BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE BENCH AT CHENNAI

APPEAL NO. 42 OF 2022 (SZ)

IN THE MATTER OF:

MALI PATEL RAJU REDDY & ORS. …APPELLANTS

Versus

UNION OF INDIA & ORS. …RESPONDENTS

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THROUGH

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PLACE: CHENNAI/ NEW DELHI

DATED:- 31.01.2023

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REJOINDER ON BEHALF OF APPELLANTS TO THE REPLIES FILED BY RESPONDENTS

MOST RESPECTFULLY SHOWETH:-

1. That the present Appeal has been filed under Section 16 (h) of the National Green Tribunal Act, 2010 against the Environmental Clearance dated 29.4.2022 granted by the Ministry of Environment, Forests and Climate Change to M/s Zaheerabad NIMZ Limited (hereinafter referred to as the ("Project Proponent"), for development of Zaheerabad National Investment and Manufacturing Zone (NIMZ) in Sangareddy District of Telengana State. Telengana State Industrial Infrastructure Corporation Limited (TSIIC) has proposed to establish NIMZ at Nyakal and Jharasangam Mandal's near Zaheerabad in Sangareddy District of Telangana in an area of 12,635 acres for both Category A and Category B Industries as per the EIA Notification, 2006.

2. That the present Rejoinder may be treated as part and parcel of the Appeal and contents of the Appeal maybe read as part of the present Rejoinder.

3. That the Respondent No. 4 has filed it's respective Reply in the present Appeal whereas the Respondents-MoEF&CC, State of Telengana/ District Collector have filed their respective Replies in the Connected matters i.e Appeal No. 38 of 2022(SZ) titled Ganapathi

Dixit vs. Union of India & Ors. which all need to be Rejoined on the issues which are as follows:-

i. According to Respondent No.4, EAC/SEIAA has specified the Form I (template based) with the required specific information to be filed for according the additional Terms of Reference (ToR) for conducting additional studies required for EIA report preparation for any proposed development. This is to be clarified that EC won't be accorded based on information provided for Form I application. Form I application is only for providing the additional ToR for EIA studies for proposed project.

ii. The deliberations at MoEF&CC for according the Environmental Clearance shall be based on the data/information provided in Final EIA report prepared by assessing the primary observations and secondary data assessment with ground truthing studies.

iii. Land use/land cover map was prepared as per the National Remote Sensing Centre (NRSC)'s 2019-20 satellite imagery by which it was found that around 44.6% of land is scrub land followed by agricultural crop land of 27.65%, agricultural plantations of 0.8% and agricultural fallow land of 26.21% are reported. The predominant land use of the project site was observed as Scrub land, agricultural crop land, agricultural fallow land as well as agricultural plantations.

iv. Observations during the physical site analysis shows that majority of the project site falls under barren scrub land followed by Agriculture land- crop and fallow land use classification. The project site is mostly comprised of barren and vacant lands. Few pockets of farm lands are also located within site.

v. Detailed floral and faunal survey has been carried out during baseline monitoring for the EIA Report.

vi. Detailed study was conducted on the greenery and conservation plan to comply the suggestions of EAC. The main aim of the study is to develop a Greenery and Conservation management plan (GCMP) involved analysis of available data regarding highly productive areas, biodiversity and ecology within the project area 9contour maps, road network, land use, etc.). After conducting the site visit and analysis of the data, conservation report was submitted to the MoEF&CC.

vii. The basis for arriving pollution loads for different sectors of industries were presented in EIA Report. As a worst-case scenario, coal as fuel for food sector is assumed for air quality modelling studies and ground level concentrations as arrived from the model have been checked and total loads are found to be well within NAAQ Standards.

viii. Public Hearing was conducted inline to the guidelines laid by EIA Notification, MoEF&CC. Public Hearing was attended by more than 870 people and it was presided over by District Magistrate and collector. Nearly 68 number of speakers expressed their views on the proposed project and nearly 81 written representations were received during the process of Public Hearing from various people and the same was

addressed. Nearly 61 written representations were received through Ministry and Responses to representations received were also submitted to the Ministry.

4. **In Rejoinder to the contention No. i. to iv it is stated that the same are wrong and denied.** It is re-iterated that a perusal of Form I shows that the Project Proponent has given a wrong and misleading description about the nature and extent of agricultural crop land. It is stated that the total Agricultural crop land in the project site comprises of 17 villages in two mandals of Jharasangam and Nyalkal is 10,374.17 acres out of a total project site area of 12,635 Acres of land. This clearly shows that about 83% of the land in project site is crop agricultural area and not 27.5% as has been portrayed by the Project Proponent. In the Form I the Project Proponent states that the land at site is "mostly scrub land, single crop land, habitations, small scale industries/establishments, government waste land etc".

5. That it is stated that the contentions of the Respondent No.4 that Form I is needed only for formulating the additional ToR in one breath and in another that deliberations at MoEF&CC for according the Environmental Clearance shall be based on the data/information provided in Final EIA report prepared by assessing the primary observations and secondary data assessment with ground truthing studies are per se contradictory in nature.

6. That the statement made under the Form I by the Project Proponent also falls on account of submission made by the Appellants referring to the record maintained by Directorate of Economic and Statistics, Government of Telangana.

7. Further, the statement also falls in the light of the fact that Government is depositing Rs. 10,000/- per year. If the major part of the land in project site area comprised of "mostly scrub land, single crop land, habitations, small scale industries/establishments, government waste land etc." as mentioned in Form I by the Project Proponent there was no need for the Government of Telangana to

pay Rs.5,000/- per acre twice a year i.e. Rs. 10,000/- (Kharif and Rabi crops) directly in the farmer's bank account under ***Raythu Bandhu*** scheme. The Project Proponent has given false, misleading data in the Form I itself just to ensure that the project gets the EC.

8. That it is further re-iterated that as per the information collected by the Farmers themselves and after doing the detailed survey of the villages, the total Agricultural crop land in the project site comprising 17 villages in two mandals of Jharasangam and Nyalkal is 10,374.17 acres out of a total project site area of 12,635 Acres of land. This clearly shows that about 83% of the land in project site is crop agricultural area and not 27.5% as has been portrayed by the Project Proponent. The details of agricultural crop land in 17 villages is as follows:-

S.NO	NATURE OF VILLAGE	TOTAL GEO GRAPHICAL AREA	LAND AFFECTED UNDER NIMZ (AC-GTS)	AGRICULTURAL CROP LAND (IN ACRES)
1	**BARDIPUR**	2065.29	446.27	**445.28**
2	**BASANTHPUR**	725.00	235.58	**200.00**
3	**CHILEPALLE**	1701.25	616.23	**616.25**
4	**GANESHPUR**	1235.00	621.15	**566.38**
5	**GANGWAR**	980.00	38.17	**38.00**
6	**GUNJOTI**	1632.20	291.33	**233.30**
7	**HADNUR**	3612.20	589.83	**542.53**
8	**HUSSELLI**	1425.00	727.29	**650.00**
9	**KALBEMAL**	2370.00	354.56	**306.36**
10	**MALKANPAHAD**	355.00	1467.40	**242.00**
11	**MAMIDGI**	2510.00	680.17	**1328.37**
12	**METALKUNTA**	1730.00	214.85	**665.00**
13	**MUNGI**	2117.20	253.56	**486.00**
14	**NAMTABAD**	1677.20	1210.50	**1000.00**
15	**REJINTHAL**	30952.20	1734.34	**672.00**
16	**RUKMAPUR**	922.20	460.41	**380.00**
17	**YELGOI**	3804.14	2382.70	**2000.00**
	TOTAL	**32813.88**	**12635.14**	**10374.17**

9. That the Appellants further re-iterate that the number of crops grown in the area as per the agricultural record at the Mandal level maintained by the Government itself shows presence of 27 varieties of crops at the proposed site of the project. True typed copy of the agricultural record at the Mandal level maintained by the Government is annexed with the Appeal as Annexure-A2 which may kindly be perused in this regard.

10. That the Directorate of Economics & Statistics, Govt. of Telangana (Rabi and Kharif crops) has given crop wise data pertaining to years 2019-2020 and 2020-21 of Jharasangam and Nyalkal mandals of District Sangareddy which together gives a list of 212 variety of crops of Kharif season and for Rabi 137 crops in the 2019-20. For the year 2020-21 a list of 76 crops has been given for both the mandals for kharif and Rabi seasons to the Appellant No.3. This shows that the land is multi-cropped and extremely fertile. Copy of the list of crops provided by Directorate of Economics & Statistics, Govt. of Telangana for the years 2019-20 and 2020-21 is annexed with the Appeal as Annexure-A3 which may kindly be perused in this regard.

11. That it is re-iterated by the Appellants that the Government is depositing a sum of Rs. 5,000/- per acre twice a year i.e Rs 10,000/- (Kharif and Rabi crops) directly in the farmer's bank account in 17 villages affected by the project under ***Raythu Bandhu*** scheme of Government of Telangana. This is for the purpose of cultivation of crops. Copy of two entries of payments received by two farmers under ***Raithu Bandhu*** scheme is already annexed with the Appeal as Annexure-A4 (Colly) and an example of sms alert received by two farmers alongwith it's true translation is already annexed with the Appeal as Annexure-A5 (Colly) which may kindly be perused in this regard.

12. That under the EIA Notification, 2006, EC process is based on the information provided by the Project Proponent in Form I. That the

information provided in Form I is crucial can be borne from the following circumstances:

i. EAC formulates comprehensive ToRs on the basis of the information furnished in Form I which addresses all possible environmental concerns. It is on the basis of ToR, that further studies and the EIA are carried out on the impact of the proposed project on the environment.

ii. At the appraisal stage, the MoEF&CC examines the documents submitted by the Project Proponent "strictly with reference to ToR" and communicates any inadequacy to EAC.

13. That in the present case the Project Proponent has provided the EAC with wrong and misleading information with respect to nature of land. Copy of the Form I is annexed alongwith the Appeal as Annexure-A6 which may kindly be perused in this regard.

14. In ***Hanuman Laxman Aroskar v. Union of India (2019) 15 SCC 401*** on the importance of disclosing true and correct facts it has been held by the Hon'ble Supreme Court that:

> **"72.** …. The disclosure in Form 1 constitutes the very foundation of the process which is initiated on the basis of the information supplied by the project proponent. Following the disclosure in Form 1, ToR are formulated, and this leads to the preparation of the EIA report. A duty is cast upon the project proponent to make a full, complete and candid disclosure of all aspects bearing upon the environment in the area of study. The project proponent cannot profess an ignorance about the environment in the study area. The project proponent is bound by the highest duty of transparency and rectitude in making the disclosures in Form 1."
>
> **73. There** can be no manner of doubt that Form 1 is an important ingredient in the entire process envisaged under the 2006 Notification. Hence, clause (*vi*) of Para 8 of the 2006 Notification provides that deliberate concealment or submission of false or misleading information or data which is material to screening or scoping or appraisal or decision on the application shall make the application liable for rejection and lead to the cancellation of a prior EC granted on that basis. The declaration which is required of the project proponent is to a similar effect.
>
> …
>
> "82. The failure on part of a project proponent to **disclose** material information in Form 1 as stipulated under the 2006

> Notification has a cascading effect on the salient objective which underlies the 2006 Notification. The 2006 Notification represents an independent code with the avowed objective of balancing the development agenda with the protection of the environment. An applicant cannot claim an EC, under the 2006 Notification, based on substantial or proportionate compliance with the terms stipulated in the notification. The terms of the notification lay down strict standards that must be complied with by an applicant seeking an EC for a proposed project. The burden of establishing environmental compliance rests on a project proponent who intends to bring about a change in the existing state of the environment. Whereas, in the present case, there has thus been a patent failure on the part of the project proponent to make mandatory disclosures stipulated in Form 1 under the 2006 Notification, that must have consequences in law. There can be no gambles with the environment : a "heads I win, tails you lose" approach is simply unacceptable; unacceptable if we are to preserve environmental governance under the rule of law."

In terms of scoping exercise Form I was submitted in which it is clear that the project proponent has concealed vital information which is necessary for proper scoping of the project to understand impact of proposed activity. The project proponent is required to exercise utmost due diligence while filling up the Form I and giving undertaking that all the data and information given is true and correct and that if any information is found to be false or misleading at any stage the project is liable to be rejected at the risk and cost of the project proponent.

15. Again in ***Hanuman Laxman Aroskar v. Union of India,(Supra)*** it has been specifically held by the Hon'ble Supreme Court with respect to duty of EAC and SEAC for evaluating the information submitted by the applicant in Form 1/Form 1A and preparing comprehensive ToR which guide the preparation of the EIA reports.The Hon'ble Supreme Court held that:

> "58...*The EAC and the SEAC are charged with evaluating the information submitted by the applicant in Form 1/Form 1A and preparing comprehensive ToR which guide the preparation of the EIA reports. Given that these bodies comprise experts in the field of environmental law, the recommendation of the EAC or the SEAC to grant EC to an applicant or reject the application is normally accepted by the regulatory authority*.

…..

124…The reasons furnished by the EAC for its recommendation are a basic link in the ultimate decision of the regulatory authority. They constitute substantive material which will be considered by the Tribunal when it considers a challenge to the grant of an EC."

16. **In Rejoinder to the contention No. v. to vi it is stated that the same are wrong and denied.** The Appellants re-iterate that as per Chapter 3.9.1.3 Status of Flora and Vegetation (Chapter 3, Page 3-27) the EIA report mentions that 282 species of plants have been recorded in the study area, but it is likely that the number of plant species will be many fold more if only the surveys were conducted in the monsoon season. All of the herbaceous species and ephemerals come and go during the course of the monsoon and by the time when this study was conducted, most of these plants would have finished their cycle.

Copy of Chapter 3.9.1.3 of EIA on Status of Flora and Vegetation is annexed herewith as **ANNEXURE-A12.**

17. It is stated that a study from Medak district lists 862 plant species - 694 wild and naturalized species belonging to 373 genera and 110 families https://www.tsijournals.com/articles/species-diversity-and-enumeration-of-various-plant-species-in-medak-telangana-state-13385.html.

Copy of the study published by Naresh K, Avinash kumar J, Venkateshwar C. titled as Species Diversity and Enumeration of Various Plant Species in Medak Telangana State. Res Rev Biosci.2017;12(2):119 is annexed herewith as **ANNEXUERE-A13**

18. That in Chapter 3.9.1.10 Faunal Diversity (Chapter 3, Page 3-40) with respect to Reptiles and Amphibians it is stated that the study period was in the winter months and since amphibians like frogs breed in the monsoon in the seasonal rock pools and water bodies, it is only likely to under represent the diversity. And since there is no mention of the methodology followed and techniques used to assess the

diversity, it is not clear how the report has arrived at 16 species of reptiles and 5 species of frogs.

19. That with respect to birds, the EIA report has recorded only 105 species of birds in the study area, but if one compares the hotspots on ebird.org that are close to the study area, there are many more species recorded in similar habitats, which is a result of repeated checklists over many years. The study period for the NIMZ, Zaheerabad project of three months is too short a time to assess the bird diversity and doesn't cover all the seasons. The EIA report has only made a very basic list without any details of the population/numbers of the birds observed and also doesn't mention where these birds were recorded.

20. There are many bird hotspots around the NIMZ proposed project site. Singur Reservoir and Dam has 205 species with 75 complete checklists on ebird.org .The list has many Schedule-I raptor species including Osprey, Black-winged Kite, Short-toed Snake-Eagle, Greater Spotted Eagle, Indian Spotted Eagle, Brahminy Kite, Eurasian Marsh Harrier, Shikra, Mottled Wood-owl, Short-eared Owl, Oriental Honey-buzzard, Booted Eagle, Bonelli's Eagle, Eurasian Kestrel, Eurasian Marsh Harrier, Montagu's Harrier, Pied Harrier, Pallid Harrier, White-eyed Buzzard and Peregrine Falcon. Including many Schedule-I species in the hotspot.

Copy of the Raptor species as per ebird.org is annexed with the Appeal as Annexure-A10 which may kindly be perused in this regard.

21. It is also submitted in Counter affidavit of Respondent No.4 that a detailed study was conducted on the greenery and conservation management plan to comply with the suggestions of the EAC and also that the master plan was modified based on the Greenery and Conservation Management Plan (GCMP) report. The project proponents and their EIA consultants have failed to acknowledge

that these so called 'barren and vacant lands' are in fact bio-diverse grasslands and Open Natural Ecosystems. They have prepared a plan based on misinformation that these habitats need greening.

22. It is stated that a mere 2000 acres of small connected patches cannot sustain the wildlife and biodiversity of the proposed NIMZ project area (12,635 acre). The proposal of planting 90,000 trees as per the plan doesn't mean much if the idea is just to plant without understanding the fact that this is an industrial project and no matter what plans the consultants give, it is disastrous to the biodiversity of the area. Neither the Draft/Final EIA by L&T or the Greenery and Conservation Management Plan by the Environmental Matters & Oikos has done any assessment of the population sizes of the mammals, birds, reptiles, fishes, invertebrates, amphibians and plants. All of them have just made simple lists and made plans to conserve biodiversity. To arrive at the Greenery and Conservation Management Plan, the consultants have relied primarily on the Project Master Plan and the Project EIA (section 3.9 on Flora and Fauna survey, recommendations in EMP and relevant aspects) and field visits in July (12-16) and September (14-21 of 2021). The inadequacies in the EIA prepared by L&T have been pointed out in letter Dated 16 January 2021 written on behalf of the Appellants which maybe perused in this regard. No references of any scientific studies have been cited or relied on, which clearly shows how the plan is completely catered to the requirements of the proposed project and not for the conservation of natural habitats and biodiversity of the area.

Copy of the letter dated 16th March 2021 and other similar letters written to the EAC are annexed herewith as **ANNEXURE-A14 (Colly).**

23. That there are 13 Reserved Forests around this massive project, some of that about the project boundary. The EAC has not thought

how a project of this scale would impact these forests. There has been no impact assessment on this aspect from the project proponent/EIA consultant.

24. That this Report has not included Grasslands in land class analysis. Secondly, while 15 natural scrub forested areas have been identified and integrated with the designated green areas of the NIMZ Master Plan, the flat lands which constitute unique laterite plateaus with grasslands/Open Natural Ecosystems (ONEs) and their associated and sensitive monsoon ephimeral flora have not been included in the proposed green areas. To exclude these areas as part of a comprehensive biodiversity analysis is a major short-coming. Thirdly, figure 6 in the Greenery and Conservation Management plan clearly shows the identified scrub areas. It also shows the large patches of brown areas on the laterite plateaus. These are critical ecological habitats for both flora and Schedule I fauna like the Blackbuck. These areas have been excluded and have not been acknowledged as critical ecological habitats.

25. The Green Conservation Management Planning Report acknowledges that *"a detailed survey of biodiversity is not included in the study presented; about 150 floral species & 65 faunal species, mainly mammals, birds, & butterflies were identified, spread over various habitats*". It is stated that it is not possible to develop a conservation management plan without a detailed biodiversity survey of all the land classes/habitat types. Also, a perusal of figure 8 shows many small waterbodies – It is stated that a 5m buffer around these and streams would not ensure protection from pollution. Once the catchment of these waterbodies and streams have been altered to industrial land use, the whole area would be adversely impacted in an irreversible manner.

26. That it is clear that the focus has been the green areas as per the Master Plan and the Greenery and Conservation Management

Plan(GCMP) doesn't focus on the whole area as a landscape that supports wildlife populations and other biodiversity. Without a detailed assessment of the biodiversity and current populations of wildlife, it is not possible and unscientific to develop a Conservation Plan.

27. The plans given in GCMP are not very clear - the resolution is not high and also these plans need to be corroborated on the field. An independent survey by ecologists working in the field of ecology, especially ecologists working on Grasslands, Scrub Habitats, Savanna Woodlands and other ONEs need to be consulted. Without independent ground truthing, the plans submitted by the consultants hired by the Project Proponent, cannot be relied upon.

Copy of GCMP is annexed herewith as **ANNEXURE-A15.**

28. **In Rejoinder to the contention No. vii. it is stated that the same is wrong and denied.** It is re-iterated that at the following location, average ambient levels of PM_{10} exceed the National Ambient Air Quality Standards for PM_{10} of 60 $\mu g/m^3$: Mettalkunta, Gunjetti, Gunalli, Waddi, Tekur, Manhalli, Jharasangam, Nyalkal, Burdipar, and Zaheerabad. At these locations, existing ambient air quality should be characterized as impaired, lacking any assimilative capacity for additional air pollutant releases.

29. It is re-iterated that the EAC has failed to consider that the consultant has given incomplete details with regard to pollution from point source i.e. DG set. It is very surprising to note that the Table 4-11 does not contain capacity of each DG sets. However, Stack details and Emission details are same for all except for DG set listed at s.no. 18-22, 39-44, 60-61 and 64 for which emission details are different without giving any

justification. The consultant has just mentioned that AERMOD has been used for prediction in increase in air pollutants but neither provided AERMOD result for individual DG set or cumulative thereof. Similarly, consultant claimed that AERMOD is also used for line source emission i.e. vehicular emission. It is important to consider that CALRoad is more appropriate air pollution prediction model for line source as it is capable for predicting air quality impacts produced by mobile sources at or near roadways and roadway intersections. Two state highways i.e. SH-14 and SH-16 intersect the proposed project and after the development of proposed project, there will be substantial increase in the traffic load which will lead to increase in air pollution due to traffic. In the light of above incremental increase in the air pollutant concentration given in Table 4-21 and 4-26 has no relevance. Moreover, incremental increase needs to be assessed on 24 hourly basis too which has not been done.

Copy of Table 4.11 of the EIA is annexed herewith as **ANNEXURE-A16.**

30. **In Rejoinder to the contention No. viii. it is stated that the same is wrong and denied.** It is re-iterated that the Public Hearing for the Project took place on 20.01.2021 was conducted by TSPCB at TSIIC land, Bardipur, Ashramam, 'X' Road, Bardipur (V), Jharasangam (M), District Sangareddy. It is submitted that the minutes of the public hearing clearly show that there were a number of issues taken by the Public due to the proposed project from all quarters during the hearing proceedings. Few of the concerns raised by the public are being reproduced herein for reference of this Hon'ble Tribunal:

i. The lands of the village was quite fertile and people were not willing to hand over the lands at any cost.

ii. The report stated that the area was scrub and waste lands. Whereas, the farmers made amply clear that the area is quite fertile and all types of crops can be grown in this area.

iii. Various types of cash crops like sugar cane, onion, ginger and garlic, pulses and plantation crops grown in this region.

iv. The people are dependent on agriculture and possess the skill of cultivation only.

v. Complaint against the attitude of the Police and numbers of people were not permitted to attend the Public Hearing

vi. The Local villagers were therefore denied a chance to express their views on this project.

vii. The pollution would create problems for the people living in and around the site.

viii. The EIA statement prepared for this project was not comprehensive and is not elaborate in nature.

ix. The EIA Report was Plagiarized and was a copied and pasted from the report prepared for other project

x. Noise increases the problem of heart stroke, water pollution results in fluorosis and possibility of giving birth to deformed and handicapped babies. He sought effective implementation of pollution abatement measures.

xi. The EIA report was quite inadequate.

xii. There were 300 species of birds in this area and the EIA report recorded only 150 species.

xiii. 700 species of plants were recorded in this area and the EIA report contained only 280 species.

xiv. He wondered how the EIA report could conclude the flora and fauna by surveying this area within 3 months, where as it takes years and years to record the species.

xv. The EIA report also failed to indicate the coordinates where they recorded these species, which against the norms. Only a list was enclosed without indicating the location, where they recorded it.

xvi. He felt that the EIA report was prepared unscientifically, inadequate and fit to be thrown into dustbin.

xvii. He stated that the EIA report recorded most area i.e., 70% of the land as scrub and grass lands. If that is so, they should have conducted Bio-diversity survey.

31. It is also stated that the local persons who have participated in the Public Hearing have extensively cited the nature of land to be agricultural, upto 80% with multiple crops. This corroborates the fact that the land in question is high in crop production and is extensive agricultural land. It also negates the project proponent's stand that the area of the project site is "mostly scrub land, single cropland, habitations, small scale industries/establishments, government waste land etc.". Even after the above issue being clearly taken up by the local persons during public hearing the EAC has failed to scrutinise the issue.

32. However, the EAC in its 258th meeting held on 17 & 18, March, 2021, has only noted that public hearing was held on 20th January, 2021 and not given any opinion on the issues raised in the public hearing. The relevant part of the minutes of meeting is reproduced here for reference:

> "3.7.10 The Public hearing was conducted on 20th January, 2021 by TSPCB. The meeting was conducted by the panel consisting of Collector, Joint Collector, Sangareddy District and Environmental Engineer, Regional Office Sangareddy, Telangana State Pollution Control Board."

33. This clearly shows that the EAC has failed to do a detailed appraisal of the Public Hearing proceedings and the issues taken up therein. The EAC has failed to apply it's mind to the issues raised in the Public Hearing. Therefore, the same cannot be said to have been carried in terms of the EIA Notification, 2006. Copy of the minutes of the Public Hearing which was held on 20.01.2021 are annexed with the Appeal as Annexure-A9 which kindly be perused in this regard.

Issues not answered by the Respondent No.4 in it's Reply.

34. That a perusal of the Reply of Respondent No.4 shows that it has failed to Reply to the issue that EAC has failed to consider that the Project Proponent has itself acknowledged that a Cumulative Impact needed to be assessed but has failed to carry out such a study. The issue for need for a Cumulative Impact Assessment study was taken up by the Appellants in paragraphs 26 and 27 of the Appeal.

35. That the Respondents has also failed to reply on the adequacy of the study period for data collection for assessing the biodiversity of the area. The ToR issued by the ministry does not specify the period for collection of baseline data. Hence, the consultant should have collected the baseline data in accordance with Annexure XI of the Technical EIA Guidance Manual for Industrial Estates which has not been dealt with.

Copy of Annexure XI of the Technical EIA Guidance Manual for Industrial Estates is annexed herewith as **ANNEURE-A17.**

36. The Respondents failed to answer with reasons, the issue of Flora and Fauna being severely underrepresented which has been taken up by the Appellants.

37. The Respondents failed to answer with reasons that proposed NIMZ, Zaheerabad project site is coming up in the catchment area of the Narinja reservoir - land use change and the destruction of vegetation is bound to threaten this wetland habitat.

38. The Appellants have mentioned a number of instances showing plagiarism being done by the Consultant but a very generic reply has been given by the Respondent No.4 when specific instances have been cited by the Appellant.

39. Therefore, in view of the abovementioned facts and circumstances the prayer in the Appeal may very kindly allowed.

40) Pass any other orders as this Hon'ble Tribunal may deem fit and proper in the facts and circumstances of the instant case.

APPELLANT No. 3

THROUGH

RITWICK DUTTA RAHUL CHOUDHARY G. STANLY HEBZON SINGH

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VERIFICATION

Verified by M. Raghava Reddy, aged about 61 years, S/o M. Malla Reddy, R/o H. No. 6-3-84/1, Premnagar, Beside Saibaba Temple, Khairatabad, Hyderabad, Telangana-502249, do hereby verify that the contents of Paragraphs 1 to 39 are true to my personal knowledge and nothing material has been concealed therefrom.

APPELLANT No. 3

Date:

Place:

NOTARIAL

M. RAMCHANDER RAO
NBK Bazar HYD 24
Goms No. 457/11

30 JAN 2023

ATTESTED

NOTARY

M. RAMCHANDER RAO

ADVOCATE

H. No. 22-2-849/3, Noor Khan Bazar,
HYD-24, T.S. India, Goms No. 457/11.

BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE BENCH, CHENNAI

APPEAL NO. 42 OF 2022

IN THE MATTER OF:

Mali Patel Raju Reddy & Ors. ...Appellants

Versus

Union of India & Ors. ...Respondents

AFFIDAVIT

I, M. Raghava Reddy, aged about 61 years, S/o M. Malla Reddy, R/o H. No. 6-3-84/1, Premnagar, Beside Saibaba Temple, Khairatabad, Hyderabad, Telangana-502249, presently at ~~Hyderabad~~ do hereby solemnly affirm and declare as under:

1. That I am Appellant No. 3 in the above titled Appeal and conversant with the facts and circumstances of the case and competent to swear this affidavit.

2. That the contents of accompanying Rejoinder are true and correct and nothing material has been concealed therefrom.

M. Raghava Reddy

DEPONENT

VERIFICATION

Verified on this 30 day of Jan, 2023 that the contents of present Rejoinder are true and correct to my knowledge and belief and nothing material has been concealed therefrom.

M. Raghava Reddy

DEPONENT

NOTARY M. RAMCHANDER RAO Goms No. 457/11 NOTARIAL GOVT. OF T.S.

30 JAN 2023

ATTESTED

NOTARY

M. RAMCHANDER RAO

ADVOCATE

H. No. 22-2-849/3, Noor Khan Bazar, HYD-24. T.S. India. Goms No. 457/11.

Telangana State Industrial Infrastructure Corporation Limited **Annexure A-12**

(A Govt. of Telangana Undertaking)

Development of NIMZ Near Zaheerabad, Telangana

Final ESIA/EMP Report

Volume - I

February 2021

L&T Infra Engineering

L&T Infrastructure Engineering Limited

C1171308
RP004, Rev.0

Spotbilled duck in buffer area	Great Egret in buffer Area
	
Great grey heron in Buffer area	Black winged stilt
	
Red wattled lapwing In buffer area	A flock of cormorants in the buffer area

Exhibit 3-2: Flora & Fauna observed in the Project area during the study

3.9.1.3 Status of Flora and Vegetation

A detailed study in both project area and study area has been carried out to assess the present floristic composition in the region. We have recorded a total of 282 plant species in the study area up to 10km radius area. Study revealed that higher number of trees compare to other life forms in the region.

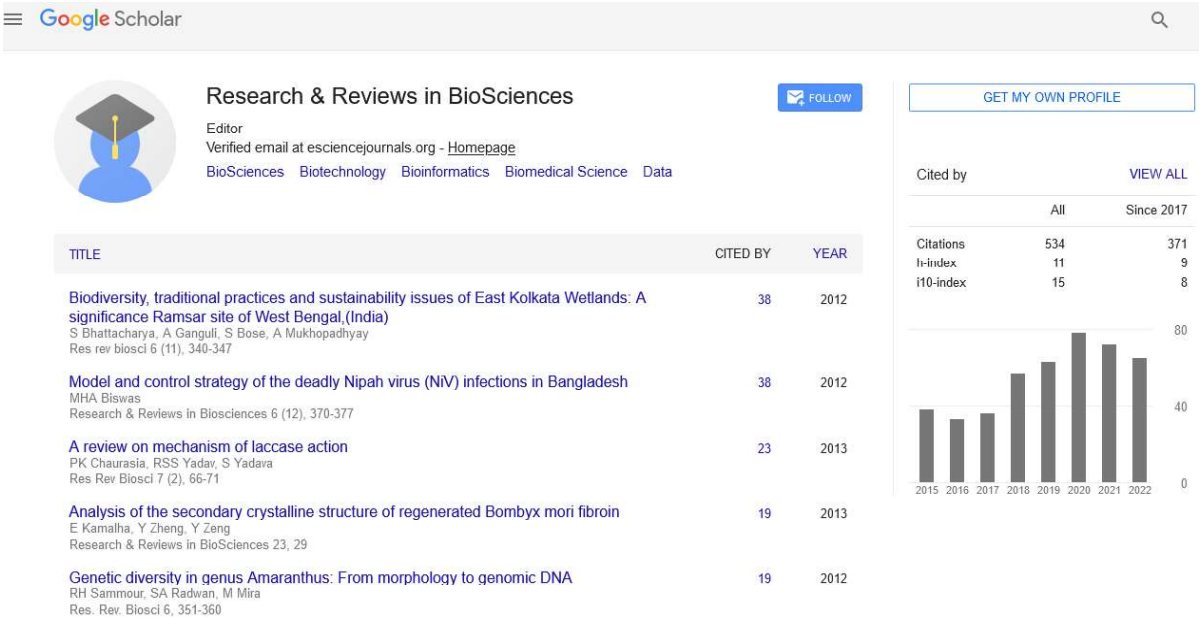
The survey reveals that there are specific patches for certain species and mass plantations such as Eucalyptus, mango etc. There are good number of plantations on the road side such as *Ficus, Polyalthia longifolia, Alstonia scholaris, Peltophorum pterocarpum, Samania saman, Delonix regia, Tectona grandis* and *Acacia auriculiformis*.

Core Area (Core Zone): The core area is representation of flora and fauna within 5 km from the outer boundary of the proposed project site. This zone represents basically terrestrial ecosystem with six Reserve Forests. The agri ecosystem and aquatic ecosystem are sporadically seen. The RFs present in the core area are Rajola R.F 1.1 km at West, Sahapur R.F, 1.5 km at North, Godepalli R.F, 2.8 km at west, Didgi R.F, 2.8 km at South, Digwal R.F, 4.7 km at South East and Zaheerabad R.F, 4.9 km at South direction.

The openlands are commonly enriched with natural as well as exotic biota. The small and medium trees in sampling points represent *Vitex negundo, Tectona grandis, Prosopis juliflora, Pongamia pinnata, Azadirachta indica, Phoenix sylvestris, Borassus flabellifer, Dalbergia sissoo.and Cassia fistula. Shrubs such as Calotropis procera, Ziziphus nummularia, Lantana camera, Parthenium histerophorus are sporadically scattered. Trees such as Tecoma stans, Alstonia scholaris, Dalbergia sisoo, Thespesia populnea, Polyalthia longifolia,* and *Pongamia pinnata* under commonly seen near village wood land.

Annexure A-13

Species Diversity and Enumeration of Various Plant Species in Medak Telangana State



All submissions of the EM system will be redirected to **Online Manuscript Submission System**. Authors are requested to submit articles directly to Online Manuscript Submission System of respective journal.

Original Article
, Volume: 12(2)

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Abstract

Medak is one of the district of Telangana state which is known for its low nutrient soils, supporting growth of some of the inferior plant species in 2016(Feb)-2017 (Feb). In this research work vegetation found in the Medak district is being divided into two broad categories, that is forest vegetation and non- forest vegetation. The vegetation found in the field area was further divided into various groups depending on morphological characteristics shown by them. A vast exploration was conducted wherein the researchers have visited various areas to observe the versatility seen in the respective regions. It is been found that the field area is inhabited by various types of plants belonging to families like Leguminosae (104), Poaceae (83), Cyperaceae (49), Asteraceae (37), Euphorbiaceae (31), Acanthaceae (22), Rubiaceae (20), Lamiaceae (18), Convolvulaceae (17) and Amaranthaceae (15). During the studies, the predominant of the plant species observed belonged to Leguminosae family. This study can be further proceeded by doing a detailed analysis of the soil for its physicochemical characters which specifically supported the growth of Leguminosae members.

Keywords

Morphology; Vegetation; Plant collection; Medak; Enumeration; Medicinal plants

Introduction

Medak district forms part of the Table land of the Deccan plateau and is crossed by different ranges of hills. The ground is mostly of plains, gentle slopes and undulating hills. Isolated peaks and rocky clusters lie scattered all over the district. The elevation of the ground in the district is between 500 m to 600 m with occasional hills up to 638 m above Mean Sea Level. The hills that are of considerable size in the forest division are in a state of erosion because of reckless felling and indiscriminate grazing [1-5]. The rock formation in the district is of the oldest type (archaeon gneisses) and consists principally of peninsular granite complex i.e. pink and grey granites and their metamorphic variations. Minor inliers of Dharwar rocks occur as narrow bands in the granite and consist of horn blend schists, chlorite schists and banded or massive ferruginous quartzite. A few such exposures are seen due North and North-east of Siddipet. A part of the Sangareddy taluk in the south-west of the district is covered by the Deccan traps (Basalt Flows) formation. Building material, the granites found in the district yield large quantity of building stone and road-metal. There are numerous quartz veins cutting across the granite all over the district. Quartz useful for glass industry may be obtained from selected deposits. In the granite feldspars are colonized in some places giving rise to small deposits of white clay in the form of veins and pockets. The soils of the district are mainly red earths comprising loamy sands, sandy loams and sandy clay loams. Red laterite soil is predominant in Zaheerabad taluk. Black cotton soils comprising of clay loams, clays and silty clays are found in Sangareddy, Andole, Narayankhed and Narsapur taluks. The red soils are generally non-saline, non-alkaline while the black soils are moderately alkaline with high soluble salt content. The district is not watered by any big river. The Manjira, a tributary of the Godavari, is an important river. Manjira rises in Bidar district of Karnataka state and enters Medak district in the South-East. It flows for about 96 km in the western and North-Western taluks of Narayankhed, Zaheerabad,

Sanga Reddy, Narsapur and Medak. The other important streams are the Haldi or Paspuyeru and the kudlair. Haldi is a tributary of the Manjira and enters the district from the North and flows through Medak town. The kudlair, which drains siddipet taluk, is another river in the district and forms a tributary of Mahai. The chief sources of irrigation in the district are the Bhanpur Ayacut the Rayanpalle project, the Gangakathwa project, the Beglempalli (Bogulapalle) project and the Peddavagu project. The undulating characters of the terrain of the district lend itself favourable to irrigation from canals, tanks, wells and streams. The climate of the district is characterized by a hot summer and generally dry weather with some pleasing showers, except during the south-west monsoon season. The year may be divided into three seasons, viz, winter season (November-February), summer season (March-May) and South-west monsoon season (June-October). The rainfall during the South-west monsoon months amounts to about 84% of the annual rainfall. July is the rainiest month. The average annual rainfall in the district is 896.7 mm. The heaviest rainfall in 24 hours recorded at any station in the district was 307.3 mm at Sangareddy in September, 1908 [6-12]. The rainfall in the district increases from the south towards North. After February, temperature rapidly increases. May is the hottest month with the mean daily maximum temperature of about 40°C and the mean daily minimum temperature of about 26°C. With the onset of the south-west monsoon in the middle of June, temperature decreases appreciably and the weather becomes more pleasant. December is the coldest month with mean daily maximum temperature at about 29°C and the mean daily minimum temperature of about 14°C. During the cold season, the temperature may go down to about 6°C.

Methods and Materials

The present work on Plant Diversity in Medak is based on intensive explorations by the authors during the year 2016-2017 and also on the critical analysis of collected specimens. In the present investigation, a total of 694 species belonging to 373 genera under 110 families have been included. A few exploration trips were conducted during different months of a year covering all ranges of the forests and non-forest areas in the Medak district. During field trips, every plant was collected in quadruplicates either with flowering or fruiting stage. Each collection of the individual specimen was labelled with field numbers and every attempt was made to study the habit, habitat, colour of the flower, flowering and fruiting season, frequency of distribution and relative abundance. All the above information was recorded in the field itself. Special care was taken for collecting aquatic species, bulbs, corms, tubers etc. [13-16].

Results and Discussion

Forests and vegetation

The vegetation of the district can be categorized into forest, non-forest and aquatic types.

Forest vegetation

The district forests are of Southern Tropical Dry deciduous type and account for 9.9% of the total geographical area. The forests as grouped into only one division i.e. Medak which includes 6 ranges (**Table 1**).

S.No.	Name of the Division	Name of the Range	Area (in sq. kms)
1.	Medak	Siddipet	178.99
2.	Medak	Ramayampet	165.27
3.	Medak	Medak	250.47
4.	Medak	Narsapur	202.70
5.	Medak	Zaheerabad	91.12
6.	Medak	Narayankhed	71.54

Table 1. Forest ranges of Medak district.

The forests are further classified into dry mixed deciduous type, Dry deciduous type and Dry savannah type. Locally the forests are sub classified by the forest officials as teak type (teak over 40%), mixed teak type (Teak 10% to 30%) and mixed type (Teak less than 10%) depending on the abundance of teak in the forests.

Dry mixed deciduous forests

These types of forest are widespread throughout the district and are distributed in the forest blocks of Medak and Narsapur taluks (**Tables 2-9**). The compositions of these forests are as follows;

S. No	Botanical Name	Family	Vernacular Name
1	*Albizia amara*	Mimosaceae	Narlenga
2	*Anogeissus latifolia*	Combretaceae	Sirimanu
3	*Bombax ceila*	Malvaceae	Buruga
4	*Boswellia serrata*	Bursaraceae	Guggilam
5	*Chloroxylon swietenia*	Rutaceae	Billudu
6	*Dalbergia paniculata*	Fabaceae	Kondapachari
7	*Disospyros melanoxylon*	Ebenaceae	Tuniki
8	*Givotia moluccana*	Euphorbiaceae	Konda puniki
9	*Hardwickia binata*	Ceasolpinaceae	Yepi chettu

S. No	Botanical Name	Family	Vernacular Name
10	*Lagerstroemia parviflora*	Lythraceae	Chinangi
11	*Lannea coromandelica*	Anacardiaceae	Ajashrungi
12	*Madhuca latifolia*	Sapotaceae	Ippa
13	*Morinda pubescens*	Maddi chettu	Rubiaceae
14	*Ougeinia oojeinesis*	Fabaceae	Tella mothuku
15	*Phyllanthus emblica*	Euphorbiaceae	Usiri
13	*Soymida febrifuga*	Meliaceae	Somidi
17	*Strychnos nux-vomica*	Loganiacaeae	Vishamushti
18	*Tectona grandis*	Verbenaceae	Teku
19	*Terminalia bellirica*	Combretaceae	Karsha phalam
20	*Terminalia paniculata*	Combretaceae	Puta nallamaanu
21	*Terminalia arjuna*	Combretaceae	Tellamaddi

Table 2. List of large tree members (some Imp. examples).

S. No	Botanical Name	Family	Vernacular Name
1	*Butea monosperma*	Fabaceae	Moduga
2	*Cassia fistula*	Ceasolpinaceae	Rela
3	*Cassine glauca*	Celastraceae	Nirija
4	*Cordia obliqua*	Boraginaceae	Iriki
5	*Dendrocalamus strictus*	Poaceae	Pothuveduru
6	*Gardenia gummifera*	Rubiaceae	Cittamaali
7	*G. Latifolia*	Rubiaceae	Pedd karinga
8	*Holarrhena pubescens*	Apocyanaceae	Kondamalle
9	*Limonia acidissima*	Rutaceae	Velaga
10	*Wrightia tinctoria*	Apocyanaceae	Paalakurche

Table 3. List of tree members (some Imp. examples).

S. No	Botanical Name	Family	Vernacular Name
1	*Alangium salvifolium*	Alangiaceae	Udugu
2	*Annona squamosa*	Annonaceae	Seethaphal
3	*Cassia auriculata*	Ceasalpinaceae	Tangedu
4	*Catunaregam spinnosa*	Rubiaceae	Marrga
5	*Combretum albidum*	combretaceae	Geddepeyyuru
6	*Dichristachys cinerea*	Mimosaceae	Velthuru
7	*Dodonae viscosa*	Sapindaceae	Bandaru
8	*Grewia hirsuta*	Teliaceae	Cheema chipuru
9	*Maytenus emarginata*	Celastraceae	Chinni tuppa
10	*Rhus mysorensis*	Anacardiaceae	Sundari
11	*Vitex negundo*	Verbenaceae	Nalla vavili
	Ziziphus spp.	Rhamnaceae	Regu, pariki

Table 4. List of shrubs (some Imp. examples).

S. No	Botanical Name	Family	Vernacular Name
1	*Arbus precatorius*	Fabaceae	Gurivinda
2	*Ampelocissus latifolia*	Vitaceae	Adavi theega draksha
3	*Aspidopterys cordata*	Malphigiaceae	Bokadeval
4	*Butea superba*	Fabaceae	Theega moduga
5	*Capparis zeylanica*	Capparidaceae	Adonda
6	*Cissampelo spareira*	Menispermaceae	Chiru boddi
7	*Cocculus hirsutus*	Menispermaceae	Dusra theega
8	*Derris scandens*	Fabaceae	Chiruthali baadu
9	*Dioscore apentaphylla*	Dioscoreaceae	Adaviginusu theega
10	*Gymnema sylvestre*	Asclepediaceae	Podapathri
11	*Ipomoea spp.,*	Convovulaceae	Lottapeece
12	*Jasminum auriculatum*	Adavi malle	Oleaceae

S. No	Botanical Name	Family	Vernacular Name
13	*Olax scandens*	Olacaceae	Turuka vepa
14	*Ziziphus oenoplia*	Rhamnaceae	Pariki

Table 5. List of climbers (some Imp. examples).

S. No	Botanical Name	Family	Vernacular Name
1	*Acalypha indica*	Euphorbiaceae	Muripenda
2	*Aerva lanata*	Amaranthaceae	Pindikura
3	*Ageratum conyzoides*	Asteraceae	Adavi pudina
4	*Alysicarpus spp.*	Fabaceae	Braramatal chettu
5	*Biophytum sensitivum*	Oxalidaceae	Jalapupa
6	*cassia tora*	Ceasolpinaceae	Pedda kasinda
7	*crotalaria junceae*	Fabaceae	Janumu
8	*Curculigo orchioides*	Hypoxidaceae	Bangaru gaddi
9	*Desmodium gangtecum*	Plantaginaceae	Deyyam jeda
10	*Glinus oppositifolius*	Molluginaceae	Chatuntharashi
11	*Hibisus lobatus*	Malvaceae	Atakanaara
12	*Indigofera linnaei*	Fabaceae	Yerra palleru
13	*Polycarpaea corymbosa*	Caryophyllaceae	Bommasaari
14	*Pulicaria wightiana*	Asteraceae	Adavi chamanthi
15	*Triumfetta rhomboidea*	Teliaceae	Banka tuttura

Table 6. List of shrubs (some Imp. examples).

S. No	Botanical Name	Family	Vernacular Name
1	*Aristida adscensionis*	Poaceae	Nalla putiki
2	*Cymbopogon citratus*	Poaceae	Nimma gaddi
3	*Dichanthium annulatum*	Poaceae	Needa gaddi
4	*Eragrostis unioloides*	Poaceae	Udara gaddi

S. No	Botanical Name	Family	Vernacular Name
5	*Heteropogon contortus*	Poaceae	Nalla ete gaddi

Table 7. List of grasses (some Imp. examples).

S. No	Botanical Name	Family	Vernacular Name
1	*Cassytha filiformis*	Lauraceae	Akaashavalli
2	*Cuscuta reflexa*	Convilvulaceae	Seethamma pogunaalu
3	*Dendrophthoe falcata*	Loranthaceae	Jeevakam
4	*Scurrula parasitica*	Loranthaceae	Pullurivi
5	*Striga asiatica*	Scropulariaceae	Rathi badamika

Table 8. List of parasites (some Imp. examples).

S.No	Botanical Name	Family	Vernacular Name
1	*Actinopteris radiate*	Pteridaceae	Nemali adugu
2	*Marseliaqua drifolia*	Marseliaceae	Marsilia

Table 9. List of Pteridophytes (some imp. examples)

Dry deciduous scrub forests

Scrub forests are mostly distributed in cornet blocks of Siddipet, Zaheerabad and Narayankhed ranges. Scrub vegetation is characterised by the predominance of the list of plants mentioned in **Table 10**.

S.No	Botanical Name	Family	Vernacular Name
1	*Annona squamosa*	Annonaceae	Seethaphal
2	*Capparis zeylanica*	Capparidaceae	Adonda
3	*Cassia auriculata*	Ceasalpinaceae	Tangedu
4	*C. Occidentalis*	Ceasalpinaceae	Adavitangedu
5	*Diospyros melanoxylon*	Ebenaceae	Tuniki
6	*Gymnosporia spinnosa*	Celastraceae	Dante chettu
7	*Lantana camara*	Verbenaceae	Sisakammari

S.No	Botanical Name	Family	Vernacular Name
8	*Phoenix loureiri*	Arecaceae	Eetha chettu

Table 10. List of dry deciduous scrub forest members (some Imp. examples).

Dry savannah forests

These types of forests are distributed in patches in the outer edges of the forest blocks and usually found in Siddipet, Narayankhed and Zaheerabad ranges and parts of Ramayampet and Narsapur. The trees stand far apart singly or in small groups along with more or less heavy grass growth in which certain fire-resistant plants persist, of which stemless phoenix that is Phoenix loureiri is one among many found. Other common species encountered in these forests include *Cassia auriculata, Dodonea angustifalia and Lantana camara* [17-20].

Non-Forest Vegetation

Waste land and road side plants

The list of waste land and road side plants are mentioned in **Tables 11-13**.

S. No	Botanical Name	Family	Vernacular Name
1	*Acalypha indica*	Euphorbiaceae	Muripenda
2	*Acanthospermum hispidum*	Asteraceae	Palleru
3	*Achyranthes aspera*	Amaranthaceae	Uttareni
4	*Amaranthus tricolor*	Amaranthaceae	Thotakura
5	*Boerhavia diffusa*	Nyctaginaceae	Punarnava
6	*calotropis gigantea*	Asclepediaceae	Tella jilledu
7	*C. procera*	Asclepediaceae	Nalla jilledu
8	*Cassia auriculata*	Ceasolpinceae	Tangedu
9	*C. Occidentalis*	Ceasolpinceae	Adavi tangedu
10	*Cleome viscosa*	Cleomaceae	Kukka vaminta
11	*Corchorus aestuans*	Teliacaeae	Parinta
12	*Croton bonplandianum*	Euphorbiaceae	Ban tulsi
13	*Datura innoxia*	Solanaceae	Nalla ummetha
14	*Echinops echinatus*	Asteraceae	Brahmadandi

S. No	Botanical Name	Family	Vernacular Name
15	*Euphorbia hitra*	Euphorbiaceae	Nanabaalu
16	*Evolvulus alsinoides*	Convolvulaceae	Vishnukantha
17	*Impatiens balsamina*	Balsaminaceae	Chiluka mukku puvvu
18	*Indigofera cordifolia*	Fabaceae	Papara alam
19	*Jatropha gossypifolia*	Euphorbiaceae	Adavi amudam
20	*Parthenium hysterophorus*	Asteracaeae	Vayyari bama
21	*Solanum surattense*	Solanaceae	Ramulka
22	*sida cordata*	Malvaceae	Gayapaku
23	*Tamarindus indica*	Meliaceae	Vepa chettu
24	*Tephrosia purpurea*	Fabaceae	Vempali
25	*Tridax procumbens*	Asteraceae	Gaddi chamanthi
26	*Vernonia cinerea*	Asteraceae	Sahadevi

Table 11. List of waste land and road side plants (some Imp. examples).

S. No	Botanical Name	Family	Vernacular Name
1	*Azadirachta indica*	Meliaceae	Vepa chettu
2	*Cassia roxburghil*	Ceasolpinaceae	Erra tangedu
3	*Delonix regia*	Ceasolpinaceae	Aggi chettu
4	*Ficus benghalensis*	Moraceae	Marrhi
5	*Mangifera indica*	Anacardiaceae	Mamidi
6	*Pongamia pinnata*	Fabaceae	Kanuga
7	*Tamarindus indica*	Solanaceae	Chintha chettu

Table 12. List of some of the important plants growing in towns and villages.

S. No	Botanical Name	Family	Vernacular Name
1	*Abutilon indicum*	Malvaceae	Botla benda
2	*Caesalpinia bonduc*	Ceasolpinaceae	Gachakai

S. No	Botanical Name	Family	Vernacular Name
3	*Cascabela thevetia*	Apocyanaceae	Pacha ganneru
4	*Catunaregam spinosa*	Rubiaceae	Marrga
5	*Clerodendrum inerme*	Verbenaceae	Takkola chettu
6	*Grewia hirsute*	Teliaceae	Cheema chipuru
7	*Lawsonia inermis*	Lythraceae	Mydaku
8	*Parkinsonia aculeate*	Fabaceae	Seema thumma

Table 13. List of some of the important Hedges.

Common weeds of dry and cultivated fields and dry irrigated fields are listed in **Tables 14 and 15**.

S. No	Botanical Name	Family	Vernacular Name
1	*Cissampelo spareira*	Menispermaceae	Velvet theega
2	*Cocculus hirsutus,*	Menispermaceae	Dusra theega
3	*Derris scandens,*	Fabaceae	Chiruthali baadu
4	*Pergularia daemia,*	Asclepediaceae	Gutu gudu
5	*Tinospora cordifolia,*	Menispermaceae	Tippa theega
6	*Tylophora indica*	Menispermaceae	Mekameyani theega

Table 14. Chief climbers seen in hedges are.

S. No	Botanical Name	Family	Vernacular Name
1	*Acalypha indica*	Euphorbiaceae	Muripenda
2	*Ageratum conyzoides*	Asteraceae	Adavi pudina
3	*Alysicarpus rugosus*	Fabaceae	Baramataal
4	*Amaranthus, spinosus*	Amaranthaceae	Thotakura
5	*Argemone Mexicana*	Papavaraceae	Brahmadandi
6	*Celosia argentea*	Amaranthaceae	Gunugu
7	*Cleome gynandra*	Cleomaceae	Kukka vaminta
8	*Chenopodium album*	Amaranthaceae	Pappu kura

S. No	Botanical Name	Family	Vernacular Name
9	*Corchorus aestuans*	Teliaceae	Parinta
10	*Crotalaria junceae*	Fabaceae	Janumu
11	*Crotalari retusa*	Fabaceae	Pottigilligicha
12	*Cynodon dactylon*	Poaceae	Garika gaddi
13	*Cyperus rotundus*	Poaceae	Thunga
14	*Desmodium triflorum*	Fabaceae	Fabaceae
15	*Digera muricata*	Amaranthaceae	Chenchali chettu
16	*Euphorbia geniculate*	Euphorbiaceae	Tilakada
17	*E. Hiirta*	Euphorbiaceae	Nanabalu
18	*Justicia spp.,*	Acanthaceae	Addasaram
19	*Leucas aspera*	Lamiaceae	Thummi kura
20	*Merremia emarginata*	Convolvulaceae	Elika jemudu
21	*Parthenium hysterophorus*	Asteraceae	Vayyari bama
22	*phylanthus amarus*	Euphorbiaceae	Nela usiri
23	*Physalis minima*	Solanaceae	Kupanti
24	*Portulaca oleracea*	Portulacaceae	Gangamili kura
25	*Rorippa indica*	Brassicaceae	Aaku mullangi
26	*Sphaeranthus indicus*	Asteraceae	Boddatarapu
27	*Trianthema portulacastrum*	Aizoaceae	Ambati madu
28	*Vigna spp.,*	Fabaceae	Pesara
29	*Echinochioa colona*	Poaceae	Taidalu
30	*Polygonum barbatum*	Polygonaceae	Konda malle

Table 15. List of weeds (some Imp. examples).

These plants are rooted in the soil saturated with water, but also survive in dried conditions in the later part of their life cycle (**Table 16**).

S. No	Botanical Name	Family	Vernacular Name
1	*Ageratum conyzoides*	Asteraceae	Adavi pudina

S. No	Botanical Name	Family	Vernacular Name
2	*Bacopa monnieri*	scropulariaceae	Brahmi
3	*Caesulia axillaris*	Asteraceae	Erragobbi
4	*Centella asiatica*	Apiaceae	Saraswathaaku
5	*Commelina spp.,*	Commiliniaceae	Ennoddula gaddi
6	*Cyperus spp.,*	Poaceae	Thunga
7	*Eclipta prostrate*	Asteraceae	Gunta galagara
8	*Hygrophila aurciculata*	Acanthaceae	Enugu palleru
9	*Ipomoea carnea*	Convolvulaceae	Lottapeece
10	*Lobelia nicotianfolia*	Companulaceae	Adavi pogaku
11	*Ludwigia perennis*	Onagraceae	Lavanga kaaya
12	*Phyla nodiflora*	Bokkena	verbenaceae

Table 16. List of wetland hydrophytes (some Imp. examples).

Apart from the species encountered in above vegetation types, number of plants are under cultivation in the district. They are appended at the end of concerned family in the systematic enumeration.

Floristic analysis

In the present study, a total of 862 numbers of fields have been collected and identified. These comprise 694 wild and naturalized species belonging to 373 genera and 110 families. Among the 694 species Dicots comprise 513 species, Monocots 177 species and Pteridophytes 4. The results are shown below in tabulated manner. The ratio of Monocotyledons to Dicotyledons is 1: 4.47 of families (19:87), 1:3.40 of genera (91:278); 1:2.91of species (177:513). The ratio of genera to species in the present study is 1:1.7, whereas for the entire Indian region it is 1:7 (**Table 17**).

S.No.	Name of the Family	No. of Species
1	Leguminaceae	104
2	Poaceae	83
3	Cyperaceae	49
4	Asteraceae	37
5	Euphorbiaceae	31

S.No.	Name of the Family	No. of Species
6	Acanthaceae	22
7	Rubiaceae	20
8	Lamiaceae	18
9	Convolvulaceae	17
10	Amaranthaceae	15

Table 17. Dominant ten family?s in Medak district, Telangana state.

The genera having 5 or more than 5 species are Cyoerus and Eragrostis with 12 species followed by Crotalaria and Fimbristylis (11); Indigofera (10); Cassia and Ipomoea (09); Desmodium, Euphorbia, Phyllanthus and schoenoplectus (07); Acacia, Alysicarpus, Ficus, Hedyotis, Heliotropium, Justicia and Leucas (06); Commelina and Grewia.

Conclusion

As it is been already mentioned about the nutritive value of the soil supported growth of inferior varieties of plants and it is also been seen that the varieties found were limited when compared with other areas.

Acknowledgement

I would like to thank the funding agency that is UGC – CAS-I (SAP-II) for its timely support. It is a privilege to work under the guidance of my co-ordinator Prof. C. Venkateshwar, Department of botany, Osmania University who have been a guiding and motivating spirit for doing my work effectively. I would render my special thanks to the Department of Botany, Osmania University for providing space to assimilate the work in written form.

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Annexure A-14

Chairman
& Members of EAC (Infra 1)

Sub: request site visit and opportunity to make our presentation to EAC

Dear Sir,

We, the project affected people, of the proposed NIMZ, Zaheerabad project area request the Chairman and members of EAC Infra 1 to visit the project area and see for yourself how our fertile agriculture lands are being taken for industrial purpose. Please keep in abeyance the appraisal of the project till you visit and see the ground reality. We request you to set aside the NIMZ, Zaheerabad project in the agenda scheduled for March 25, 2022.

The PP and the government of Telangana are misleading the ministry and EAC Infra-1 by saying this area is barren. 90 percent of lands proposed to be acquired are fertile lands under cultivation. We are all small and marginal farmers depending on the land and crops we grow. please don't play with our only source of livelihoods.

NG Ranga agricultural university has set up an agricultural research center in 120 acres, in Bansanthpur, Mamidigi, Metalkunta, Kalbemala Villages Nayalkal Mandal. Given the fertile lands, this center has been set up here. The claims on land use made by the pp and government of Telangana are false and if you can come, you can see for yourself how fertile these lands are. PP has shown that only 27.65 percent of the land to be acquired is cropland. We contest it.

We request that as the PAPS losing our land and livelihood, we be given adequate opportunity to defend ourselves and not pushed to become victims of unfair disadvantages. We would also like to get a chance to appear before the EAC (Infra I) to present our concerns.

Yours Sincerely,

To

Dr. Deepak Arun Apte,
Chairman, EAC (Infra I)

&

Members
EAC (Infra I)

&

Shri Amardeep Raju,
Member Secretary (EAC),
Scientist E,
Ministry of Environment, Forest and Climate Change

Date: May 26, 2021

Subject: Minutes of the 258th meeting of Expert Appraisal Committee held on 17th-18th March, 2021 through Video Conferencing - Minutes of Appraisal of Development of Zaheerabad National Investment and Manufacturing Zone (NIMZ) in Sangareddy District of Telangana by M/s Telangana State Industrial Infrastructure Corporation Limited - Environmental Clearance (Proposal No.IA/TG/NCP/71421/2017 and File No. 21-237/2017-IA.III)

Ref:

1. Extensive plagiarism in draft EIA for Zaheerabad NIMZ (Scientists for People, Letter dated 13 January 2021) – Rejection of EIA as per OM No J-11013/41/2006-IA.II(I) dated 05 October 2011

2. Comments on the NIMZ draft EIA/EMP (March 2020) and Final EIA Report (February 2021) - on the biodiversity of the proposed site (Letter Dated 16 January 2021)

3. Reject the Draft EIA/EMP Report prepared by L&T Infra Engineering for NIMZ, Zaheerabad (Letter Dated 19 January 2021) Short-comings in the Environmental Public Hearing (PH) conducted for NIMZ, Zaheerabad on

20 January 2021 and severe inadequacies in the draft EIA/EMP report presented at the PH (Letter Dated 27 January 2021)

4. Comments on the NIMZ draft EIA/EMP and Final EIA Report (February 2021) - on the biodiversity of the proposed site (Letter Dated 16 March 2021)

Dear Chairman and Members,

In my previous email to the Committee, dated 16 March 2021, the following were the main points that I had raised:

"Study period for data collection is inadequate for assessing the bio-diversity in the proposed NIMZ, Zaheerabad site.

The report fails to mention any areas where protected, important or sensitive species of flora and fauna are found.

Scrublands, grasslands, rocky laterite plateaus and agriculture fallow lands are the major land use types that will be diverted and converted to an industrial land use type for the proposed NIMZ site.

The proposed NIMZ, Zaheerabad project site to come up in the catchment area of the Narinja reservoir - land use change and the destruction of vegetation is bound to threaten this wetland habitat.

The PIA study in the draft EIA/EMP report fails to investigate the single major land use type - shrublands and grasslands.

Methodology followed in the EIA report is inadequate to assess the biodiversity of the NIMZ, Zaheerabad project area.

The study treats this huge landscape as a uniform habitat and not one that has a mix of different habitat types that need separate categorisation and investigation for assessment of biodiversity.

The Flora and Fauna is severely underrepresented.

The mitigation measures section accepts the biodiversity loss but does not mention any con-

servation measures.

The Environment Management Plan and Greenbelt Development doesn't mention any native vegetation of the dry arid scrub lands, grasslands and laterite plateaus.

The Wildlife Conservation Plan presented in the report has been prepared without collecting any baseline data on the major land use type of the project area (scrub lands, grasslands and laterite plateaus).

I appeal to the EAC to consider all the observations I have made regarding the severe inadequacies presented in the final EIA report on the biodiversity of the proposed NIMZ project. The final EIA is insufficient and the biodiversity of the project area has not been assessed based on ground truthing. Hence I humbly request the EAC to reject the final EIA and ask the project proponent to come back with a fresh EIA that conducts a multi seasonal study with robust sampling techniques that will comprehensively assess the biodiversity of the area based on ground truthing and not on borrowed information and present half truths and false information for appraisal. "

While the Committee has deferred the proposal for want of more information/documents, important aspects - the extensive plagiarism (Scientists for People, Letter dated 13 January 2021) in the EIA report submitted by the project proponent and the short-comings in assessment of the biodiversity of the proposed project area (Letter dated 16 March 2021) have not be raised by the committee at all. If a project of this scale is to be appraised without objecting and raising questions regarding the above, it is worrisome.

In the documents/information asked by the Committee (285th meeting on 17th-18th March, 2021), point **ix** and **x** only mentions 'greenery' and 'tall and old and heritage native trees'. Biodiversity is reduced to these simple terms without an understanding of the natural landscape - laterite plateaus, grasslands and scrub habitats in the proposed project area. I have pointed out that the EIA has not assessed the largest land use in the area and prepared a biodiversity report and a Wildlife Conservation Plan without this assessment.

- "ix. The proponent should develop a Greenery and Conservation management plan to sustain existing greenery." How is it possible to develop such a plan without a thorough assessment of biodiversity and the local ecology, while excluding the major land use of the area in the EIA report? By 'sustain existing greenery' does the Committee mean all the existing natural landscapes/habitat types should be kept undisturbed and unchanged?

- "x. All tall and old and heritage native trees should be enumerated, GPS tagged and detailed in EIA EMP and plotting design should be such that all such trees are protected." To suggest that only old and tall native trees be enumerated, is a failure on the Committee's part to understand the natural ecology of the proposed project

area and not give any importance to the other natural flora of the region (laterite plateaus with grassland and scrub forests).

There are 13 Reserved Forests around this massive project, some that abut the project boundary. Has the Committee thought how a project of this scale would impact these forests? There has been no impact assessment on this aspect from the project proponent/EIA consultant.

TSIIC already has a land bank of more than 2 lakh acres, so why do they need more land is a question that needs to be raised by the Committee - nearly 13,000 in this case.

I appeal to the EAC to consider all the above and base their appraisal on facts and to put the safety and welfare of the people first. These are people who depend on the land, who are set to lose everything and they do not want to part with their lands.

I also appeal to the Committee to consider the threat to the local biodiversity from an impending massive land use change because of the establishment of the NIMZ, Zaheerabad project.

I hope the Committee for once is not reduced to a mere rubber stamp of scientific approval of political decision making.

Please do not appraise this proposal.

Attachments: Comments on the NIMZ draft EIA/EMP (March 2020) and Final EIA report (February 2021) - on the biodiversity of the proposed site (the same was attached with my letter dated 16 March 2021)

Yours sincerely,
Dr. Pranay Rao Juvvadi.

Scientists for People

26.02.2021

To
Dr Deepak Arun Apte
Chairman, EAC (Infra-I)
&
Members, EAC (Infra-I)

Sub: Our comments and queries on the draft EIA for the Zaheerabad NIMZ project

Sir(s),

Now the NIMZ project is due for appraisal after completing the formality of public hearing. Earlier, the questions raised at the time of public hearing and submitted in writing were being answered in writing but now they are not doing so in Telangana. Our submissions on coal mining were not answered. So we are preferring to send our written comments and queries to EAC for consideration. We are also aware that EAC does not get adequate time for any detailed appraisal at the scheduled meetings. Our analysis has been that most of the times EACs spend less than haldf an hour on each project on the scheduled meeting day. We are no aware of the members doing any home work on these projects. The information we have gathered to study the draft EIA is 1.13 GB as stored on our computer hard disk. Some of us have decades of experience in technology development, design and engineering of commercial plants, their commissioning and trouble shooting. We have studied more than hundred EIA reports and made detailed comments.

This is in continuation of our letter dated 17.01.2021 addressed to you with a copy of the plagiarism report. In this highly biased and manipulative environment devoid objectivity of science, our concerns are:

a. We have made detailed plagiarism analysis and presented to TSPCB and TSIIC along with MoEF&CC. Most of our copy-paste exposures have been ignored by the EACs though there is OM dated 5 October 2011 on cancelling the EIA report and even the EC issued. Now the proponent may tinker with those sections identified by us and submit a final report. Does it absolve them of the crime of plagiarism? Ethics literature characterizes plagiarism as a crime. Plagiarism is indicative of the lack of application of mind and ability to undertake the study. We are attaching the draft EIA of December 2020 to check our analysis of plagiarism. We demand that the proponent be asked to come up with a fresh EIA study and go for public hearing again. People were not allowed to participate and driven out by the police.

b. Pollution loads calculated are imaginary and have no basis. Our comments and queries attached give details of the flaws in the study.

c. To avoid the application of LARR Act, 2013 the proponent in collusion with state authorities has proposed leaving villages as it is and only taking their lands and livelihoods. Whenever major tragedies like Bhopal disaster and Styrene release at Visakhapatnam happened people were blamed for living near the industries. Now by design, the proponent and the regulators are forcing people to be exposed to industrial pollution for 24 hrs a day. Samething was done at HPC knowing full well the damage to life at Patancheru and other areas in Hyderabad due to Pharma industry. With a poor history of environment, health and safety, it would be genocide by design.

Ongoing Covid 19 threat has set the world rethinking human future. World Scientists have been warning us since 1992 that we are on a collision course with nature. This experiment cannot go on. There is no justification for energy intensive production systems that are not sustainable.

Addressing a UN organized meeting on climate change on 22.02.2021, a prelude to COP26, David Attenborough said, "If we continue on our current path, we will face the collapse of everything that gives us our security: food production, access to fresh water, habitable ambient temperature, and ocean food chains, and if the natural world can no longer support the most basic of our needs, then much of the rest of civilization will quickly break down."

The conservative UK Prime Minister Boris Johnson said, "Whether you like it or not, it is a matter of when, not if, your country and your people will have to deal with the security impacts of climate change"

Under such dire circumstances, thoughtless pursuit of 18th century model of development based on faulty proposals will only bring disaster. Proponent must be made to come out with a suitable proposal fit for the present day world.

Sincerely,

Dr K Babu Rao
Former Chief Scientist
Scientists for People

Encl: a/a

Scientists for People

Dr Deepak Arun Apte 16.03.2021

Chairman, EAC (Infra I)

&

Members

EAC (Infra I)

Dear Chairman and Members,

We understand from the agenda that the NIMZ project proposed by TSIIC is coming up for appraisal before you on 17 March 2021. After quickly going through the final EIA put up for appraisal, we would like to make some observations/comments on it.

1. Draft reports (March 2020 and December 2020) were named as EIA and the final report is called ESIA without any additional material on social impact.
2. In the contents, chapter 3 page numbering started at 3-35 and ended at 3-91 in draft EIA of December 2020 and it is corrected to 3-1 to 3-57 in the final ESIA.
3. Chapter 4 has a few more pages compared to draft EIA (53 pages in draft to 58 pages in final).
4. Chapter 7 contents are renumbered due to addition of a section on public consultation and the material is also redistributed in the final report. (Draft is 51 pages and the final is 57 pages)
5. Chapter 9 is smaller in final report (draft is 42 pages and final version 37 pages).

We are looking at the allegations made against us by L&T infra in justification of their plagiarism. Tobacco companies do not admit smoking is addictive. Fossil fuel companies still deny the need for regulating carbon emissions to prevent climate change. We do not expect L&T Infra to admit their errors. We found plagiarism and distortion of science even in NGT appointed expert committee reports that is carried into judgments. Should this continue? We are not doing it for money nor have any conflicts of interests. We are working for people as a gratitude for supporting us with a career and pension after retirement. You must know how tough it is to identify copied content from a 500 page report searching paragraph by paragraph.

Ethics in science is a separate discipline and requires specific knowledge. L&T Infra's main defence is that it is their own work for other clients reproduced. Simply

stating that it is our own work does not stand. Self plagiarism is also plagiarism. Especially when ownership of the reports is declared by the project proponents, consultants do not have any further rights on the content they generated and cannot use it verbatim without acknowledging the source.

We quote here from "Code of Practice and Professional Ethics for Integrated Environmental Assessment Experts" of National Environment Management Authority, Uganda. India has not set up such authority despite directions from Supreme Court.

"Contents of Reports and References
11. (1) An Environmental Assessment Expert shall, based on the Terms of Reference, include all matters as required, by relevant statutory provisions, before submitting such reports to the project proponent or operator.
(2) An Environmental Assessment Expert shall, in undertaking an environmental assessment or audit, bear in mind any previous environmental assessments or audits of a similar project made under the relevant regulations, **but shall not copy the previous documents wholesome.**
(3) An Environmental Assessment Expert in making reference to other environmental assessment or environmental audit shall acknowledge the sources of the references."

We attach a published article on self plagiarism and link to an article by Turnitin, plagiarism software Development Company. This software Turnitin used in academics largely but is unsuited for consultancy reports. https://www.turnitin.com/blog/why-recycling-your-work-is-usually-plagiarism

Another plagiarism software development company, iThenticate has a number of articles on self plagiarism.
https://www.ithenticate.com/plagiarism-detection-blog/bid/52928/5-Common-Excuses-for-Plagiarism#.YE8sdVUzbce

Additional material on plagiarism is appended to this letter.

They accused us "**The scientists have conveniently changed the numbering of the contents for the Draft EIA report which is different that the report consultant has submitted to TSPCB for public Hearing"** This is about an error in numbering the subsection on social impact assessment. Plagiarism is about the textual content and not the subsection number. Instead of showing proof that the content is original and not sourced from anywhere, they use a small error in wrongly typing the subsection number as a deliberate misrepresentation by us. They made several errors in page numbering also. We take responsibility for this inadvertent error that crept into numbering the subsection.

They have conveniently left out responding on pages and pages copied from World bank and IFC EHS guideline documents and other resources. We offered to publicly

debate on the issue of plagiarism with VC & MD and his team. But he never responded.

It is the responsibility of MoEF and regulatory agencies (PCBs) to check the integrity of the EIA reports and it is not for us citizens. Once the undersigned wrote to Secretary, MoEF&CC to take the services of universities or IITs to screen the draft EIA reports submitted for plagiarism before taking up for appraisal. He positively responded and marked my email to an official in the ministry, who was subsequently found to have plagiarized a regulation from USEPA. When MoEF and EACs themselves are accused of plagiarism what ethical values can be expected? Here are examples reported in press.
https://thewire.in/law/moefcc-usepa-eia-plagiarism
https://www.newslaundry.com/2020/02/24/environment-ministrys-expert-panel-copy-pastes-approval-for-coal-projects-in-goa

Like the minutes of the EAC including "Thane creek" in approval of a project in Goa as shown below, South China Sea Institute of Oceanography in a EIA report included "Zhanjiang" port in a Shenzhen bay project.

(viii) No underwater blasting is permitted.

(ix) Dredged material shall be disposed safely in the designated areas so that the dumped dredge material does not enter Thane creek and some part of the dredged material may also be utilized for beach nourishment. With the enhanced quantities, the impact of dumping on the coastal environment should be studied and necessary measures shall be taken on priority basis if any adverse impact is observed.

But South China Sea Institute of Oceanography responded to public objections on plagiarism, instituted an inquiry and apologized for the grave error. It was a case of recycling text from another report by the institute. The SCSIO never used false defence like L&T but admitted the mistake and took steps to improve ethical values.

"On March 28th, the Research Office of China Biodiversity Conservation and Green Development Foundation (CBCGDF) posted an article about **"Even forget to change the city name when plagiarizing! EIA problem for Shenzhen Bay Channel Dredging Project".** After the publication of the article on the alleged plagiarism of the EIA for Shenzhen Bay Channel Dredging Project at the expense of public environmental interests, many people contacted CBCGDF and said that this kind of mess problem about the EIA industry was just the tip of the iceberg.

On the morning of March 29th, the South China Sea Institute of Oceanography, Chinese Academy of Sciences (SCSIO), issued a statement on the matter for the second time.

This statement, entitled **"Statement on Alleged Plagiarism in the Environmental Impact Statement on Shenzhen Bay Channel Dredging Project (Phase I)"**, highlights the following:

(1). SCSIO believes that the EIA team is working following regulations. "Our team undertaking the environmental impact assessment of Shenzhen Bay Channel Dredging Project (Phase I) has carried out field survey, investigated and collected the marine environment and ecological status data of Shenzhen Bay and carried out relevant numerical simulation calculation following the specified procedures during the implementation of the project";

(2). SCSIO's explanation for forgetting to change the city name and suspected of plagiarism is, "but in the part of qualitative analysis, due to the use of the report completed by SCSIO in the past as a template and the submission of the unfinished report process draft as publicity materials, there are many appearances of 'Zhanjiang', and some of the analysis contents include 'Zhanjiang Port' and relevant planning, etc." (Note: can the meaning be interpreted as use our content, so it should not be considered as plagiarism?).

(3). **SCSIO said that this is a "serious mistake" of "the EIA engineer of the project", and express the "sincerely apologize";**

(4). SCSIO promised that "the institute will conduct a further in-depth investigation on the implementation of the project, seriously deal with the relevant responsible personnel, and publish the treatment results on time."

http://www.cbcgdf.org/English/NewsShow/4997/11877.html

"**Plagiarism – and ignoring redlines**

The environmental impact assessment (EIA) for a 110 million yuan (US$16 million) dredging project in Shenzhen Bay, was commissioned by Shenzhen Shipping Channels Centre and carried out by the Chinese Academy of Sciences' South China Sea Institute of Oceanology. The report was published online for public consultation, but careful readers noted that some sections were identical to an earlier report on the dredging of another channel in Zhanjiang port, also in Guangdong province. Even the word "Zhanjiang" appeared repeatedly. This caused outrage. On 15 April, the Ministry of Ecology and Environment described the case as "particularly grave" and said an investigation had been ordered."

https://chinadialogueocean.net/13710-shenzhen-bay-dredging-scandal-and-ecological-redlines/

None of our academies and Research organizations had any ethics policies till recently. When the undersigned referred a nearly fully plagiarized report to INSA, they simply stated that they cannot act on persons who are not members of their

academy. Society for Scientific Values established to check unethical practices in science is dysfunctional.

There is a groundswell in the struggle against Hyderabad Pharma City project cleared by this EAC. People are refusing to part with their land and continuing relay hunger strikes in several villages. Several hundreds of them obtained stay order from HC against acquisition. Recently several District Collectors were sentenced to 3 month imprisonment for contempt of court in land acquisition cases in Telangana.

Relay Hunger Strike in one of the affected villages

Women are in the forefront.

We had already sent you a critique of the NIMZ EIA from scientific and engineering aspects. EAC has to look into the following aspects.

1. Whatever the level of expertise of EAC, such a large project with nearly a thousand pages of documents for appraisal, it is humanly impossible to adequately appraise the project in 1.5 hrs of time allotted. People and their concerns are completely blanked in the appraisal process. Environmental justice is a casualty. EACs have no accountability for decision making.
2. As there is no requirement for individual units to obtain EC, who will keep track of the pollution load from actual projects.
3. As such the fictitious air pollution data gives predicted values close to daily air pollution limits for particulate matter. Instead of using average annual limit, 24 hr limit is used for comparison. These limits are not permanent and need changes as they are very high compared to limits in several countries. India has become one of the most polluted countries in the world.
4. The habitations are sandwiched among the industries to avoid rehabilitation costs. No social impact of such a condition with land gone and livelihoods lost is considered. People will be turned into insecure daily wagers and that is called development.
5. In case of leakage of gas like Ammonia from food processing industry there is no risk assessment on habitations. Electronic industries also use several toxic gases and our colleagues helped a major public sector unit to dispose of excess cylinders lying for years. No storages for fuels, solvents etc are proposed and explosion hazards not considered. Who will ensure public safety? In AP series of accidents continue with loss of life. On March 11, an explosion in a chemical reactor killed two on spot and severely injured four persons.

We appeal to EAC to consider all our submissions in the public interest and integrity of EIA process and keep in mind environmental justice to the thousands of villagers being sacrificed for promoting this project. Right to life and livelihoods should not be taken away based on a copy pasted report. Approving this project means approving ethical misconduct.

Sincerely,

Dr K Babu Rao
Scientists for People

Encl: a/a

Scientists for People

30.04.2021

Dr Deepak Arun Apte
Chairman, EAC (Infra I)

Sri Amar Deep Raju
Member Secretary, EAC (Infra I)

&

Members, EAC (Infra I)

Sub: Minutes of Appraisal of Zaheerabad NIMZ project

Dear Chairman and Members,

Minutes begin with a quoted paragraph reproduced below. We have no idea why quotation marks were used without identifying the source.

"*The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent*."

It is more in the tone of a legal defence than actual appraisal. Appraisal should decide whether the information submitted is false and/or misleading. Once the appraisal is over and EC issued who will identify the falsity at a later stage. Only a legal course by the affected may identify and prove the falsity. Then what is the purpose of expert appraisal? We have submitted a detailed plagiarism analysis but the EAC has simply ignored it? Will the EAC certify that there is no copy paste in the report? The OM of October 2011 issued on cancellation of the EC is based on a court judgment won by the affected. But the judgment is sidelined by not analyzing the reports for plagiarism and not considering the analysis submitted by citizens. We had submitted several cases of extensive plagiarism. We never came across any EIA report that does not contain copy-pasted content. Recently, an EIA included a certificate that it was tested using an in house plagiarism checker X, version 7.0.2. It is in fact free software on public domain available for anyone to use. But it did contain several paragraphs copy pasted identified using the same software. Such is the audacity of claims by EIA consultants. MoEF&CC has utterly failed to eliminate ethical misconduct in EIA reports. EACs are passively accepting violation of ethics in science. Integrity in science and scientific processes is taking a nose dive. Expertise

is not serving public interest but allowing itself to be a mere rubber stamp of scientific approval of political decision making

The statement released last night at the end of the First Nobel Summit stated: *"We need to reinvent our relationship with planet Earth. The future of all life on this planet, humans and our societies included, requires us to become effective stewards of the global commons—the climate, ice, land, ocean, freshwater, forests, soils, and rich diversity of life that regulate the state of the planet, and combine to create a unique and harmonious life-support system. There is now an existential need to build economies and societies that support Earth system harmony rather than disrupt it."*

"Science is a global common good on a quest for truth, knowledge, and innovation toward a better life. Now, humankind faces new challenges at unprecedented scale."

This appraisal process is to build an economy and society that is proven to disrupt the earth system harmony. In addition the science used to justify such disruption is distorted and unverified.

The minutes have used the disputed data presented in the EIA as it is. For example, the quantity of water requirement and effluent generated and solid waste generated are accepted without considering our submissions. This EAC has cleared several such EIA reports by the same consultant for APIIC because no one questioned the EIAs there. Unfortunately, objectivity of science is being sacrificed in the appraisal process.

We strongly urge the EAC Infra I to put the safety and welfare of the people above all else in their appraisal. Please put an end to fictitious estimates of pollution loads with no real basis.

Sincerely,

Dr K Babu Rao

Scientists for People

Chairman
& Members of EAC (Infra 1)

Sub: request site visit and opportunity to make our presentation to EAC

Dear Sir,

We, the project affected people, of the proposed NIMZ, Zaheerabad project area request the Chairman and members of EAC Infra 1 to visit the project area and see for yourself how our fertile agriculture lands are being taken for industrial purpose. Please keep in abeyance the appraisal of the project till you visit and see the ground reality. We request you to set aside the NIMZ, Zaheerabad project in the agenda scheduled for March 25, 2022.

The PP and the government of Telangana are misleading the ministry and EAC Infra-1 by saying this area is barren. 90 percent of lands proposed to be acquired are fertile lands under cultivation. We are all small and marginal farmers depending on the land and crops we grow. please don't play with our only source of livelihoods.

NG Ranga agricultural university has set up an agricultural research center in 120 acres, in Bansanthpur, Mamidigi, Metalkunta, Kalbemala Villages Nayalkal Mandal. Given the fertile lands, this center has been set up here. The claims on land use made by the pp and government of Telangana are false and if you can come, you can see for yourself how fertile these lands are. PP has shown that only 27.65 percent of the land to be acquired is cropland. We contest it.

We request that as the PAPS losing our land and livelihood, we be given adequate opportunity to defend ourselves and not pushed to become victims of unfair disadvantages. We would also like to get a chance to appear before the EAC (Infra I) to present our concerns.

Yours Sincerely,

Telangana State Industrial Infrastructure Corporation Limited **Annexure A15**

(A Govt. of Telangana Undertaking)

Development of NIMZ Near Zaheerabad, Telangana

Final ESIA/EMP Report

Volume - I

February 2021

L&T Infra Engineering

L&T Infrastructure Engineering Limited

C1171308
RP004, Rev.0

Stack No.	Stack Height (m)	Stack Velocity (m/s)	Stack Dia. (m)	Exit Temp K	PM10 (g/s)	PM2.5 (g/s)	SO2 (g/s)	NO2 (g/s)
NM12	30	13	0.2	418	0.002	0.001	0.992	0.698
NM13	30	13	0.2	418	0.001	0.000	0.540	0.380
NM14	30	13	0.2	418	0.002	0.001	0.920	0.647
NM15	30	13	0.2	418	0.002	0.001	0.711	0.500
NM16	30	13	0.2	418	0.002	0.001	0.714	0.503
NM17	30	13	0.2	418	0.002	0.001	0.711	0.500
NM18	30	13	0.2	418	0.002	0.001	1.117	0.786
NM19	30	13	0.2	418	0.002	0.001	0.904	0.636
NM20	30	13	0.2	418	0.002	0.001	1.007	0.709
NM21	30	13	0.2	418	0.002	0.001	1.007	0.709
NM22	30	13	0.2	418	0.002	0.001	0.783	0.551
Total					0.038	0.015	18.107	12.740

All the above emissions are assumed to be continuous in nature; these are considered for Air Quality Modelling for prediction of impacts.

4.4.2.2 NIMZ's Point Sources-Emissions from DG sets

The following assumptions were made while estimating emissions from DG sets of proposed NIMZ:

- Out of 678.63 mVA of total power requirement for the operation phase of NIMZ, power backup is assumed for 120 MVA and distributed among different land uses in NIMZ.
- Emissions from DG sets were estimated based on composition and by referring the literature review of similar type of DG set's emission and Consultant's experience with Air Pollution Control (APC) Measures and the land area occupied through available secondary data.
- The DG Set emissions are estimated by assuming that the Capacity of DG Set will be to meet the 15- 20% of total power requirement of the plots during emergency. These DGs will be operated during power failure only.

The emission details from DG sets of Zaheerabad NIMZ are given in **Table 4-11.**

Table 4-11: DG Set Emissions from Zaheerabad NIMZ

Stack Details					Emissions Details			
Stack Code	Stack Height (m)	Stack Velocity (m/sec)	Stack Diameter (m)	Exit Temp. (°K)	PM10 (g/s)	PM2.5 (g/s)	SO2 (g/s)	NO2 (g/s)
DGA1	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA2	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA3	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA4	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA5	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA6	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA7	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA8	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA9	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA10	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA11	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA12	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA13	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA14	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA15	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGA16	30	22	0.4	754	0.0496	0.0198	0.469	2.602

Stack Details					Emissions Details			
Stack Code	Stack Height (m)	Stack Velocity (m/sec)	Stack Diameter (m)	Exit Temp. (°K)	PM10 (g/s)	PM2.5 (g/s)	SO2 (g/s)	NO2 (g/s)
DGA17	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGE1	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGE2	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGE3	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGT1	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGT2	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGF1	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGF2	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGF3	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGF4	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGF5	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGF6	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGF7	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGMA1	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGMA2	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGME1	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGME2	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGME3	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGME4	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGME5	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGN1	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGN2	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGL1	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGR1	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGR2	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGR3	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGR4	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGR5	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGR6	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGR7	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGR8	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGT1	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGU1	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGU2	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGU3	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC1	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC2	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC3	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC4	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC5	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC6	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC7	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC8	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC9	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGC10	30	21	0.3	754	0.0126	0.005	0.237	1.314
DGC11	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC12	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC13	30	22	0.4	754	0.0496	0.0198	0.469	2.602
DGC14	30	21	0.3	754	0.0126	0.005	0.237	1.314
Total					2.781	1.112	27.699	153.652

Though DGs will be operated during power failure only, all the above emissions are assumed to be continuous in nature during emergency; these are considered for Air Quality Modelling for prediction of impacts.

Telangana State Industrial Infrastructure Corporation Limited

(A Govt. of Telangana Undertaking)

Annexure A-16

Development of NIMZ Near Zaheerabad, Telangana

EC Clarifications

October 2021

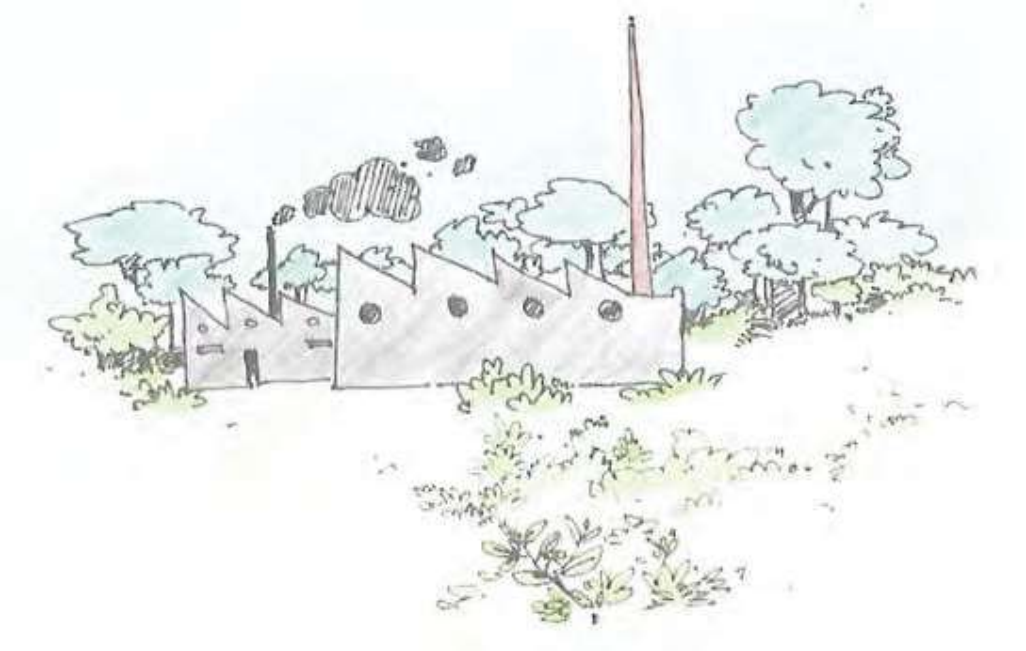
L&T Infra Engineering

L&T Infrastructure Engineering Limited

C1171308

Green Conservation Management Planning
for
NIMZ, Zaheerabad

Submitted to
L&T Infrastructure Engineering Pvt. Ltd.



Prepared by
Environment Matters and Oikos

September 2021

21.	*Morinda pubescence*
22.	*Nyctanthes arbor-tristis*
23.	*Phoenix sylvestris*
24.	*Phyllanthus emblica*
25.	*Pterocarpus santalinus*
26.	*Spondias pinnata*
27.	*Syzygium cumini*
28.	*Tamarindus indica*
29.	*Tectona grandis*
30.	*Wrightia tinctoria*
31.	*Sapindus laurifolius*

Annexure 3: Drawings / Maps

1. Proposed Plantation Zones for a Sample Green area (Yelgoi lake)
2. Proposed Conceptual Road Sections with Plantations
3. Proposed Typical Tree Plantation plan for Road Avenue
4. Revised Final Green Area mapped with NIMZ Master Plan (Sept 2021)

The species mix for plantation in these areas will be proposed and finalized in the further studies.

1003, Vision Crest, D. S. Babrekar Marg, Dadar West, Mumbai 400028, Maharashtra, India.

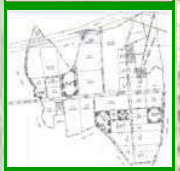
IL&FS | Environment

TECHNICAL EIA GUIDANCE MANUAL
FOR
INDUSTRIAL ESTATES

Prepared for

The Ministry of Environment and Forests
Government of India





by
IL&FS Ecosmart Limited
Hyderabad
October 2009

ANNEXURE XI
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				
▪ Meteorological ▪ Wind speed ▪ Wind direction ▪ Dry bulb temperature ▪ Wet bulb temperature ▪ Relative humidity ▪ Rainfall ▪ Solar radiation ▪ Cloud cover	Minimum 1 site in the project impact area requirements Other additional site(s) are require depending upon the model applied or site sensitivities	Min: 1 hrly observations from continuous records	Mechanical / automatic weather station Rain gauge As per IMD As per IMD	IS 5182 Part 1-20 Sit-specific primary data is essential Secondary data from IMD, New Delhi for the nearest IMD station
Pollutants ▪ SPM ▪ RPM ▪ SO_2 ▪ NO_2 ▪ CO ▪ H_2S* ▪ NH*3 ▪ HC* ▪ Fluoride* ▪ Pb* ▪ VOC-PAH* ▪ Mercury* (parameters are given in ToR for EIA studies based on nature of project, raw material & process technology,	10 to 15 locations in the project impact area	24 hrly twice a week 8 hrly twice a week 24 hrly twice a week	▪ 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 lon meter	**Monitoring Network** Minimum 2 locations in upwind side, more sites in downwind side / impact zone All the sensitive receptors need to be covered **Measurement Methods** As per CPCB standards for NAQM, 1994

Attributes	Sampling		Measurement Method	Remarks
	Network	Frequency		
location-nature/activities within of air				
B. Noise				
Hourly equivalent noise levels	Same as for Air Pollution along with others Identified in study area	At lest one day continuous in each season on a working and non-working day	Instrument : Sensitive Noise level meter (preferably recording type)	Min: IS: 4954- 1968 as adopted 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 meter	CPCB / OSHA
Hourly equivalent noise levels	Highways (within 500 meters 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. Land Environment				
▪ Soil ▪ Particle size distribution ▪ Texture ▪ pH ▪ Electrical conductivity ▪ Cation exchange capacity ▪ Alkali metals ▪ Sodium Absorption Ratio (SAR) ▪ Permeability ▪ Porosity	One surface sample from each landfill and/or hazardous waste site (if applicable) and prime villages, (soil samples be collected as per BIS specifications) in the study area	Season-wise	Collected and analyzed as per soil analysis reference book, M.I.Jackson and soil analysis reference book by C.A. Black	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

Attributes	Sampling		Measurement Method	Remarks
	Network	Frequency		
Land Use/Landscape				
▪ 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	▪ Global positioning system ▪ Topo-sheets ▪ Satellite Imageries ▪ (1:25,000) ▪ Satellite Imageries ▪ (1:25,000)	Drainage within the plant area and surrounding is very important for storm water impacts. From land use maps sensitive receptors (forests, parks, mangroves *etc*.) can be identified
D. Solid Waste				
Quantities: ▪ Based on waste generated from per unit production ▪ Per capita contribution ▪ Collection, transport and disposal system ▪ Process Waste ▪ Quality (oily, chemical, biological)	For green field unites it is based on secondary data base of earlier plants.	Process wise or activity wise for respective raw material used. Domestic waste depends upon the season also	Guidelines IS 9569 : 1980 IS 10447 : 1983 IS 12625 : 1989 IS 12647 : 1989 IS 12662 (PTI) 1989	
▪ General segregation into biological/organic/inert/hazardous ▪ Loss on heating ▪ pH ▪ Electrical Conductivity ▪ Calorific value, metals etc.	Grab and Composite samples	Process wise or activity wise for respective raw material used. Domestic waste depends upon the season also	Analysis IS 9334 : 1979 IS 9235 : 1979 IS 10158 : 1982	

Attributes	Sampling		Measurement Method	Remarks
	Network	Frequency		
Quality ▪ Permeability And porosity ▪ Moisture pH ▪ Electrical conductivity ▪ Loss on ignition ▪ Phosphorous ▪ Total nitrogen ▪ Cation exchange capacity ▪ Particle size distribution ▪ Heavy metal ▪ Ansonia ▪ Flouride	Grab and Composite samples. Recyclable components have to analyzed for the recycling requirements	Process wise or activity wise for respective raw material used.	Analysis IS 9334 : 1979 IS 9235 : 1979 IS 10158 : 1982	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
E. Biological Environment (aquatic)				
▪ Primary productivity ▪ Aquatic weeds ▪ Enumeration of ▪ phytoplankton, zooplankton and benthos ▪ Fisheries ▪ Diversity indices ▪ Trophic levels ▪ Rare and endangered species ▪ Sanctuaries / closed areas / Coastal regulation zone (CRZ) ▪ Terrestrial ▪ Vegetation – species, list, economic importance, forest	Considering probable impact, sampling points and number of samples to be decided on established guidelines on ecological studies based on site eco-environment setting within 10/25 km radius from the proposed site Samples to collect from upstream and downstream of	Season changes are very important	Standards techniques (APHA et. Al. 1995, Rau and Wooten 1980) to be followed for sampling and measurement	Seasonal sampling for aquatic biota One season for terrestrial biota, in addition to vegetation studies during monsoon season Preliminary assessment Microscopic analysis of plankton and meiobenthos, studies of macrofauna, aquatic vegetation and application of indices, viz. Shannon, similarity, dominance IVI

Attributes	Sampling		Measurement Method	Remarks
	Network	Frequency		
produce, medicinal value ▪ Importance value index (IVI) of trees ▪ Wild animals	discharge point, nearby tributaries at down stream, and also from dug wells close to activity site			*etc.* Point quarter plot-less method (random sampling) for terrestrial vegetation survey.
Avifauna ▪ Rare and endangered species ▪ Sanctuaries / National park / Biosphere reserve	For forest studies, chronic as well as short-term impacts should be analyzed warranting data on micro climate conditions			Secondary data to collect from Government offices, NGOs, published literature Plankton net Sediment dredge Depth sampler Microscope Field binocular
F. Socio-economic				
▪ Demographic structure ▪ Infrastructure resource base ▪ Economic resource base ▪ Health status: Morbidity pattern ▪ Cultural and aesthetic attributes	Socio-economic survey is based on proportionate, stratified and random sampling method	Different impacts occurs during construction and operational phases of the project	Primary data collection through R&R surveys (if require) or community survey are based on personal interviews and questionnaire	Secondary data from census records, statistical hard books, toposheets, health records and relevant official records available with Govt. agencies

* Project Specific