Methylene-blue ▪ Nessler’s Method ▪ Infra Red analyzer ▪ Specific Ion meter 	<p>Monitoring Network</p> <ul style="list-style-type: none"> ▪ Minimum 2 locations in upwind side, more sites in downwind side / impact zone ▪ All the sensitive receptors need to be covered <p>Measurement Methods</p> <p>As per CPCB standards for NAQM, 1994</p>
B. Noise				
Hourly equivalent noise levels	Same as for Air Pollution	At least one day continuous in	Instrument : Sensitive Noise	Min: IS: 4954- 1968 as adopted

Attributes	Sampling		Measurement Method	Remarks
	Network	Frequency		
	along with others Identified in study area	each season on a working and non-working day	level meter (preferably recording type)	by CPCB
Hourly equivalent noise levels	Inplant (1.5 m from machinery or high emission processes)	Same as above for day and night	Instrument : Noise level metre	CPCB / OSHA
Hourly equivalent noise levels	Highways (within 500 metres from the road edge)	Same as above for day and night	Instrument : Noise level meter	CPCB / IS : 4954-1968
Peak particle velocity	150- 200m from blast site	Based on hourly observations	PPV meter	
C. Water				
Parameters for water quality <ul style="list-style-type: none"> ▪ Ph, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium salinity ▪ Total nitrogen, total phosphorus, DO, BOD, COD, Phenol ▪ Heavy metals ▪ Total coliforms, faecal coliforms ▪ Phyto plankton ▪ Zooplankton ▪ Fish & other aquatic flora & fauna (parameters are given in ToR for EIA studies based on nature of project, raw material & process technology, location-nature/activities within of air basin)	Set of grab samples during pre and post-monsoon for ground and surface water for the whole study zone. For lab. Analysis the samples should be preserved for transport safe	Diurnal and season-wise	Samples for water quality should be collected and analyzed as per: IS: 2488 (Part 1-5) methods for sampling and testing of industrial effluents Standard methods for examination of water and waste water analysis published by American Public Health Association. International standard practices for benthos and aquatic flora & fauna	
For Surface Water Bodies				
<ul style="list-style-type: none"> ▪ Total Carbon ▪ PH ▪ Dissolved Oxygen 	Monitoring locations should include up-stream, on site, down stream of	Yield & impact on water sources to be measured during critical	Samples for water quality should be collected and	Historical data should be collected from relevant offices such as central water

Attributes	Sampling		Measurement Method	Remarks
	Network	Frequency		
<ul style="list-style-type: none"> ▪ Biological Oxygen Demand ▪ Free NH₄ ▪ Boron ▪ Sodium Absorption ratio ▪ Electrical Conductivity 	<p>proposed discharge point. Besides sampling should cover width of the river in case water quality modeling is proposed.</p> <p>Standard methodology for collection of surface water (BIS standards)</p> <p>At least one grab sample per location per season</p>	<p>season</p> <p>River Stretch within project area be divided in grids (say 1 km length and 1/3 width) and samples should be from each grid at a time when the wastewater discharged by other sources of pollution is expected to be maximum</p>	<p>analyzed as per:</p> <p>IS: 2488 (Part 1-5) methods for sampling and testing of industrial effluents</p> <p>Standard methods for examination of water and wastewater analysis published by American Public Health Association.</p>	<p>commission, state and central ground water board, Irrigation dept.</p>
Parameters for wastewater characterization				
<ul style="list-style-type: none"> ▪ Temp, colour, odour, turbidity, TSS, TDS ▪ PH , alkalinity as CaCO₃, p value, M value, total hardness as CaCO₃, chloride as cl, sulphate as SO₄, Nitrate as NO₃, Fluoride as F, Phosphate as PO₄, Chromium as Cr (Hexavalent, total) Ammonical Nitrogen as N, TKN, % sodium, BOD at 20 C, COD, DO, total residual chlorine as Cl₂, oil and grease, sulphide, phenolic compound 	<p>Implant Source depending upon the different waste streams the parameters can be optimized</p> <p>Grab and composite sampling representing avg of different process operations as well as worst emission scenario should be represented</p>	<p>Different operational cycles as well as raw material variations should be reflected in the analysis</p>	<p>Samples for water quality should be collected and analyzed as per:</p> <p>IS: 2488 (Part 1-5) methods for sampling and testing of industrial effluents</p> <p>Standard methods for examination of water and wastewater analysis published by American Public Health Association.</p>	<p>All plant sources categorized as:</p> <ul style="list-style-type: none"> ▪ Different Process waste streams as well as run-off conditions ▪ ETP wastewater ▪ Domestic/ sanitary wastewater
D. Land Environment				
<ul style="list-style-type: none"> ▪ Soil ▪ Particle size distribution ▪ Texture ▪ pH ▪ Electrical conductivity ▪ Cation exchange capacity 	<p>One surface sample from each landfill and/or hazardous waste site (if applicable) and prime villages, (soil samples be collected as per BIS</p>	<p>Season-wise</p>	<p>Collected and analyzed as per soil analysis reference book, M.I.Jackson and soil analysis reference book by C.A. Black</p>	<p>The purpose of impact assessment on soil (land environment) is to assess the significant impacts due to leaching of wastes or accidental releases and contaminating</p>

Attributes	Sampling		Measurement Method	Remarks
	Network	Frequency		
<ul style="list-style-type: none"> ▪ Alkali metals ▪ Sodium Absorption Ratio (SAR) ▪ Permeability ▪ Porosity 	specifications) in the study area			
Landuse / Landscape				
<ul style="list-style-type: none"> ▪ Location code ▪ Total project area ▪ Topography ▪ Drainage (natural) ▪ Cultivated, forest plantations, water bodies, roads and settlements 	At least 20 points along with plant boundary and general major land use categories in the study area.	Drainage once in the study period and land use categories from secondary data (local maps) and satellite imageries	<ul style="list-style-type: none"> ▪ Global positioning system ▪ Topo-sheets ▪ Satellite Imageries (1:25,000) ▪ Satellite Imageries (1:25,000) 	<p>Drainage within the plant area and surrounding is very important for storm water impacts.</p> <p>From land use maps sensitive receptors (forests, parks, mangroves etc.) can be identified</p>
E. Hazardous Waste				
<ul style="list-style-type: none"> ▪ Permeability and porosity ▪ Moisture pH ▪ Electrical conductivity ▪ Loss on ignition ▪ Phosphorous ▪ Total nitrogen ▪ Caution exchange capacity ▪ Particle size distribution ▪ Heavy metal ▪ Ansonia ▪ Fluoride 	Grab and Composite samples. Recyclable components have to analyzed for the recycling requirements	Process wise or activity wise for respective raw material used.	<p>Analysis</p> <p>IS 9334 : 1979</p> <p>IS 9235 : 1979</p> <p>IS 10158 : 1982</p>	Impacts of hazardous waste should be performed critically depending on the waste characteristics and place of discharge. For land disposal the guidelines should be followed and impacts of accidental releases should be assessed
F. Biological Environment Aquatic				
<ul style="list-style-type: none"> ▪ Primary productivity ▪ Aquatic weeds ▪ Enumeration of phytoplankton, zooplankton and benthos 	Considering probable impact, sampling points and number of samples to be decided on established guidelines on ecological	Season changes are very important	Standards techniques (APHA et. Al. 1995, Rau and Wooten 1980) to be followed for sampling and measurement	<p>Seasonal sampling for aquatic biota</p> <p>One season for terrestrial biota, in addition to vegetation studies during monsoon season</p>

Attributes	Sampling		Measurement Method	Remarks
	Network	Frequency		
<ul style="list-style-type: none"> ▪ Fisheries ▪ Diversity indices ▪ Trophic levels ▪ Rare and endangered species ▪ Sanctuaries / closed areas / Coastal regulation zone (CRZ) ▪ Terrestrial ▪ Vegetation – species, list, economic importance, forest produce, medicinal value ▪ Importance value index (IVI) of trees ▪ Wild animals 	<p>studies based on site eco-environment setting within 10/25 km radius from the proposed site</p> <p>Samples to collect from upstream and downstream of discharge point, nearby tributaries at down stream, and also from dug wells close to activity site</p>			<p>Preliminary assessment</p> <p>Microscopic analysis of plankton and meiobenthos, studies of macrofauna, aquatic vegetation and application of indices, viz. Shannon, similarity, dominance IVI etc</p> <p>Point quarter plot-less method (random sampling) for terrestrial vegetation survey.</p>
<p>Avifauna</p> <ul style="list-style-type: none"> ▪ Rare and endangered species ▪ Sanctuaries / National park / Biosphere reserve 	<p>For forest studies, chronic as well as short-term impacts should be analyzed warranting data on micro climate conditions</p>			<p>Secondary data to collect from Government offices, NGOs, published literature</p> <p>Plankton net</p> <p>Sediment dredge</p> <p>Depth sampler</p> <p>Microscope</p> <p>Field binocular</p>
G. Socio Economic				
<ul style="list-style-type: none"> ▪ Demographic structure ▪ Infrastructure resource base ▪ Economic resource base ▪ Health status: Morbidity pattern ▪ Cultural and aesthetic attributes 	<p>Socio-economic survey is based on proportionate, stratified and random sampling method</p>	<p>Different impacts occurs during construction and operational phases of the project</p>	<p>Primary data collection through R&R surveys (if require) or community survey are based on personal interviews and questionnaire</p>	<p>Secondary data from census records, statistical hard books, toposheets, health records and relevant official records available with Govt. agencies</p>

* Project Specific concerned parameters needs to be identified by the project proponent and shall be incorporated in the draft ToR, to be submitted to the Authority for the consideration and approval by the EAC/SEAC.