

Minutes of the 279th meeting of Expert Appraisal Committee held on 15th November, 2021 through Video Conferencing for the projects related to Infrastructure Development, all Ship breaking yards including ship breaking units 7(b); Industrial Estate/Parks/Complexes/Areas, Export Processing Zones, Special Economic Zones, Biotech Parks, Leather Complexes 7(c); Ports, harbors, breakwaters, dredging 7(e) and National Highways 7(f)

The 279th Meeting of Expert Appraisal Committee (EAC) of Infra-1 (IA-III) was held through Video Conferencing at the Ministry of Environment, Forest & Climate Change (MoEF&CC), Indira Paryavaran Bhavan, New Delhi on 15th November, 2021 under the Chairmanship of Dr. Deepak Arun Apte. A list of participants is annexed as **Annexure-A**.

1. OPENING REMARKS OF THE CHAIRMAN

At the outset, Dr. Deepak Arun Apte, Chairman, EAC welcomed the Members of the EAC and requested Shri Amardeep Raju, the Member Secretary of the EAC to initiate the proceedings of the meeting with a brief account of the activities undertaken by the Ministry under Infra-1 Division.

2. CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Committee confirmed the Minutes of 278th EAC meeting held on 27th - 28th October, 2021 with the following amendments.

I. Agenda No. 3.13 (278th EAC MoM): M/s Adani Port & Special Economic Zone Limited (APSEZ): Proposal No. IA/GJ/NCP/216793/2021; File No. 10-138/2008-IA.III

Point No.	Particular/details	Request made by PP	Remarks
3.13.4 (Para: xv)	Proponent shall not do any coal-based operation. Instead, possibilities to be explored for gas/electricity-based operations. Option to utilise solar power and wind energy should also be worked out and submitted.	The above condition is not relevant to APSEZ as we are only infrastructure developer May be deleted	Para: xv may be deleted
Point No. 3.13.4 (Para: xviii)	The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per ministry's O.M No 22-65/2017-IA.III dated 1st May, 2018 and the action plan on the activities proposed under CER shall be submitted at the	Ministry's O.M No. 22-65/2017-IA.III dated 30 th September, 2020 (reference no. 2), supersedes OM No. 22-65/2017-IA.III dated 1 st May 2018 and hence this condition is not applicable. Therefore following condition is included:	Para: xviii may be deleted and relevant para may be included.

	time of appraisal of the project included in the EIA/EMP Report	As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30 th September, 2020, the project proponent, based on the commitments made during the public hearing, shall include all the activities required to be taken to fulfil these commitments in the Environment Management Plan along with cost estimates of these activities, in addition to the activities proposed as per recommendations of EIA Studies and the same shall be submitted to the ministry as part of the EIA Report. The EMP shall be implemented at the project cost or any other funding source available with the project proponent.	
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II. Agenda No. 3.6 (278th EAC MoM): M/s Indo Energy International Ltd. (IEIL): Proposal No. IA/PB/NCP/233342/2021 and File No. 10-34/2015-IA.III

*Augmenting existing Sanegaon facility **to 5 Million Tons** by upgrading of equipment, mechanization of storage and stacking, loading, unloading arrangements, for handling of barges up to 4500 metric tons. (in the above existing para, the bold portion is included)*

3. AGENDA WISE CONSIDERATION OF PROPOSALS:

Agenda wise details of proposals discussed and decided in the meeting are as following:

Agenda No.3.1

Sri City – proposed Phase-II expansion project at Rallakuppam, Kolladam, Irugulam, Mallavaripallem, Thondur & Peddetipakkam villages. Satyavedu & Varadiaphalem Mandal, Chittoor District, Andhra Pradesh by M/s Sri City Private Limited – Environmental Clearance.

[Proposal No. IA/AP/NCP/1822/2007; File No. 21-51/2020-IA.III]

“The EAC noted that the Project Proponent and the consultant have given undertaking that the data and information given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in 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.”

3.1.1. The project proponent along with the EIA Consultant M/s. ABC Techno Labs India Private Limited, Chennai made a presentation through Video Conferencing and provided the following information: -

3.1.2. Sri City Phase-I: Sri City is an integrated business city spread over 7500 acres, which includes a multiproduct Special Economic Zone (SEZ), a Domestic Tariff Zone (DTZ), a Free Trade & Warehousing Zone (FTWZ) and an Electronics Manufacturing Cluster. Sri City is home to over 186 companies from 27 countries. Sri City has already obtained EC vide No. 21-791/2007-IA III dated 16.10.2008 and developed phase 1 spread over 5400 acres.

3.1.3. Sri City Phase-II: Sri City has now proposed to develop Phase II (895.368 Ha) at Rallakuppam, Kolladam, Irugulam, Thonduru, Mallavaripalem & Peddetipakkam villages, in Satyavedu & Varadiapalem Mandal, Chittoor District of Andhra Pradesh.

3.1.4. ToR was granted on 3rd November, 2020 in its 243rd meeting on 28th – 30th September, 2020 (F. No. 21-51/2020-IA.III).

3.1.5. The proposed project falls under Schedule 7(C), Category “A” of EIA Notification 2006. The project site falls within 10 km radius of Interstate boundary between Andhra Pradesh – Tamil Nadu attracting General Conditions of the EIA Notification 2006. Total investment/cost of the project is about Rs 100 Crores.

3.1.6. Public hearing (PH) was conducted by Joint Collector, Chittoor District, APPCB – Regional office Tirupati, DSP Chittoor District and Tahsildar for the project on 24th September 2021 at nearby M/s Zen Linen International Pvt Ltd.

3.1.7. The proposed Expansion project of Sri City Phase-II falls under agricultural crop land & plantation area, few water bodies found inside it. Land use /Land breakup of the proposed project site is as following-.

Sl. No.	LU/LC	Area (Acres)	Area (Hectares)	% of Land Use
1	Industrial/ Commercial zone	1238.45	501.187	55.97
2	Multiple use zone	226.35	91.60	10.24
3	Residential zone	194.26	78.61	8.78
4	Transportation and Facilities	129.14	52.26	5.84
5	Green Belt	279	112.916	12.61
6	Commercial	145.255	58.795	6.56
Total		2212.455	895.35	100

3.1.8. Landuse/Landcover around 10 km radius of project site

Sl. No.	LU/LC	Area (in Sq.km)	%
1	Agricultural Crop Land	54.70	8.16
2	Agricultural Plantation	98.37	14.67
3	Agricultural Fallow Land	185.85	27.71
4	Barren/ Unculturable / Waste lands/ Scrub land	45.46	6.78
5	Forest	156.33	23.31
6	Built up land	16.57	2.47
7	Mine / Industry / Quarry	13.79	2.06
8	Water Body	99.57	14.85

3.1.9. List to industries to be housed with the proposed project site: The Proposed project have those red, orange, green & white category industries which are not attracting EIA Notification 2006 in their Phase II development. Furthermore, Industries attracting EIA notification – 2006 will not be considered. The probable list of upcoming industries along with its CPCB categorization is as below:

S.No	Type of Industry	CPCB Categorization
1	Auto components & Light engineering	Orange
2	Steel fabrication	Orange
3	Engineering units including machinery	Orange
4	Leather products excluding tannery	Orange
5	Industrial carbon including electrodes and graphite blocks, activated carbon, carbon black	Red
6	Textile garments excluding dyeing	Orange
7	Electronic products & ancillary products	Orange
8	Logistics & warehousing facilities	Orange
9	Pharmaceutical formulation and R & D	Orange
10	Synthetic detergents and soaps (excluding formulation)	Orange
11	Bakery & confectionery units	Orange

12	Coated electrode manufacturing	Orange
13	Food & food processing including fruits & vegetables processing	Orange
14	Manufacturing of tooth powder, tooth paste, talcum powder & other cosmetic items	Orange
15	Printing or etching of glass sheet using hydrofluoric acid	Orange
16	Forging of ferrous & Non – ferrous metals	Orange
17	Foundry operations	Orange
18	Manufacturing of glass	Orange
19	Thermocol manufacturing	Orange
20	Foam manufacturing	Orange
21	Health Care Establishment	Orange
22	Industries having effluent discharge more than 100KLD	Red

3.1.10. Terrain: The topography of the area is undulating terrain, with alluvial lateritic soil.

3.1.11. Details of water bodies:

S. No.	Water bodies	Distance
01	Poovalambedu Lake	≈ 9.4 Km, SSE
02	Pulicat Lake	≈ 4.5 Km, E
03	Telugu Ganga Canal	9 th Canal at close proximity to the site
04	Tada Falls	≈ 9 Km, NW

3.1.12. Water requirements: The total water required for the proposed Phase II project will be 20.5 MLD. The Government of Andhra Pradesh has allocated 1 TMC (81 MLD) of water via G.O. No.MS.184 through Telugu Ganga Canal. Water is supplied by AP Govt from Kandaleru reservoir and this is stored in open storage which can hold water about 800 Million liters. No ground water extraction is proposed.

3.1.13. Diversion of forest land: Proposed project site does not involve forest land.

3.1.14. There is no National Parks, Sanctuaries and Tiger Reserves etc are around 10 Km from the proposed project site. There is no Eco Sensitive Zone passing through the project site and Pulicate Bird Sanctuary ESZ is 2.5 Km from nearest site of project and 6.8 Km from Industrial Zone – aerial distance (ZSI report confirming no effect on ESZ , is part of EIA).

3.1.15. Waste Management: It is estimated that around 18.4 TPD of MSW and industrial waste (hazardous, non-hazardous and recyclable waste) will be generated from the proposed project. The municipal solid waste shall be disposed to APPCB approved vendors by respective industry. The industrial solid waste generated daily shall be collected via trucks and transported to the proposed collection point (Transfer Station). This station receive loads of processable

solid waste in varying sizes and consolidation takes place into tractor/trailer size loads and then the larger loads are transported to the landfill site. For disposal of hazardous waste nearby APPCB approved TSDF operator will be given preference.

3.1.16. CETP details: CETP is not applicable because different industry sectors different types of effluents and these cannot be treated in one CETP. It is the responsibility of individual units to treat their effluents in their premises.

3.1.17. STP Details: The sewer line network will be designed as per the IS and EU standards. Through the underground sewage network, all the sewage will be collected from industrial, commercial and residential units will be transported to the existing Sewage Treatment Plant (STP). Estimated sewage generation in operation phase will be around 5440 KLD to STP and post treatment it will be around 4712 KLD for reusing. During operation phase, wastewater generated will be treated by individual industries and the treated water will be recycled back in order to achieve ZLD while sewage generated from industries will be treated in the STPs, additional expansion will be taken up by developer based on demand.

3.1.18. Tree cutting: These are total 4570 trees in Phase – II land. Necessary permission from GoAP under WALTA act will be sought for trees cutting. Planting of 2 trees is proposed for each tree cutting.

3.1.19. Energy conservation: Energy conservation measures for proposed expansion source are Green glasses, Sensor lighting and Insulation etc around can save 10% with quantity of 500 Nos.

3.1.20. Rainwater harvesting: Rainwater Harvesting is proposed with 450 Nos of storage with capacities of 1800 along with 1080 no's of recharge pits with capacities of 1500. Sri City has a very effective rain water harvesting system that enables open storage of 900 million litres of rain water, which is sufficient for about 6 months.

3.1.21. Proposed project site is not in CRZ area.

3.1.22. Land acquisition and R&R issues: Land acquisition & land conversion (agricultural to nonagricultural) was completed in 2010 and further no forest land was acquired. The land was acquired through AP Government and all compensations have been paid in consultation with AP and compensation paid is higher than the prevailing market rate. Hence no R&R issue is involved.

3.1.23. Employment potential: Total man power requirement during construction phase will be about 3000 person. During operation phase of the project, direct & indirect employment generated will be 20,000 and 45,000 people, respectively.

3.1.24. Benefits of the project: The proposed expansion project will have major positive impact on social and economic upliftment of the region by overall improvement in living standard through creation of new jobs, increase in volume of general trade, general improvement in infrastructural facility with better transport and communication

network. Sri City will create revenues for State Government and Central Government by means of taxes, cess etc.

3.1.25. Details of court cases: No Court Cases are pending against the proposed project.

3.1.26. Summary of specialized Studies carried out for the project as per the ToR: Based on ZSI study that the proposed phase-II expansion of Sri City Pvt. Ltd will not have any effect on the migratory bird species that visit Pulicat Bird Sanctuary and its associated water bodies located in north-eastern, eastern and south-eastern sides of Sri City. The reason being that the Sri City is away from the main bird sanctuary and its easternmost point where the company proposes to expand its activities is more than 2.5 Km and in between we have main broad gauge railway line and four-lane highway (NH-5) which connects Chennai with New Delhi and Kolkata. Besides there is no passage in between through which water from Pulicat enters Sri City or waste water from Sri City that goes to Lake Ecosystem. Furthermore, all waste water generated from various industries inside Sri City are treated as per standard guidelines given by CPCB and stored within Sri City campus or used for gardening purposes. It is worthwhile to mention that the Sri City management has two well established nurseries mostly having native plant varieties and the treated water from sewage plants are being used in these two nurseries and various gardens besides being used to raise avenue plants.

3.1.27. *During the deliberation, the EAC observed and noted the following:*

- i. List of industries should be defined accordingly to the CPCB category and it should be clarified how Zero Liquid Discharge will be implemented by the individual industry.*
- ii. No CETP has been proposed by the proponent to manage the effluents that are generated by industries. The proponent has to provide an undertaking that CETP is not required and individual industry will strictly implement the ZLD model.*
- iii. Sri City getting permission for more water quantity for less industry and if not used has to be surrendered to the water board.*
- iv. As mentioned in ZSI report, 30-50 Meter has to be kept as the buffer zone for the Swamp lands. Swamp land should not be disturbed and it has to be considered under Green Belt.*

3.1.28. Further to the queries raised by EAC, PP vide letter dated 15th November, 2021 has submitted the requisite information. It has been mentioned that the use of standby DG sets are proposed for mandatory backup operations of fire water tanks, STP, emergency services. It is assured that PP has dual source supply, hence 99.5% uptime. Therefore, the usage of DG sets is very low. PP also provided seasonal wind roses. PP mentioned that all water bodies in phase-1 have been identified by ZSI as swamp areas. A green belt of 10-15 m width has been developed around the water bodies. Further, PP has given undertaking that no Red-Category industries shall be allowed in Phase-II. It has been mentioned that all individual units will treat their trade effluent inside their premises by ensuring 'Zero Liquid Effluent Discharge'

3.1.29. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 279th meeting on 15th November, 2021 and **recommended** the

proposal for grant of Environmental Clearance with specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. All the mitigation measures to reduce pollution as mentioned in EIA/EMP report shall be implemented in toto.
- ii. The existing water bodies in the project area shall be conserved and used for effective water management. No ground water shall be used in any case.
- iii. Provision shall be made to recharge the ground water and construct rainwater harvesting structures for augmentation of ground water levels. Rain water harvesting for roof run-off and surface run- off, as plan submitted shall be implemented.
- iv. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The bore well for rainwater recharging shall be kept at least 4 mts above the highest ground water table.
- v. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured/recorded to ensure the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six Monthly Monitoring report.
- vi. The Industrial complex shall achieve Zero Liquid Discharge and to achieve the Zero Liquid Discharge, waste water generated from various industrial operations shall be properly collected, treated to the prescribed standards and then recycled or reused for the identified uses.
- vii. The member units shall provide storage tanks for collection of effluent and provide ETP for further treatment as per the prescribed norms and, as per the commitment made by Sricity. Flow meters with recording facilities shall be provided to monitor the effluent quality and quantity discharged by member industries to the final disposal/re-use on a continuous basis.
- viii. Ambient noise levels shall be regularly monitored and conform to the prescribed standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during development/ construction phase.
- ix. Continuous monitoring system be installed by all the member industries and adequate measures shall be made to reduce ambient air, water and noise level during construction and post construction phase, so as to conform to the stipulated standards by CPCB/SPCB. A detailed plan with number of air quality monitoring stations specially near the village boundaries and parameters to be monitored with frequency of monitoring shall be submitted with the 6 monthly compliance report. Further compliance report as per the monitoring plan shall also be submitted. For identifying the location of monitoring stations, seasonal wind rose analysis shall be carried out with respective predominant wind direction taking the nearby villages as the reference locations.

- x. Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016.
- xi. Grading within the project site shall be planned such that there shall be negligible impacts on the existing natural drainage system/pattern. An adequate drainage system shall be provided at the site with separate collection streams to segregate the storm run-off from roads, open areas, material storage areas, vehicle wash water and other wastewater streams. Suitable measures should be taken to prevent the washing away of construction materials into the drainage system.
- xii. Green belt should be developed all around the settlements and water bodies. Minimum 33% of total project area shall be maintained as green belt.
- xiii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory Aforestation etc, either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also be implemented and become part of EMP.
- xiv. The unused water should be surrendered to the water board.
- xv. As mentioned in ZSI report, 30-50 Meter buffer need to be kept as the buffer zone for the Swamp lands. Swamp land should not be disturbed and it has to be considered under Green Belt.

Agenda No. 3.2

Proposed Construction of Training Walls for Permanent Stability of Bar Mouth at Village Pulicat, Taluk Ponneri, District Thiruvallur, Tamil Nadu by M/s Department of Fisheries - Further consideration for Environmental Clearance

[Proposal No. IA/TN/NCP/186694/2019; File No. 10-39/2019-IA.III]

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

3.2.1. The above mentioned proposal was earlier considered by Expert Appraisal Committee (EAC) in its 44th EAC meeting held on 23rd -25th September, 2019. TOR was accorded vide letter No. 10-39/2019-IA-III, dated 16th October, 2019.

3.2.2. Subsequently, the aforementioned proposal was placed before the EAC during its 249th meeting on 14th December 2020 for the want of Environmental Clearance. It was noted that there is a lack of scientific data/evidence over fisheries and the proposed project may affect the migratory bird, since Pulicat Bird Sanctuary which is located within 10 km of the project site. In view of the above, the EAC has deferred the proposal and requested the PP to submit a brief report over fisheries and their impacts on fish population, based on scientific data/evidences.

3.2.3. The aforementioned proposal was further placed before the EAC-Infra-1 during its 254th meeting on 11th February, 2021 and it was deferred based on the following observation made by EAC: “The PP has submitted partial information for the queries raised in the 249th meeting on 14th December 2020. The PP has submitted the abstract of the report in the last meeting in place of the full report. The abstract does not highlight the finding of the report and the mitigation measures suggested for the area. Further, as mentioned in the earlier meeting that a sub-Committee shall visit the site and submit the report.

3.2.4. A site visit was conducted by a sub Committee on 7th September, 2021. Based on the observations it has been concluded that the opening of Ponneri bar mouth will be beneficial for the Pulicat lake ecosystem. The exchange of water between sea and lake will stabilize the salinity levels, thereby increasing the diversity and abundance of planktons and other benthic flora and fauna in the lake. This in turn can help in sustaining the overall wetland bird population in Pulicat Bird Sanctuary which lies in the Central Asian Flyway Region that also supports several important migratory bird species.

3.2.5. Report prepared by SACON was also placed and discussed by the committee. The report clearly states that the opening of the mouth will benefit the migratory birds.

3.2.6. The aforementioned proposal was further placed before the EAC-Infra-1 during its 279th meeting on 15th November, 2021. The project proponent along with the EIA Consultant M/s. ABC Techno Labs India Private Limited, Chennai made a presentation through Video Conferencing.

3.2.7. *During the deliberation, the EAC noted that*

- i. A site visit was conducted by the Sub-Committee and the report is already submitted by the Sub-Committee*
- ii. Despite clear cut views of EAC in earlier meetings, no scientific data/evidence over fisheries has yet been submitted by the proponent.*
- iii. It must be clarified that how opening of bar mouth at Pulicat lake will impact (positively or negatively) the fisheries.*

In view of the foregoing observations and commitment by the proponent to submit the requisite information, the EAC decided to **defer** the proposal. The proposal shall be reconsidered after

the above details are made available for appraisal by the EAC.

Agenda No. 3.3

Construction of Two/Four lane with paved shoulder from Km 80+800 to Km 120+125 (Satna to Maihar Section) of NH 135BG under Bharatmala Pariyojana in the State of Madhya Pradesh (Package-III) by M/s National Highways Authority of India – Environmental Clearance.

[Proposal No. IA/MP/NCP/199099/2021; File No. 10-17/2019-IA.III]

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in 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 ToR/Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

3.3.1. The project proponent along with the EIA consultant M/s Intercontinental Consultants and Technocrats Pvt. Green Park, New Delhi has made a presentation through Video Conferencing and provided the following information-

3.3.2. The proposed project road originates (24°35'0.31"N, 80°46'41.37"E) from Giduri village near Satna (design Km 80+800) and terminates (24°15'47.62"N, 80°47'34.08"E) on NH-7 at Lakhanpur village near Maihar (design Km 120+125) in State of Madhya Pradesh. The alignment of the proposed project road is passing through 3 talukas (Raghuraj Nagar, Uchehara & Maihar) and 40 villages (7 villages in Raghuraj Nagar Taluka, 24 villages in Uchehara Taluka & 9 villages of Maihar Taluka) of Satna district in the state of Madhya Pradesh. The total length is of 39.325 km.

3.3.3. The proposed project falls under 7(f), Highway, Category A. Total project cost is Rs, 646.07 Cr. ToR was issued on 24th Apr 2019 and amendment in ToR was granted on 24th March 2021 during 256th EAC meeting held on 4th March, 2021 (letter No. 10-17/2019-IA.III).

3.3.4. Land use/Land cover of project site:

S. No.	Land-use / Land-cover	Area (ha)	%
1	Agriculture & allied uses	185.46	96.0
2	Waterbody	5.20	2.7
3	Vacant	1.60	0.8
4	Settlements	1.00	0.5
	Total Area (ha)	193.26	

3.3.5. Land use/ Land cover around 10 km radius of project site (1 km in case of Highway projects):

S. No.	Land-use / Land-cover	Area (ha)	%
1	Agriculture	99,128.88	68.86

2	Forest	30,627.36	21.28
3	Settlements / Built-up area	7,778.28	5.40
4	Water body	2,605.28	1.81
5	Mining activities	1,733.84	1.20
6	Vacant	1,437.37	1.00
7	Industrial	523.87	0.36
8	Transportation / Roads	57.86	0.05
9	Waste land	41.35	0.03
10	Recreation	17.84	0.01
	Total Area (ha)	143,951.93	

3.3.6. Right of Way (RoW): Proposed ROW shall be 45 meter in general. At location of major & minor junction, bus bays, truck lay bye, toll plaza and interchange extra land has been considered in addition to above as per the actual design requirement.

3.3.7. Terrain: The proposed alignment is passes through plain terrain with elevation varies from about 296 m to 337 m above MSL.

3.3.8. Water Bodies: The alignment of the proposed project road (Satna to Maihar) crosses rivers, local streams and nala at several locations as below:

S. No.	Proposed Chainage	Name of River/ Canal	Village
1.	81+350	Local Stream	Itaura Kothar & Chakbandi
2.	82+881	Pond	Lamtara
3.	85+150	Satna River	Jiganhat
4.	90+018	Local Stream	Hardua Kothar
5.	96+564	Local Stream	Kolgawan Ubari
6.	96+933	Local Stream	Govrao Khurd
7.	98+524	Local Stream	Govrao Khurd
8.	107+332	Barha River	Kulpura
9.	111+587	Local Stream	Ichoul
10.	113+797	Local Stream	Ichoul
11.	114+857	Patna Nala	Ichoul
12.	115+917	Local Stream	Barhi

3.3.9. To minimize the impact drainage & hydrological flow, 4 major bridges, 8 minor bridges and 144 culverts are proposed to be constructed along the project road. It has been ensured that free flow of water shall be maintained wherever the alignment crosses river / local streams / nallah etc.

3.3.10. Water requirements: **Construction Phase:** The total water demand of the project is 4,95,045 KL. In compliance to the Sub-Clause 111.8.3 of MoRTH Specifications, the Contractor will identify the nearest source of water body at plant and camp site and shall source

the water preferably from surface water bodies, rivers, streams in the project area. Only at locations where surface water sources are not available, the Contractor shall contemplate extraction of ground water, after intimation and consent from the CGWB. As per the CGWB classification, out of 3 Talukas, through which the proposed project road is passing, Raghuraj Nagar Taluka fall under critical category, Maihar Taluka fall under semi-critical category and Uchehara Taluka fall under safe category. **Operation Phase:** During the operations phase the water would be required primarily for domestic use at the toll plaza and landscaping. No ground water shall be extracted.

3.3.11. Waste Management: **Wastewater Treatment in Construction Camp:** Daily water requirement for drinking & domestic purposes in the construction camps are 8,500 liters and generation of wastewater is 6,800 liters (6.8 m³). Packaged Wastewater Treatment Plant has been recommended for the construction camp. **Solid Waste Management:** Refuse Containers will be provided at site for the management of domestic waste generated by the construction laborers and these containers shall be emptied at least once daily and will be disposed of as per SWM Rules, 2016 in consultation with the local authority. **Construction waste:** The part of the cut material shall be used in fill and further possibility of using the cut material in other road works shall be examined based on its suitability during the construction phase. The balance cut material, if any, shall be disposed off according to the Construction and Demolition Waste Management Rules, 2016. **Hazardous Waste Management:** The hazardous waste generated during construction period will be disposed off as per applicable rule.

3.3.12. Public Hearing: PH was conducted at Government Primary School, village Lagargaon, Uchehara Taluka, Satna District, Madhya Pradesh on 28th July, 2021.

3.3.13. Diversion of forest land: Proposed project site does not involve forest land. There is no National Parks, Sanctuaries and Tiger Reserves etc are around 10 km from the proposed project site. Proposed project site is not in CRZ area.

3.3.14. Details of Tree Cutting: The proposed project does not involve diversion of forest land. In non-forest land, there are 2,646 trees within the proposed RoW. Girth size of maximum number of trees is 30 to 60 cm (30.7%) followed by 60 to 90 cm (22%) and less than 30 cm (18.6%). Girth size of only 7.4% trees is more than 180 cm. Major species are Khair, Sag, Amba, Neem, Vilayati babool etc. As per joint inspection with the Revenue Department, it is found that, out of 2,646 trees, 1,470 trees are coming within the construction zone which is to be felled.

3.3.15. Green Belt Development: Avenue plantation shall be carried out as per IRC SP 21:2009. Total length of the proposed project road is 39.325 km, out of which effective length available for plantation is 28.911 km. total 26,486 trees are proposed to be planted (10 times) under greenbelt development plan. The proposed project is a two lane highway and no space available for median plantation. The capital cost provision of about Rs. 5.29 Crore has been kept for greenbelt development.

3.3.16. Rain Water Harvesting: 79 Rain Water Harvesting Structures with provision of oil filters and de-silting chambers has been proposed along project road as per requirement of IRC SP: 42-2014 and IRC SP: 50-2013.

3.3.17. Land Acquisition/ R&R Issues: The land required for construction of proposed project road is tentatively 193.26 ha, out of which 166.26 ha is private land and 26.99 ha is government land. Total number of affected household is 1734 and Total number of structures to be affected is 8. Land will be acquired by the CALA (Competent Authority for Land Acquisition) as per National Highways Act, 1956 and relevant provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013 & amendment of State Government.

3.3.18. Employment potential: Total manpower requirement is 700 out of which 550 man-powers will be required during construction phase and 150 during operation phase.

3.3.19. Benefits of the project: The proposed highway will connect two important National Highways i.e. NH-39 and NH-30 (old NH-7). There are 13,010 registered industries in Satna district out of which 9,896 are large and medium industries. The proposed highway will provide efficient access to various markets by ensuring smooth flow of goods and services. The highway will support the local businesses and economy along the project corridor. It will also facilitate small-scale industries by streamlining transport of raw and finished material.

3.3.20. Studies carried out for the project as per the ToR:

- *Cumulative Impact Assessment*: shall be carried out after completion of all 3 packages and shall be submitted along with the EC application for last package of the NH-135BG.
- *Traffic Study*: has been carried out and findings of the same have been included in the EIA Report.
- *Provide measures to avoid road kills of wildlife*: The proposed project (Package-III) does not involve diversion of any forest land and also nor falls within 10 km boundary of any Protected Area. No such incident neither observed during the field survey nor reported by the local villagers. The same has been verified from the Forest Department. No road kill data is available with the Forest Department.
- A comprehensive plan for plantation has been prepared and included in the EIA Report as greenbelt development plan.

3.3.21. Details of Court cases: An Original Application No. 50/2021 between Shubhendra Kumar Pandey V/s NHAI & Others was filed Under Section 14 and 15, R/W Section 18(1) of the National Green Tribunal Act, 2010 regarding felling of tree between km 80.800 to km 85.150 on dated 10.07.2021 before the National Green Tribunal, Central Zone Bench, Bhopal. The applicant has stated that 600 fully grown trees of various thicknesses are to be cut down for the construction of the project of National Highway NH-135BG, distance from Km 80.800 to Km 85.150.

3.3.22. The matter was taken up by this Tribunal on 26.07.2021 and joint committee consisting Divisional Forest Officer (DFO), Satna and representative from the Madhya Pradesh Pollution Control Board was constituted with a direction to submit factual and action taken report.

3.3.23. As per the observation made by the committee, total no. of trees standing in the said span are 469 but cutting and felling will be limited to 278 trees only, due to construction of NH 1358G from km 80.800 to km 85.150.

3.3.24. NHAI has submitted the reply to the Honourable Court on 21st September 2021 and date of hearing was 8th October 2021. The report submitted by the Joint Committee is accepted by the honourable court. The respondents are directed to take care and the undertaking which have been submitted for plantation of 10 times of the number of trees felled for construction of proposed NH to mitigate the felling of trees should be taken care of. Original Application No. 50/2021(CZ) is finally disposed off.

3.3.25. *During the deliberation, the EAC noted the following:*

i. Green belt development should be carried out by the concerned State Forest Dept.

3.3.26. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 279th meeting on 15th November, 2021 and **recommended** the proposal for grant of Environmental Clearance with specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. Green belt development (tree plantation) in lieu of the trees being felled in non forest land should be carried out by the State forest department as deposit work and not by the private contractor. Green belt must be developed using exclusively native species. No exotic species to be used for the same. No Ground water shall be extracted and used. Approval/permission of concerned authority shall be obtained before drawing surface water from canal or any other sources.
- ii. The proponent shall obtain permission from the competent authorities for tree felling along the proposed alignment.
- iii. Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table.
- iv. In borrow pits, the depth of the pit shall be regulated such that the sides of the excavation will have a slope not steeper than 1:2, from the edge of the final section of bank. Soil erosion checking measures shall be carried out. Details for Borrow area operation and rehabilitation given in EIA report shall be followed.
- v. Quarry areas shall be barricaded during mining operations. The abandoned quarry shall be developed as water reservoirs with proper fencing around quarry area. Details for Quarry area operation and rehabilitation given the EIA report shall be followed.
- vi. In all the construction sites within 150 m of the nearest habitation, noisy construction work such as crushing, concrete mixing will be stopped during the night time between 10.00 pm to 6.00 am. No noisy construction activities will be permitted around educational institutions/health centres (silence zones) up to a distance of 100 m from the sensitive receptors. All plants and equipment used in construction shall strictly conform to the CPCB/SPCB noise standards.
- vii. Traffic Control Devices/Road Safety Devices/ Roadside Furniture including various types of cautionary, informatory, regulatory as mandatory signboards, road markers,

- studs, etc. shall be provided at appropriate locations all along the project stretch in accordance with the specifications laid down in Manual of Specifications and Standards for Expressways (IRC: SP:99-2013) and IRC:8, IRC:25, IRC:26, IRC:35, IRC:67, IRC:79, IRC:103 and Section 800 of MORTH Specifications.
- viii. Prepare the traffic prediction report for complete project (including all packages of this project) considering the cumulative impact of the traffic on the environment and submit to the Ministry and concerned Regional Office within 3 months.
 - ix. All the major, minor bridges and culverts should not affect the drainage systems. Flood plains of the rivers/ drainage systems are not to be disturbed.
 - x. Afforestation using compensatory plantation in the ratio of 1:10 shall be carried out. Native tree species shall be provided as per the IRC Guidelines on Landscaping and Tree Plantation (IRC:SP:21-2009). Effort should be made to plant native trees and Ficus species on both sides of the alignment. Special attention shall be given for protecting giant trees, and locally important trees (having cultural importance) and should be identified chainage wise.
 - xi. Project alignment should be managed in such a way to save the Heritage/old trees supposed to be affected by the proposed alignment.
 - xii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory afforestation etc., either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also become part of EMP and shall be implemented.
 - xiii. Proponent shall keep the finish road level sufficiently elevated from ground level with provision of railing on both sides to restrict animal crossing in order to avoid the possibility of wildlife injury/death. Animal underpasses, watch tower, water holes and other mitigation measures proposed shall be constructed in supervision of forest department.
 - xiv. While constructing the over bridges as proposed over major water bodies efforts should be made to avoid construction of pillars in beds of water bodies.

Agenda No. 3.4

Development of 8-lane Bangalore-Chennai Expressway Phase-II from Km 71.000 near N.G. Hulkur Village, Bangarpet Taluqa, Kolar District, Karnataka and ends at Km 156.000 near 190 Ramapuram Village, Gudipala Mandal, Chittoor District, Andhra Pradesh by M/s National Highways Authority of India (Total length – 85.00 km) –

Environmental Clearance.

[Proposal No. IA/KA/MIS/73482/2018; File No. 10-14/2018-IA.III]

3.4.1 The project proponent along with the EIA consultant M/s Vardan Environet, Gurugram has made a presentation through Video Conferencing and provided the following information-

3.4.2 The proposed Bangalore-Chennai Expressway Phase-II is a new Greenfield project for providing better and efficient connectivity in the Bangalore-Chennai Region. The project starts from Kolar district (ch.71.000- ch.75+300 and ch.82.407-ch.83.598) comprising length of 5.491 Km in Karnataka and 2 locations at Chittoor district (ch.75.300-ch.82.407 and ch.83.598-ch.156.000) comprising length of 79.509 Km in Andhra Pradesh. The project stretch falls in the states of Karnataka and Andhra Pradesh. The total length is 85.00 Km and total area proposed is 918.5228 ha. The proposed right of way for the Greenfield alignment is considered as 90 m.

3.4.3 The Geo-coordinates of project site are: Starting Point: 13° 0'28.14"N, 78°25'33.77"E and Ending Point: 13° 7'15.53"N, 79° 6'13.41"E

3.4.4 The proposed project falls under 7(f), Highway, Category A. Total project cost is Rs, 4121.00 Cr. ToR was considered during 187th Meeting of the EAC held on 12th April, 2018 and it was granted by MoEFCC vide its letter F. No. 10-14/2018-IA.III dated 14th May, 2018.

3.4.5 Land use/Land cover of project site:

S. No.	Land-use / Land-cover	Area (ha)
1	Agriculture Area (ha.)	686.5949
2	Waste/Barren Land (ha.)	0
3	Grazing/ Community Land (ha.)	0
4	Surface Water Bodies (ha.)	45.936
5	Settlements (ha.)	0
6	Industrial (ha.)	0
7	Forest (ha.)	61.776
8	Mangroves (ha.)	0
9	Marine Area (ha.)	0
10	Others (ha.): Other Govt.Land	124.2159
	Total (ha.)	918.5228

3.4.6 Land use/ Land cover around 10 km radius of project site (1 km in case of Highway projects):

S. No.	Land-use / Land-cover	Area (%)
1	Urban	0.85
2	Rural	1.54

3	Industrial	0.89
4	Agriculture Land	57.72
5	Agriculture Plantation	10.99
6	Forest	12.23
7	River/Stream	0.36
8	Lakes/Ponds/Reservoirs	2.61
9	Waste Land	1.09
10	Scrub Land	11.06
11	Barren/Uncultivable land	0.64
	Grand Total	100

3.4.7 The proposed road will have 17 nos. of Major Bridges, 34 nos. of Minor Bridges, 157 nos. of Culverts, 20 nos. VUP, 5nos. VOP, 8 LVUP, 26 LVUP, 11 flyovers and 2 Toll Plaza. In addition, 12.506 km of connecting road are proposed on Main Expressway and 3.480 Km on Interchange locations.

3.4.8 Terrain: The proposed alignment is passing through Plain, Rolling and Hilly terrain.

3.4.9 Water Bodies: The project mainly crosses rivers namely Kaundinya, apart from this river, there are number of seasonal natural streams/nallahs crosses the project road. The project alignment passes through 12 No. Minor irrigation Tanks. (1 in Kolar district and 11 in Chittoor district).

3.4.10 Water requirements: Total water requirements during construction and operation phase are 4,500 KLD and 27 KLD, respectively. The source will be a mixture of surface water and ground water and prior permission for its extraction shall be obtained from competent authorities. Ground water extraction is proposed during construction Stage after approval from CGWA/State Ground Water Department.

3.4.11 Public Hearing: PH was conducted in Kolar district of Karnataka and Chittoor District of Andhra Pradesh on 19th Aug 2021 and 28th Aug 2021, in the presence of Deputy Commissioner and District collector, respectively.

3.4.12 Diversion of forest land: The project alignment is passing through Rayala Elephant Reserve Forest Area, Palamner Range, Chittoor West Forest Division in Andhra Pradesh. The RF land to be diverted for expressway is 61.776 Ha. The project online Forest proposal no. is FP/AP/ROAD/141827/2021.

3.4.13 Three (3) nos. of Elephant Underpasses have been proposed along the Elephant movement route in consultation with Forest Department. In addition, minor bridges have been proposed across streams and 3 nos. box culverts have been provided in the forest stretch for ensuring access of movement of wild animal.

3.4.14 Protected Area: Kaundaniya Wildlife Sanctuary is located on the southern side of the road in Palamaner Range of Chittoor West Forest Division in Chittoor District at a distance from 2.2 Km to 10 Km. The Eco-sensitive zone of Kaundaniya WLS is yet to be notified by the

MoEFCC, so the Eco-sensitive zone (ESZ) of this Sanctuary is considered to 10 Km from the outer boundary of the Sanctuary.

3.4.15 Waste Management: The excavated material (C&D Waste) quantity is 3,92,377 tonne and it will be reused in road and ground levelling within ROW.

3.4.16 Details of Tree Cutting & Green Belt Development: A total of 27,703 nos. of trees (4,662 Forest Trees and 23,042 Non Forest Trees) of varying girth are located within the corridor of impact and are likely to be felled due to the project. Greenbelt Development along the entire project length within ROW is proposed with 3 Rows of tree plantation following the guidelines as per IRC SP: 21:2009. Compensatory Plantation is proposed in the ratio of 1:3 (Total number of Tree to be planted = 69,200).

3.4.17 Rain Water Harvesting: About 170 nos of Rain Water Harvesting Structures at every 500 meters of either side of the road are proposed.

3.4.18 Land Acquisition/ R&R Issues: The proposed land acquisition for the alignment is approx. 918.5228 ha (Private-686.5949 ha and Government- 231.9279 ha). A total of 80 PAH, 80 PAF and 474 PAP, 80 PDHs and 80 PDFs are involved under project.

3.4.19 Employment potential: Total Permanent employment for 500 persons and temporary employment for 9,37,500 persons are proposed.

3.4.20 Benefits of the project: **Environmental:** The proposed BCE Phase-II project will ensure the smooth flow of traffic, which reduces the emissions. Apart from it, plantation will be done throughout the project road, which will increase the aesthetic, improve environment in the region. **Economic:** Provide better connectivity between Bangalore and Chennai and will act as a link between major commercial, industrial centres of Karnataka, Andhra Pradesh and Tamil Nadu. Lowering transportation cost for users and improving access to goods and services enables new and increased economic and social activities. Expressway would work through the dynamic developmental externalities generated through the forward and backward linkages.

3.4.21 Details of Court cases: No Court Case is pending against the proposed project.

3.4.22 *During the deliberation, the EAC observed and noted the following:*

It was observed that the Ch.117 to Ch.124 of the proposed alignment is passing adjacent to the existing four lane road. Committee asked NHAI to explore if connectivity of the existing (adjacent) road may be given from Ch.117 to Ch.124 into the proposed road so as to make un-interrupted Elephant under pass.

3.4.23 The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 279th meeting on 15th November, 2021 and **deferred** the proposal for grant of Environmental Clearance as sought details on the above point no 3.4.22.

Agenda No. 3.5

Development of economic corridors, inter corridors, feeder routes and borders road to

improve the direct connectivity in Indian Cities (Lot-8/ Package-1) Surat –Nashik-Ahmednagar Greenfield Stretch (Length 289.00 km) in the States of Gujarat and Maharashtra by M/s National Highways Authority of India – Terms of Reference

[Proposal No. IA/MH/NCP/229436/2021 File No. 10/47/2021-IA.III]

3.5.1. The project proponent along with the DPR consultant M/s Aarvee Associates Architects Engineers & Consultants Pvt. has made a presentation through Video Conferencing.

3.5.2. The EAC had a detailed deliberation in its 279th meeting on 15th November, 2021 and noted with concern that the project proponent has shown only one alignment for the proposed project. Therefore, the proposal was **deferred** for grant of Terms of Reference for the want of all three feasible alignments.

Any Other Item:

Agenda No. 3.6

Transport of coal/cargo through road movement for 50% of terminal capacity through Mechanised Handling facilities at General-cum-Bulk cargo berth in the Outer Harbour of Viksakhapatnam Port Trust by M/s Visakhapatnam Port Trust – Further consideration for Amendment in Environmental and CRZ Clearance.

[Proposal No. IA/AP/NCP/220069/2021 File No. 10-9/2009-IA.III]

3.6.1. The aforementioned proposal was earlier considered by EAC in its 268th meeting on 26th – 27th July, 2021. EAC had deferred the EC amendment proposal of Visakhapatnam Port Trust with the observation that there was no capping on provisions of rail and road transport on the EC granted to Visakhapatnam Port Trust. The proposal was further considered in 278th EAC meeting during 27th - 28th October, 2021, and it was again deferred as the project proponent and the consultant was unable to connect for the meeting due to failure in the audio/video system.

3.6.2. At this instance, the aforementioned proposal was further placed before the EAC during 279th meeting on 15th November, 2021. The project proponent along with the EIA consultant M/s SV Enviro Labs & Consultants has made a presentation through Video Conferencing and provided the following information-

Information sought by EAC during 268 th meeting on 26 th – 27 th July, 2021	Information submitted by PP
Clarifications on the earlier EC granted to the Visakhapatnam Port Trust with regard to the Provisions of rail and road transport without any capping and whether the current proposal is within the domain of the State Govt? .	Concessionaire M/s Vizag General Cargo Berth Pvt. Limited (VGCBPL) had approached APPCB by highlighting above aspects for their kind consideration on “Permission to increase road bound dispatches from 1 MMTPA to 3 MMTPA as per customers requirement and necessary amendment in CFE and /or CFO conditions”. <i>In reply, APPCB has reverted as following during CFE amendment Meeting:</i>

	“The facility shall submit the copy of the EC Amendment or seek clarification from MoEF&CC, GoI for change of mode of transport of coal/cargo through road movement for 50% of terminal capacity through mechanized handling facilities at general cum bulk cargo berth in the outer harbour of Visakhapatnam Port Trust as MoEF&CC had mentioned only wagon loading in EC Order dt: 01.09.2009 issued to M/s. VPT.”	
ii. Detailed information regarding the previous conditions and amendment required in the earlier prescribed EC, dated 01.09.2009 in a tabular form.	EC previous conditions dated 01.09.2009	Clarification/amendment required in earlier EC dated 01.09.2009
	Point no (3), The proposed installation of mechanical handling system at the existing general cargo berth in the outer harbour for unloading of coking coal and steam coal shall comprise ship unloading system, stackers, reclaimers, wagon loading system and a system of conveyors.	Point no (3), The proposed installation of mechanical handling system at the existing general cargo berth in the outer harbour for unloading of coking coal and steam coal shall comprise ship unloading system, stackers, reclaimers, wagon loading system, a system of conveyors, <u>loading of trucks with payloaders, transportation by rail and/or road from Eastern Stackyard.</u>
	Point (2). At present coking coal and steam coal are being transported by rail/road. Point (3). This proposed installation of mechanical handling equipment envisages cargo handling of 6.50 million tons of additional cargo.	This proposed installation of mechanical handling equipment envisages cargo handling of existing 4.58 million tons plus 6.50 million tons of additional cargo transported by rail and / or road per annum.

3.6.3. The proposed project is for amendment in the Environmental and CRZ Clearance to “Transport of coal/cargo through road movement for 50% of terminal capacity through Mechanized Handling facilities at General-cum-Bulk cargo berth in the outer Harbour of Visakhapatnam Port Trust”, Visakhapatnam, Andhra Pradesh”.

3.6.4. The proposed project falls under 7(e), Category-A, Ports & harbours as per EIA notification 2006. Environmental & CRZ Clearance for the project for “Installation of Mechanized Handling facilities at General-cum-Bulk cargo berth in the outer harbor of Visakhapatnam Port trust” was granted *vide* letter No. 10-9/2009-IA.III dated 01st September, 2009.

3.6.5. The proponent vide a letter dated 12th July 2021 has requested the Ministry for amendment in EC letter dated 01st September, 2009 “to transport coal/cargo through road movement for 50% of terminal capacity”. The required amendment in Project Layout is as following:

Plant/ Equipment/ Facility	Existing configuration	Proposed configuration/ Amendment required	Remarks, if any
10.18 MMTPA	10.18 MMTPA	Transport of Cargo through Roads from Eastern stack yard for 50 % of terminal capacity	There shall be transportation of coal/cargo through road for 50 % of terminal capacity (10.18 MMTPA) from Eastern stack yard. There is no change in cargo handling capacity.

3.6.6. Reason for Amendment: M/s VGCBPL is Presently dispatching Cargo by Rail movement and 1 MMTPA cargo by Road movement (from Eastern Stack Yard) and given the following reason for above amendment “Most of the Rail bound customers are preferring economically viable domestic coal over import coal due to Govt. of India`s policy initiatives in promoting domestic coal production under campaign of “Aatma Nirbhar Bharat”. Hence only coastal customers prefer import coal due to geographic advantage (coastal area/close to sea) and logistics/landed cost advantage of handling cargo by road than rail. Multiple customers (close by coastal area) prefer road movement due to less daily consumption. Residual small cargo left over which is not a Rake load and hence needs to be dispatched by road. Some of our customers cannot accept Rail Rakes due to various constrains and/or lack of infrastructure at their end”.

3.6.7. *During deliberation, EAC observed and noted the following:*

- i. After amendment, the movement of about 500 trucks per day may cause heavy pollution load due to transportation of coal.*
- ii. Therefore, transportation of 2.5 MMTPA coal/cargo through road shall be recommended initially for one year.*
- iii. The PP need to carry out baseline assessment of the air quality parameters for the present scenario and need to acquire requisite quarterly data on air pollution caused by the increased transportation of coal/cargo for 2.5 MMTPA through road for up to one year for assessment.*
- iv. After assessment of environmental issues and disclosing data on “how much pollution load is increasing” for 2.5 MMTPA, the PP may come up with the proposal of increasing the transportation of coal/cargo through road for 50 % of terminal capacity.*

3.6.8. The EAC, taking into account the revised submission made by the project proponent had a detailed deliberation in its 279th meeting during 15th November, 2021 and **recommended** the proposal for the amendment in Environmental and CRZ Clearance issued by the Ministry in favor of M/s Visakhapatnam Port Trust, vide F. no. 10-9/2009-IA.III dated 01st September, 2009 for “transportation of coal/cargo through road up to 2.5 MMTPA of terminal capacity (10.18 MMTPA) from Eastern stack yard as following:

EC previous conditions dated 01.09.2009	Clarification/amendment required in earlier EC dated 01.09.2009
Point no (3), The proposed installation of mechanical handling system at the existing general cargo berth in the outer harbour for unloading of coking coal and steam coal shall comprise ship unloading system, stackers, reclaimers, wagon loading system and a system of conveyors.	Point no (3), The proposed installation of mechanical handling system at the existing general cargo berth in the outer harbour for unloading of coking coal and steam coal shall comprise ship unloading system, stackers, reclaimers, wagon loading system, a system of conveyors, <u>loading of trucks with payloaders, transportation by rail and/or road from Eastern Stackyard.</u>
Point (2). At present coking coal and steam coal are being transported by rail/road. Point (3). This proposed installation of mechanical handling equipment envisages cargo handling of 6.50 million tons of additional cargo.	This proposed installation of mechanical handling equipment envisages cargo handling of existing 4.58 million tons plus 2.5 MMPTA of additional cargo transported by rail and / or road.

3.6.9. The amendment is subject to following conditions:

- i. *Transportation of 2.5 MMTPA coal/bulk cargo through road shall be recommended initially for one year. The PP need to carry out baseline assessment of the air quality parameters for the present scenario by acquiring requisite quarterly data on air pollution caused by the increased transportation of coal/bulk cargo for 2.5 MMTPA through road for up to one year for assessment.*
- ii. *A detailed analysis for the increase in the pollution load or otherwise shall be submitted to the Ministry*
- iii. *After assessment of environmental issues and disclosing data on “extent of increased pollution load due to 2.5 MMTPA, the PP to come up with the proposal of increasing the transportation of coal/cargo through road for 50 % of terminal capacity.*

Agenda No. 3.7

Development of 8-lane SPUR Starting from Km 26.582 of Vadodara -Mumbai Expressway Main Alignment (Design Chainage 0+000) and terminating at proposed Junction with the Multi-Modal Corridor of MMRDA (Design Chainage 79+783) in the state of Maharashtra (Length 79.783) by M/s National Highways Authority of India – Further consideration for Environmental Clearance

[Proposal No. IA/MH/MIS/110764/2019 and File No. 10-29/2019-IA.III]

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in 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 ToR/Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

3.7.1 The aforementioned proposal was earlier considered by EAC in its 278th meeting during 27th - 28th October, 2021, and it was deferred for want for some requisite information.

3.7.2 At this instance, the aforementioned proposal was further placed before the EAC during 279th meeting on 15th November, 2021. The project proponent along with the EIA consultant M/s Intercontinental Consultants and Technocrats Pvt. Ltd. New Delhi has made a presentation through Video Conferencing and provided the following information-

Information sought by EAC during 278th meeting during 27th - 28th October, 2021	Information submitted by PP during 279th meeting on 15th November, 2021	Remarks
i There seems to be ambiguities in the proposals submitted to Matheran Monitoring Committee in 2013 and 2021. PP need to clarify whether tunnel under Matheran was part of proposal submitted to MMC in 2013?	Tunnel was part of the VME-SPUR alignment since inception of the project as well as the application submitted to the Matheran Monitoring Committee (MMC).	<i>Chronology of the event has been submitted by the proponent.</i>
ii PP has to submit the ESZ clearance from Matheran Monitoring Committee on an authorized letter head.	Additional structures were designed on the observation of MMC and same was approved by the MMC during its meeting held on 21 st April 2012 and 15 th December 2012 and letter issued by the chairman of MMC dated 16 th April 2013. The District collector Raigad endorsed the said approval of the Chairman MMC dated 16.04.2013 in his letter dated 24 th March 2021.	<i>Letter issued by the chairman of MMC dated 16th April 2013 in on the personal letter head and PP has not submitted an authentic letter from MMC.</i>
iii In Forest area between chainage 2 to 19 all culverts, animal underpasses shall be as per prescription made in the conservation plan. However, considering good population of wildlife in the area it is advised that width of underpass shall be kept 10 meter uniformly for all underpasses.	NHAI would like to undertake that width of all culverts, animal underpasses in the forest area between chainage 2 to 19 shall be kept 10 meter uniformly.	<i>Chainage wise list of structures between 2 to 19 with revised width has been submitted by the PP.</i>

3.7.3 The proposed Vadodara Mumbai Expressway (VME) – SPUR is a Greenfield alignment, which starts at km 26.582 of main alignment of the Vadodara Mumbai Expressway at Koshimb village of Palghar district at Ch. 0+000 and terminate at the proposed junction with the Multi-Modal Corridor of Mumbai Metropolitan Region Development Authority

(MMRDA) in Morbe village of Raigad district at Ch. 79+783. Total length of the VME-SPUR alignment is 79.783 km; out of which 18.900 km lies in Palghar district, 55.260 km lies in Thane district and remaining 5.623 km lies in Raigad district of Maharashtra.

3.7.4 The proposed alignment is passing through 68 villages and 6 Talukas (Vasai, Wada, Bhiwandi, Kalyan, Ambarnath and Panvel) in the State of Maharashtra.

3.7.5 The proposal was considered by the Expert Appraisal Committee (EAC) in its 220th meeting held on 26 July, 2019 and 232nd meeting held on 27th February, 2020 for the ToR. ToR was issued vide F. No. 10-29/2019-IA.III dated 16th March 2020.

3.7.6 The geocoordinates of project site are starting point 19°29'19.44"N, 72°52'58.86"E, 19°3'59.65"N, 73°10'49.57"E. Length of the proposed expressway is 79.783 km. Virar Railway Station is located at a distance of approx.11.5 km from the start point of the expressway and Pavel Junction Railway Station is located at a distance of approx.12.6 km from the end point of the expressway. Chhatrapati Shivaji International Airport / Mumbai Airport is approx. 30 km from the start point of the proposed expressway.

3.7.7 About 7 major bridges, 6 major bridge cum viaduct, 23 minor bridges, 7 interchange, 3 flyover, 2RoB,4.160 km tunnel, 5 vehicular underpasses, 8 vehicular overpass, 29 light vehicular / pedestrian underpasses, 2 animal overpass, 53 dedicated animal crossing (box culvert), 33 small vehicular / animal underpasses, 185 culverts, toll plaza at 7 locations, truck parking at 2 locations, wayside amenity at 1 location, smaller parking with toilet facilities at 2 locations and connecting roads at the identified locations for a length of 2.389 km on left side and 5.170 km on right side have been proposed along the expressway.

3.7.8 The proposed project falls under 7(f), Category-A, Highway as per EIA notification 2006. Total Project Cost including Centage & Pre-construction Cost is Rs, 10,510 Cr.

3.7.9 The proposed Right of Way (RoW) in general is 100 m in non-forest area and 70 m forest area except at interchanges, highway amenities, truck parking, where additional land shall be required as per actual design.

3.7.10 The proposed alignment is passes through plain, rolling and hilly terrain with elevation varies from about 3 m to 639 m above MSL.

3.7.11 Details of water bodies: The alignment of the proposed expressway crosses rivers, local streams and nalaat several locations mentioned below-

Sl. No.	Proposed Chainage	Name of River/ Canal	Village
13.	3+400	Tansa River	Chandip
14.	6+300	Local Stream	Bhatane
15.	10+264	Tansa Tributary	Ambode
16.	13+463	MurumlaNadi	Kalambhon
17.	15+150	Local Stream	Gorad
18.	18+000	Local Stream	Kelthan
19.	18+118	Local Stream	Kelthan
20.	18+850	Tansa River	Kelthan

21.	20+955	Local Stream	Mahalunge
22.	21+760	Local Stream	Ghotgaon
23.	22+572	Local Stream	Ghotgaon
24.	24+915	Local Stream	KasbeDugad
25.	26+760	Local Stream	MohiliBudrak
26.	31+080	Local Stream	Nandithane
27.	33+334	Kamvadi River	Nivali
28.	34+235	Local Stream	Pundas
29.	45+400	Bhatsa River	Sange
30.	47+300	Kalu River	Sangode
31.	51+340	Local Stream	Manivali
32.	55+600	Local Stream	VaholiTarfBahe
33.	57+619	Barvi River	AptiTarfeBahe
34.	58+945	Local Stream	Dapivali
35.	67+300	Ulhas River	Chamtoli
36.	69+985	Local Stream	Bhoj
37.	70+540	Local Stream	Bendshil
38.	71+350	Local Stream	Bendshil

3.7.12 Public Hearing was conducted in three District Raigad on 15th March 2021, Thane on 16th March, 2021 and Palghar on 24th March, 2021.

3.7.13 The proposed project involves diversion of approx. 122.6133 ha Forest Land. Proposal has been uploaded on 6th November 2020 (FC Proposal No. FP/MH/ROAD/53857/2020) and it is under examination with the State Government.

3.7.14 The proposed SPUR alignment is located at a distance of 0.619 km from the boundary of the Tungreshwar Wildlife Sanctuary and at a distance of 0.275 km from the notified ESZ boundary.

3.7.15 The proposed alignment passes through Matheran Eco-Sensitive Zone from km 71+532 to 75+426(both buffer and eco-sensitive zone) and from km 77+115 to km 77+691 (only buffer zone).

3.7.16 Land use pattern of project site: (within proposed RoW)

S. No.	Land-use / Land-cover	Area (ha)	%	Remarks
1	Agriculture Land	659.57	63.93	-
2	Forest	122.61	11.91	-
3	Mangroves	0.00	0.00	-
4	Mining	2.60	0.25	-
5	Rural Area	9.07	0.88	-
6	Urban Area	13.76	1.33	-
7	Industrial Area	44.51	4.31	-
8	Water Bodies	13.72	1.33	-

9	Barren Land	165.76	16.06	-
	Total	1031.9	100	

3.7.17 Water requirement: The total water demand of the project is 23,75,760 KL. In compliance to the Sub-Clause 111.8.3 of MoRTH Specifications, the Contractor will identify the nearest source of water body at plant and camp site and shall source the water preferably from surface water bodies, rivers, streams in the project area. Only at locations where surface water sources are not available, the Contractor shall contemplate extraction of ground water, after intimation and consent from the CGWB. As per the CGWB classification, all the Talukas, through which the proposed VME-SPUR is passing, fall under “safe” category. During the operations phase the water would be required primarily for domestic use at the toll plaza and landscaping.

3.7.18 Daily water requirement for drinking & domestic purposes in the 4 construction camps are 42,000 liters (10,500 liters in each construction camp) and generation of wastewater is 33,600 liters (8,400 liters in each construction camp). Therefore, Packaged Wastewater Treatment Plant has been recommended for each construction camp.

3.7.19 Refuse Containers will be provided at site for the management of domestic waste generated by the construction laborers and these containers shall be emptied at least once daily and will be disposed of as per SWM Rules, 2016 in consultation with the local authority.

3.7.20 The part of the cut material shall be used in fill and further possibility of using the cut material in other road works shall be examined based on its suitability during the construction phase. The balance cut material, if any, shall be disposed off according to the Construction and Demolition Waste Management Rules, 2016. The hazardous waste generated during construction period will be disposed off as per applicable rule.

3.7.21 Tree cutting: Loss of flora will occur due to vegetation clearing within the proposed ROW. There are approximately 55,355 trees within the proposed RoW; out of which 13,839 trees in forest land and 41,516 trees in non-forest land. About 69,680 no. of trees and 40,098 no. of hedges have been proposed to be planted under greenbelt development plan. Preference to native species including fruit species shall be given. These species are valuable from the socio-economic point of view. Plantation will be maintained upto 5 years and protected from cattle, wildlife and illegal felling. Dead saplings will be replaced to maintain the survival percentage of 90%. A capital cost provision of about Rs. 14.46 Crore has been kept for greenbelt development.

3.7.22 As per the CGWA classification, all the Talukas (Vasai, Wada, Bhiwandi, Kalyan, Ambarnath and Panvel) through which the proposed expressway is passing fall under safe category. However, as per MoRTH requirement rainwater harvesting structure has been proposed. 75 numbers (1 structure in every km excluding tunnel area) of Rain water harvesting with provision of oil filters and de-silting chambers shall be provided along the expressway as per requirement of IRC SP: 42-2014 and IRC SP: 50-2013.

3.7.23 The proposed VME-SPUR alignment crosses tidal influenced parts of a small nala

(connected to Tansa River), the Bhatsa River and Kalu River. CRZ map and report has been prepared by the National Centre for Earth Science Studies (NCESS), Thiruvananthapuram. Length of the proposed expressway in CRZ area is 609 m and total area in CRZ is 6.972 ha.

Location	CRZ IA		CRZ IB	CRZ II	CRZ III	CRZ IVA	CRZ IVB
	Mangrove	Mangrove Buffer					
KashidKopar	-	-	141.19	-	1533.8	-	280.47
Sange	-	-	2161.09	-	9093.73	-	4810.18
Konderi	-	-	938.22	-	9355.1	-	1488.8
Sangode	-	-	3889.35	-	16573.49	-	10472.23
Balyani	-	-	0	8978.1	0	-	0
Total (in sq. m.)			7129.85	8978.1	36556.12		17051.68
Total (in ha)			0.713	0.898	3.656		1.705
Grand Total = 69715.75 Sq. m / 6.972 ha							

3.7.24 The CRZ proposal was considered by the Environment and Climate Change Department, Government of Maharashtra on 21st September 2021 and recommended the proposal for grant of CRZ clearance to MoEF&CC, New Delhi vide letter dated 29.09.2021 with certain conditions.

3.7.25 The project falls under permissible activities as per the CRZ Notification, 2011.

3.7.26 R&R Issues: The land required for construction of proposed expressway is tentatively 1031.91 ha, which includes 122.6133 ha forest land and 909.2967 ha non-forest land. Land will be acquired by the CALA (Competent Authority for Land Acquisition) as per National Highways Act, 1956 and relevant provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013 & amendment of State Government.

3.7.27 Total manpower requirement is 2200 out of which 1400 manpower will be required during construction phase and 800 during operation phase.

3.7.28 Benefits of the project: The spur connects the main expressway to JNPT, Maha Samrudhi Marg (Mumbai-Nagpur Expressway) and Mumbai Pune Expressway. Therefore the traffic bound for JNPT, Nagpur and Pune will play on SPUR and will not enter the Mumbai city. This will reduce both traffic congestion and pollution in the city. The Vadodara Mumbai Expressway with Spur is linking already existing Ahmedabad- Vadodara Expressway, Delhi-Vadodara Expressway, Mumbai –Nagpur Expressway and Mumbai Pune expressway and thus will provide expressway connectivity between Delhi-Mumbai-Nagpur-Pune. The expressway along with SPUR will provide connectivity to Dahej Port and Jawahar Lal Nehru Port (JNPT) thus facilitating imports and exports from these two ports. The project will be beneficial to Local Trade and Economy and will provide employment opportunity.

3.7.29 Details of Court cases: No court case is pending against the proposed project

3.7.30 *During deliberation, EAC observed and noted the following:*

- i. *ESZ clearance letter dated 16th April 2013 from Matheran Monitoring Committee (MMC) has not been received on an authorized letter head and rather on the personal letterhead.*
- ii. *The provision of ESZ recommendation from Matheran Monitoring Committee needs to be ascertained by the member secretary (Infra-1) of the Ministry.*
- iii. *The land required for construction of proposed expressway is tentatively 1031.91 ha, which includes 122.6133 ha forest land, however, PP while appraising the project has not submitted the alternate alignment to bypass the forest land.*

3.7.31 The EAC made following decisions:

- A. The EC process may start after submission of the recommendations of the Matheran Monitoring Committee on an authorized letter head by the authority and further evaluation of the requisite documents/information by the member secretary.
- B. Taking into account the revised submission made by the project proponent had a detailed deliberation in its 279th meeting during 15th November, 2021 and **recommended** the proposal for the Environmental Clearance with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects.

Specific Conditions:

- i. The recommendations if any from the Matheran Monitoring Committee (MMC) shall be strictly complied with.
- ii. SACON will monitor and document the wildlife movement during the construction and for five years after the construction and document efficacy of over/underpasses. Adequate financial provisions be made for the same in consultation with SACON.
- iii. All conditions stipulated by the Environment and Climate Change Department, Government of Maharashtra vide letter No CRZ 2021/CR126/TC4 dated 29.09.2021 shall be strictly complied with.
- iv. Green belt development (tree plantation) in lieu of the trees being felled in non forest land should be carried out by the State forest department as deposit work and not by the private contractor. No Ground water shall be extracted and used. Approval/permission of concerned authority shall be obtained before drawing surface water from canal or any other sources.
- v. The proponent shall obtain permission from the competent authorities for tree felling along the proposed alignment.
- vi. Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table.
- vii. In borrow pits, the depth of the pit shall be regulated such that the sides of the excavation will have a slope not steeper than 1:2, from the edge of the final section of bank. Soil erosion checking measures shall be carried out. Details for Borrow area operation and rehabilitation given in EIA report shall be followed.
- viii. Quarry areas shall be barricaded during mining operations. The abandoned quarry

shall be developed as water reservoirs with proper fencing around quarry area. Details for Quarry area operation and rehabilitation given the EIA report shall be followed.

- ix. In all the construction sites within 150 m of the nearest habitation, noisy construction work such as crushing, concrete mixing will be stopped during the night time between 10.00 pm to 6.00 am. No noisy construction activities will be permitted around educational institutions/health centres (silence zones) up to a distance of 100 m from the sensitive receptors. All plants and equipment used in construction shall strictly conform to the CPCB/SPCB noise standards.
- x. Traffic Control Devices/Road Safety Devices/ Roadside Furniture including various types of cautionary, informatory, regulatory as mandatory signboards, road markers, studs, etc. shall be provided at appropriate locations all along the project stretch in accordance with the specifications laid down in Manual of Specifications and Standards for Expressways (IRC: SP:99-2013) and IRC:8, IRC:25, IRC:26, IRC:35, IRC:67, IRC:79, IRC:103 and Section 800 of MORTH Specifications.
- xi. Prepare the traffic prediction report for complete project (including all packages of this project) considering the cumulative impact of the traffic on the environment and submit to the Ministry and concerned Regional Office within 3 months.
- xii. All the major, minor bridges and culverts should not affect the drainage systems. Flood plains of the rivers/ drainage systems are not to be disturbed.
- xiii. Afforestation using compensatory plantation in the ratio of 1:10 shall be carried out. Native tree species shall be provided as per the IRC Guidelines on Landscaping and Tree Plantation (IRC:SP:21-2009). Effort should be made to plant native trees and Ficus species on both sides of the alignment. Special attention shall be given for protecting giant trees, and locally important trees (having cultural importance) and should be identified chainage wise.
- xiv. Project alignment should be managed in such a way to save the Heritage/old trees supposed to be affected by the proposed alignment.
- xv. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory afforestation etc., either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also become part of EMP and shall be implemented.
- xvi. Proponent shall keep the finish road level sufficiently elevated from ground level with provision of railing on both sides to restrict animal crossing in order to avoid the

possibility of wildlife injury/death. Animal underpasses, watch tower, water holes and other mitigation measures proposed shall be constructed in supervision of forest department.

- xvii. While constructing the over bridges as proposed over major water bodies efforts should be made to avoid construction of pillars in beds of water bodies.

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Annexure-A

Following members were present during the 279th EAC (Infra-1) meeting held on 15th November 2021

S. No.	Name	Designation	Remarks
1.	Dr. Deepak Arun Apte	Chairman	Present
2.	Sh. S. Jeyakrishnan	Member	Present
3.	Sh. Manmohan Singh Negi	Member	Present
4.	Sh. ShamWagh	Member	Present
5.	Dr. Mukesh Khare	Member	Present
6.	Dr. Ashok Kumar Pachauri	Member	Present
7.	Dr. V. K Jain	Member	Present
8.	Dr. Manoranjan Hota	Member	Present
9.	Sh. R Debroy	Member	Absent
10.	Dr. Rajesh Chandra	Member	Absent
11.	Dr. M. V Ramana Murthy	Member	Present
12.	Smt. Bindu Manghat	Member	Absent
13.	Dr. Niraj Sharma	Member	Absent
14.	Sh. Amardeep Raju,	Scientist'E' & MS, MoEF&CC	Present
15.	Dr. Rajesh Prasad Rastogi	Scientist'C', MoEF&CC	Present
17.	Mr. P.Balakumar	Research Associate	Present