

Minutes of the 294th meeting of Expert Appraisal Committee held on 11th – 12th April, 2022 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 294th 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 during 11th – 12th April, 2022 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 293rd EAC meeting held on 24th – 25th March, 2022 with the following amendments/correction-

Agenda No./Item	Existing content	Corrected content
3.10 (Sub-committee Report) Observation and Recommendations: Para (x)	Realign the proposed alignment from chainage 101+000 to 10+900 and improvement of Jaldega road from Kulumara to kolebera may be done.	Realign the proposed alignment from chainage 101+000 to 102+900 and improvement of Jaldega road from Kulumara to kolebera may be done.

AGENDA WISE CONSIDERATION OF PROPOSALS:

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

Agenda No. 3.1

Development of Industrial Park near Nakkapali Village, Nakkappalli Mandal, Visakhapatnam District, Andhra Pradesh in an area of 1578 ha (3899 acres) by M/s Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) – Environmental and CRZ Clearance

[Proposal No. IA/AP/NCP/261625/2018 and File No. 21-140/2018-IA.III]

“The EAC noted that the Project Proponent and the consultant have submitted 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 abovementioned proposal was placed before the EAC in its 294th meeting on 11th – 12th April 2022. The project proponent along with the EIA Consultant M/s L&T Infrastructure Engineering Limited made a presentation through Video Conferencing and provided the following information -

3.1.2. The proposed project is for Development of Industrial Park near Nakkapali Village, Nakkappalli Mandal, Visakhapatnam District, Andhra Pradesh in an area of 1578 ha (3899 acres). This Project site falls at Latitude 17°21'35.64"N and Longitude 82°42'5.77"E and existing ground elevation is ranging from 0 m to 126 m.

3.1.3. ToR was granted vide letter No. 21-140/2018-IA.III dated 12th June 2019 during the 215th meeting held on 20th May, 2019.

3.1.4. The proposed project falls under 7 (c) Industrial Park, Cat - A as per EIA notification 2006, and its subsequent amendments. Total Project Cost is Rs. 1191.00 Cr.

3.1.5. Land use /Land cover of project site is as following:

S.No.	Landuse/Landcover	Area (ha)	Area (%)	Remarks
1	Agriculture Plantation	742.30	47.04%	
2	Crop land	130.43	8.27%	
3	Aquaculture/Pisciculture	102.66	6.51%	
4	Builtup (Rural)	46.17	2.93%	
6	Scrub land Dense	230.08	14.58%	
7	Scrub land Open	191.89	12.16%	
8	Sandy areas	44.66	2.83%	
9	Lakes/Ponds	45.48	2.88%	
10	Reservoir/Tanks	13.56	0.86%	
11	River/Stream/Drain	30.64	1.94%	
	Total	1578	100.00%	

3.1.6. Land use pattern over around 10 km radius of project site:

S.No.	Landuse/Landcover	Area (ha)	Area (%)	Remarks
1	Agriculture Plantation	13662.02	24.56%	
2	Crop land	10683.24	19.21%	
3	Aquaculture/Pisciculture	396.46	0.71%	
4	Builtup (Rural)	991.98	1.78%	
5	Transportation	151.29	0.27%	
6	Mining/Industrial	261.47	0.47%	
7	Forest Plantation	367.34	0.66%	
8	Forest-Dense	1631.23	2.93%	
9	Gullied/Ravenous	9.66	0.02%	

10	Scrub land Dense	231.33	0.42%	
11	Scrub land Open	1992.83	3.58%	
12	Sandy areas	400.72	0.72%	
13	Salt Affected	3.42	0.01%	
14	Lakes/Ponds	172.19	0.31%	
15	Reservoir/Tanks	1028.91	1.85%	
16	River/Stream/Drain	227.01	0.41%	
17	Canal	156.42	0.28%	
18	Sea (Bay of Bengal)	23250.82	41.80%	
	Total	55618.32	100%	

3.1.7. List of industries to be housed with: Types of industries expected to be established in proposed Industrial Park are as following:

S. No.	Possible Sector	Anticipated Types of Industries/ Activities
1	Pharmaceuticals	Formulation, Bulk Drugs, Intermediates, Herbal medicines, bio pharmaceuticals.
2	Chemicals & petrochemicals	Basic chemicals, laboratory Chemicals involving distillation, purification process, Herbal Extraction, production of cosmetics, manufacturing of soaps, Organic Chemicals (Methane to methanol and menthol based), inorganic Chemicals (Industrial gases, acids), speciality chemicals, Agro chemicals such as Pesticides/ Insecticides/ Fungicides/ Herbicides /Agrochemical formulation, NPK Fertilisers/ Granulation, water treatment chemicals etc. Petrochemical products (PDH Unit, Polypropylene Unit, Propylene Intermediate Unit, Specialty Chemicals), petrochemical based processing industries
3	Industrial and Consumer Electronics	Medical equipment, defence electronics, control equipment. Solar panels and module (Polysilicon Ingots (Wafer Unit, PV Cells & Modules PV Ancillary). Communication Equipment (Mobiles/BTS/Router/switches/Dish Antennas)), Consumer Electronics (TV/Cameras/set top boxes), Electronic Components, Industrial Electronics (Invertors/UPS/LEDs /Energy meters etc..) and Consumer durables such as Washing machines, Refrigerators, Air conditioners, Microwave ovens, Kitchen equipment, utensils, Brown goods and domestic appliances Pressure cookers, Collapsible tubes, utensils, cutlery, wire products etc.
4	Auto and Auto components	Manufacture of motor vehicles (such as manufacturing of Tractors, Buses etc.) Manufacture of parts and accessories for motor vehicles (includes parts such as brakes, gearboxes, axles, seats, tyres, rubber products etc.)
5	Aerospace and defence	Aero engine Components such as Propellers/Rotors, etc. Aero structure Components, Fuselage Manufacture, Aircraft Construction and Assembly. Avionics, Aero engine & Aero structure Subassemblies. Manufacture of Military/Defence fighting vehicles/ Defence Electrical and Electronics (Manufacturing of semiconductors, chips, transmitters, R&D etc. Panels, Components, Equipment and

		Power Systems, Electrical Cable Accessories / Harnesses, Aircraft Interiors Equipment Furnishings, Tooling, Ground Support & Airfield Equipment. Manufacture of communication devices (Telephone sets, incl. telephones for cellular networks or for other wireless networks; others, VHF))																																
6	Engineering	<table border="1"> <tr> <td colspan="2">Heavy Engineering Goods</td> </tr> <tr> <td>Industrial Machinery</td> <td>Mining Machinery, Construction Machinery, Material handling equipment, Metallurgical equipment, Textile machinery, Air pollution control systems, Furnaces, cooling towers etc.</td> </tr> <tr> <td>Heavy electrical equipment and components</td> <td>Electrical motors, generators, Boilers, turbines, power cables, inverters, switch gears, Capacitors, transformers etc.</td> </tr> <tr> <td>Other Industrial Machinery</td> <td>Printing and Processing Machines, Transmission Shafts</td> </tr> <tr> <td>Process plant and equipment</td> <td>Machinery for processing chemicals, Food, cement, plastics, Hydrocarbons, Pharmaceuticals, sugar, Injection- moulding machines</td> </tr> <tr> <td>Machine tools</td> <td>CNC Machines</td> </tr> <tr> <td>Others</td> <td>Floating docks and storage vessels</td> </tr> <tr> <td colspan="2">Light Engineering</td> </tr> <tr> <td>I. C. Engines and parts</td> <td>Compression Ignition and Electrical Ignition type IC Engines Compact engines, parts of IC engines</td> </tr> <tr> <td>Electric manufacturers</td> <td>Power cables, Electric filament or Discharge lamps, electric wires and cables, Insulated Wires, Electric Conductors and Optical Fibre Cables, Wires and Cables of Oxygen Free Copper, wire ropes etc.</td> </tr> <tr> <td>Industrial equipment</td> <td>Industrial Gears, Pumps, compressors, Valves, electric fans, Diesel engines etc.</td> </tr> <tr> <td>Industrial consumables</td> <td>Antifriction Bearings, cutting tools, dry cells copper cathodes and sections of cathodes unwrought,</td> </tr> <tr> <td>Industrial durables</td> <td>Aluminium extruded and rolled products</td> </tr> <tr> <td>Hardware</td> <td>High tensile fasteners, Industrial fasteners, nuts bolts</td> </tr> <tr> <td colspan="2">Metal/Metals Forming</td> </tr> <tr> <td>Steel pipes and tubes</td> <td>Seamless pipes and tubes of iron and steel, Welded pipes and Tubes of iron/ steel tube or pipe fittings of iron or steel.</td> </tr> </table>	Heavy Engineering Goods		Industrial Machinery	Mining Machinery, Construction Machinery, Material handling equipment, Metallurgical equipment, Textile machinery, Air pollution control systems, Furnaces, cooling towers etc.	Heavy electrical equipment and components	Electrical motors, generators, Boilers, turbines, power cables, inverters, switch gears, Capacitors, transformers etc.	Other Industrial Machinery	Printing and Processing Machines, Transmission Shafts	Process plant and equipment	Machinery for processing chemicals, Food, cement, plastics, Hydrocarbons, Pharmaceuticals, sugar, Injection- moulding machines	Machine tools	CNC Machines	Others	Floating docks and storage vessels	Light Engineering		I. C. Engines and parts	Compression Ignition and Electrical Ignition type IC Engines Compact engines, parts of IC engines	Electric manufacturers	Power cables, Electric filament or Discharge lamps, electric wires and cables, Insulated Wires, Electric Conductors and Optical Fibre Cables, Wires and Cables of Oxygen Free Copper, wire ropes etc.	Industrial equipment	Industrial Gears, Pumps, compressors, Valves, electric fans, Diesel engines etc.	Industrial consumables	Antifriction Bearings, cutting tools, dry cells copper cathodes and sections of cathodes unwrought,	Industrial durables	Aluminium extruded and rolled products	Hardware	High tensile fasteners, Industrial fasteners, nuts bolts	Metal/Metals Forming		Steel pipes and tubes	Seamless pipes and tubes of iron and steel, Welded pipes and Tubes of iron/ steel tube or pipe fittings of iron or steel.
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		Castings and forgings	Steel, alloy steel and non-ferrous metals for engineering, automobile and shipping sectors
		Others	
			Manufacture of basic iron and steel (Ferro alloys, wire of steel by cold drawing, tube and tube fittings etc.) and basic precious and other non-ferrous metals) Manufacture of motor vehicles (such as manufacturing of Tractors, Buses etc.) Manufacture of parts and accessories for motor vehicles (includes parts such as brakes, gearboxes, axles, seats, tyres, rubber products etc.)
7	CRZ permissible hazardous material storages		Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)
8.	Building Materials Industry/Non-Metallic minerals		Tiles, Ceramics and refractories, glass and glassware, graphite, marbles, processed minerals, Clay building products, bricks, AAC Blocks, Kerb Stones etc.
9.	MSME (includes Leather, Plastics, wood etc.)		Leather Products such as Sports goods excluding tanning and hide processing Plastic products for Packaging, automobile, consumer durables, healthcare, etc. by Injection, Blow Moulding, Extrusion etc., Timber/ Wood Products such as Furniture, Sports goods, Wood Flooring etc.
10.	Food and Agro Processing Industry		Processing and preserving of fruit and vegetables, Manufacture of grain mill products, starches and starch products (includes flour milling, rice milling, milling of other grains), Manufacture of cocoa, chocolate and sugar confectionery, Manufacture of macaroni, noodles, couscous and similar farinaceous products, Manufacture of prepared meals and dishes, Manufacture of other food products Processing and preserving of meat (includes production, processing and preserving of meat and meat) products, aqua food related processing (fish and prawns etc.). Manufacture of dairy products (includes manufacturing of milk, milk powder, ice cream etc.). Manufacture of other food products (includes manufacture of bakery products Processing of edible nuts etc.). Manufacture of prepared animal feeds (manufacture of cattle feed, poultry feed, feed for pets etc.).
11.	Apparels and Textile Industry		Ginning/ Weaving, Spinning mills, Weaving and Knitting Mills cotton and manmade fabrics and apparels manufacturing; technical textiles (Mainly textile based) and handloom. No Yarn / Textile processing involving any effluent/emission generating processes including bleaching, dyeing, printing and colouring is proposed

3.1.8. Water Bodies & impact on Drainage: Bay of Bengal – Abutting and Tandava Nadi is 6.9 km –SW

3.1.9. Water requirements: Water requirement during the construction phase is 1 MLD and will be partly sourced water supply scheme of YLMC and partly from local Municipality/ panchayat. The Net total daily raw requirement or make up water during the operation phase will be about 16.15 MLD and will be sourced from Yeleru Left Main Canal located north to site. Water supply approval for Nakkapalli I.P has already been obtained from Visakhapatnam Industrial Water Supply Company Limited (VIWSCO), GoAP. The withdrawal of groundwater is not envisaged as a part of proposed development.

3.1.10. Waste water Management: Total Industrial Wastewater generation is proposed up to 5.27 MLD and total 2.95 MLD sewage generation is proposed. Industrial wastewater shall be treated in the proposed CETPs up to discharge standards and through marine outfall discharging into sea. Industrial wastewater shall be treated within industry premise and treated wastewater will be reused within the industry. CETPs shall have a temporary storage facility for 30 days, wastes shall be periodically disposed to nearby TSDF. Sludge generated from STP shall be composted and will be used as manure for greenbelt/ green areas development. Estimated MSW generation is 18.5 TPD and Industrial Solid Waste is 79.5 TPD. The solid waste generated from the proposed project will be segregated as Municipal waste, Hazardous waste & E-Waste. Municipal waste generated will be disposed to local bins for further treatment and disposal. Individual industries generating hazardous waste shall be sent through authorized waste handler for further treatment and disposal. E-Waste generated will be collected, stored and transported to authorised recyclers. Solid Waste Management Rules, 2016 and Construction & Demolition Waste Management Rules, 2016 (as amended) will be followed for environmental sound management of respective waste. Hazardous and other waste Management Rules, 2016 (as amended) will be followed for environmental sound management of hazardous waste. Hazardous wastes will be disposed through approved APPCB/CPCB vendors to nearby TSDF.

3.1.11. CETP details: APIIC shall develop CETPs (two Streams) for non-pharma and pharma, chemical and petrochemical units separately on modular basis based on industrial wastewater generation. The treated wastewater from CETP will be disposed into sea through marine outfall facility. To begin, APIIC proposes to establish a 2.04 MLD CETP as 1st module and remaining will be developed in modular basis inline to requirements and demand. For CETP 1, the High TDiS wastewater volume is expected to be about 223 KLD and the Low TDiS wastewater is expected to be about 300 KLD. For CETP 2, the Low TDiS wastewater volume is expected to be about 1388 KLD and 130 KLD of the metal pre-treatment and finishing wastewater expected from the engineering /Auto/aerospace/Industrial Electronics Sectors.

3.1.12. STP details: The sewage from residential areas will be treated in STP which will be developed on modular basis. Sequencing Batch Reactor (SBR) system is proposed for sewage treatment. SBR system is a fill and draw activated sludge system. High-efficiency oxygen transfer aeration equipment shall be used in SBR process to satisfy the high-rate oxygen consumption requirement at the starting of the “fill” and “aeration” cycles. The total estimated STP capacity for overall development area is ~2.95 MLD. The treated sewage shall be stored as non-potable water having detention time of minimum 24 hours. Separate water distribution network is being proposed to provide for non-potable supply. Treated sewage will be reused for greenbelt and toilet flushing etc.

3.1.13. Public hearing: Public Hearing was conducted on 25th November 2020. The main issues raised during the PH was related to Health problems due to operating of the existing industries

in surrounding area, Fish catch reduction due to the discharge of industrial effluents into the Sea, Employment opportunities to locals, Water allocation, Opposed establishment of bulk drug, chemical and petroleum product industries near to habitations, Proper compensation for lands, Compensation for trees to be cut, Separate compensation for villagers/fishermen & Taddy workers, Establishment of skill development centres and Loss of property and life due to accidents.

3.1.14. Tree cutting and Green Belt Development: Approximately 2705 naturally grown trees will be involved in tree cutting apart from the commercial plantations. Major visible trees are *Borassus flabellifer* (Thaadi), *Casuarina equisetifolia* (Sarugudu), *Anacardium occidentale* (Jeedi mamidi), *Acacia auriculiformis* (Australia Tumma) & *Eucalyptus globulus* (Neelagiri chettu). In the proposed Industrial Park, an area of 690 acres is allotted as green area, which covers around 17.7% of total area. Adequate green peripheral buffers (15m) are provided all along the project boundary. Adequate green buffer (50m) is provided near settlements, water bodies (as per norms), etc. landscaped green spaces will be provided & will serve as lung space for the industrial park. Approximately 4,65,000 numbers of trees are proposed to be planted in Nakkapalli IP. The survival of the plantation shall be monitored frequently and survival rate of the plantation during operational phase shall not be less than 80%. A capital cost of INR 62.13 million (6.13 Crores) shall be earmarked for this purpose and INR of 3.11 million (0.31 Crores) shall be allocated for recurring expenses per annum towards green belt development and maintenance.

3.1.15. Diversion of forest land: There is no involvement of diversion of forest land.

3.1.16. There is no National Parks, Sanctuaries and Tiger Reserves, Eco-Sensitive Zone (ESZ) or Eco-Sensitive Area (ESA) notified by the MoEF&CC within 10 km of proposed project site.

3.1.17. Energy conservation and Rain Water Harvesting: Estimated Installation Capacity for Solar Power Harnessing is 10.10 MW. Estimated Volume of run-off that can be harvested will be 3193760 Volume (m³)/year. Rainwater harvesting techniques will be adopted at park and industrial level.

3.1.18. CRZ area: The proposed project is in CRZ area (Non-Eroding Coast). NCSCM has conducted HTL/LTL demarcation studies within 7km radius of project site. The project development area does not fall or contain any environmentally sensitive areas as specified in CRZ Notification and that the project area meets the regulations of CRZ Notification, 2011. CRZ area of 288.57 acres (7.4%) will be utilised storage of chemicals/petroleum products as permissible under CRZ notification, 2011 and 2019 as applicable. The proposed Marine outfall for CETP treated wastewater will pass through the CRZ areas. There is a backwater/stream flowing within the site and a buffer of 100 m or width of the creek as per CRZ regulation is proposed and green areas will be developed in the buffer area.

- i. The proposed project activities such as Marine Logistics/Storage & Other Compatible Activities falls on
 - a. The intertidal zone (CRZ 1B - Creek),
 - b. CRZ III - No Development Zone (NDZ) (HTL to 200 m and 100 m from creek or width of the creek whichever is less) and CRZ III (200 to 500 m from HTL).

- ii. The proposed green area falls on CRZ III - No Development Zone (NDZ) (HTL to 200 m and 100 m from creek or width of the creek whichever is less).
- iii. The proposed roads falls on the CRZ III of Creek, CRZ 1B of creek, CRZ III (200 to 500m), NDZ and CRZ IVB (Creek).
- iv. Proposed Supporting Facilities such as pipelines, conveying systems, power cables/transmission lines, falls on CRZ 1B, CRZ III, CRZ IVB and CRZ IVA (Marine outfall pipeline).

3.1.19. Marine disposal: The proposed project involves marine disposal. NoC from APPCB obtained on August 17, 2021; outfall location: 17°20'12.05"N & 82°42'34.98"E

3.1.20. Land acquisition and R&R issues: Compensation for land and structure are paid as per G.O 160 issued by GoAP dated November 16, 2016 and District collector orders vide File No. REV-ESECOLND(ATGL)82/2017-JA(E3)-VSKPCO/Dt:19-07-2018. As such no R&R is proposed for the settlements existing in the project boundary. Compensation for the lands, trees and structures if any involved in land acquisition for development of IP would be decided by the District Collector and APIIC would pay the compensation accordingly.

3.1.21. Employment Potential: During the construction phase a total of 1200 employees will get employment. During operation phase will get employment of 30,800 of direct employment and 2.5 times of direct employment as indirect employment. Local people will be getting a large employment opportunity and would be given preference for employment based on their skill set.

3.1.22. Benefits of the Project: The project shall meet the growing needs of manufacturing sector and will provide better quality of educational and medical facilities to the local people, socio economic benefit to the locals by providing both indirect employment and direct employment. There will be positive impact on social conditions in and around the site due to the Industrial Area.

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

3.1.24. During deliberation, EAC observed and noted the following:

- i. *The proposed project includes five villages/ settlement inside the industrial boundary.*
- ii. *Not a single person is in favor of establishing of chemical/petrochemical industries as seen through public hearing document.*
- iii. *There is marine disposal of industrial effluents.*

3.1.25. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 294th meeting and **deferred** the proposal for the want of the following information/documents:

- i. *Revised layout may be submitted excluding the villages which are on the outer boundary of the project area.*
- ii. *Please revisit the details provided for chemical/petrochemical sector in the*

- proposed industrial park and submit.*
- iii. *Complete disaster management/mitigation plan should be detailed out for the pollution caused from the chemical/petrochemical industries.*
 - iv. *Marine disposal should be avoided/ minimized and detailed study on impacts of marine disposal on marine life should be carried out and submitted.*
 - v. *The proposed residential area involves cutting of top of hillock with dense scrubland. This should be avoided. Proposed residential area is also very close to chemical and petrochemical units as shown in the layout map. The entire layout required thus needs to be revisited.*

Agenda No. 3.2

Development of Industrial Park and Multi-product SEZ in area of 715 ha at Pakhajan, Ambhel and Limdi village, Taluka Vagra, District Bharuch, Gujarat by M/s Dahej SEZ Limited –Terms of Reference

[Proposal No. IA/GJ/NCP/262723/2022 and File No. 10/17/2022-IA.III]

“The EAC noted that the Project Proponent and the consultant have submitted the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in PFR/DPR/Form-1/Annexure-III. 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 aforementioned proposal was placed before the EAC during 294th meeting during 11th – 12th April 2022. The project proponent along with the EIA consultant M/s Eco Chem Sales and Services made a presentation through Video Conferencing and provided the following information-

3.2.2. The proposed project is for Development of Industrial Park and Multi-product SEZ in area of 715 ha at Pakhajan, Ambhel and Limdi village, Taluka Vagra, District Bharuch, Gujarat.

3.2.3. The proposed project falls under 7 (c) Industrial Park, Cat - A as per EIA notification 2006, and its subsequent amendments. Total Project Cost is Rs. 1567 Cr.

3.2.4. The Geo-coordinates of project site is as following-

Corners	Longitude	Longitude
A	21°49'54.36"N	72°41'56.20"E
B	21°49'36.64"N	72°41'42.06"E
C	21°49'5.94"N	72°41'38.94"E
D	21°48'33.84"N	72°41'51.24"E
E	21°48'6.52"N	72°41'57.35"E
F	21°47'28.11"N	72°42'23.19"E
G	21°47'41.33"N	72°43'1.15"E
H	21°47'43.50"N	72°43'0.26"E
I	21°47'45.25"N	72°43'5.98"E

J	21°47'52.55"N	72°43'32.07"E
K	21°47'55.71"N	72°43'31.21"E
L	21°47'57.17"N	72°43'36.44"E
M	21°48'1.52"N	72°43'35.38"E
N	21°47'56.45"N	72°43'20.57"E
O	21°48'22.12"N	72°43'18.39"E
P	21°48'15.06"N	72°42'52.43"E
Q	21°48'45.98"N	72°42'50.04"E
R	21°48'47.18"N	72°42'37.96"E
S	21°49'7.01"N	72°42'42.80"E
T	21°49'28.32"N	72°42'47.73"E
U	21°49'39.14"N	72°42'47.69"E
V	21°49'39.58"N	72°42'42.05"E
W	21°49'42.17"N	72°42'43.68"E
X	21°49'45.64"N	72°42'43.26"E
Y	21°49'54.20"N	72°42'25.34"E
Z	21°49'56.09"N	72°42'11.24"E

3.2.5. Land use/Landover of project site is as following:

S. No.	Landuse/Landcover	Area (ha)	Area (%)	Remarks, if any
1.	Grass Land	174	24.30	
2.	Scrub Land	34	4.77	
3.	Trees/Orchard	74	10.35	
4.	Crop Land	230	32.18	
5.	Fallow Land	172	24.07	
6.	Settlement	2	0.31	
7.	Muddy/Barren Land	27	3.80	
8.	Water body	2	0.22	
Total		715	100	

3.2.6. Landuse/Landcover around 10 km radius of project site: Landuse/Landcover around 10 km radius of project site is as follows:

S. No.	Landuse/Landcover	Area (ha)	Area (%)	Remarks, if any
1.	Scrub Land	4048	9.04	
2.	Trees/Orchard	3460	7.73	
3.	Grass Land	5929	13.24	
4.	Salt Marsh	111	0.25	
5.	Crop Land	15312	34.20	
6.	Fallow Land	9391	20.97	
7.	Saltpan	2761	6.17	
8.	Ponds/Rivers	878	1.96	
9.	Muddy/Barren Land	1732	3.87	
10.	Settlement	1153	2.58	

Total	44775	100.00	
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3.2.7. List of industries to be housed with: Types of industries expected to be established in proposed Industrial Park are as following:

S. No.	Types of Industries/Sectors	Categorization of Industry as per EIA Notification, 2006	Categorization as per CPCB	Zoning as per ATLAS
1.	Metallurgical industries	3 (a)	A & B	A1,W1
2.	Cements plants	3 (b)	A & B	A1,W1
3.	Petroleum refining industry	4 (a)	A	A1,W1
4.	Coke oven plants	4 (b)	A & B	A1,W1
5.	Chlor-alkali industry	4 (d)	A & B	A1,W1
6.	Soda ash Industry	4 (e)	A	A1,W1
7.	Chemical fertilizers	5 (a)	A & B	A1,W1
8.	Pesticides industry and pesticide specific intermediates (excluding formulations)	5 (b)	A	A1,W1
9.	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	5 (c)	A	A1,W1
10.	Manmade fibers manufacturing	5 (d)	A & B	A1,W1
11.	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	5 (e)	A & B	A1,W1
12.	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	5 (f)	A & B	A1,W1
13.	Distilleries	5 (g)	A & B	A1,W1
14.	Integrated paint industry	5 (h)	B	A1,W1
15.	Pulp & paper industry	5 (i)	A & B	A1,W1
16.	Automobile and Auto Components	-	-	-
17.	Electroplating and Metal Coating	-	-	-
18.	Electrical and Electronics including component industry	-	-	-
19.	Glass and Ceramic Industry	-	-	-
20.	Food Processing	-	-	-

21.	Lead/Lithium acid battery manufacturing Units	-	-	-
22.	Textiles Industries	-	-	-
23.	Engineering Industries	-	-	-
24.	Plastic Industries	-	-	-
25.	Industries which do not attract any provisions of EIA Notification 2006, but covered under CTE/CTO	-	-	-

3.2.8. Terrain and topographical features: Terrain of the project site is undulating and Mean Sea level is ranging from 6 to 7 m.

3.2.9. Water Bodies: There are seasonal rain water channels (Kash) passing through the land boundary to allow the rainwater to flow through the land during the Monsoon season.

3.2.10. Water Requirement: The estimated water demand for manufacturing and non-manufacturing area, services, and green belt arrives at 36 MLD which is sourced from 366 MG reservoir of GIDC located at Rahiyad. Concurrence letter for water supply is obtained vide letter no: GIDC/ENG/PH/163 on dated 16th February 2022 from GIDC Gandhinagar. No ground water will be used for the project.

3.2.11. Tree cutting/Protected area/ESZ: Currently, the proposed Location has scarce trees distribution for the size of parcel and no distinct vegetation as well. As per the survey drawing of the land, only 69 trees (i.e. 1 tree in an average of 10 HA. of land) are present on the available land and hence this project can be taken up without destroying the existing trees as well as vegetation. No forest land is involved in the project. Project site is not located within 10 km radius of any protected area, Eco sensitive zones, National Park, Wild life sanctuary and Tiger Reserves etc.

3.2.12. CRZ area: the proposed project does not fall under CRZ area and not attract provisions of CRZ notification 2011.

3.2.13. Waste Management: **CETP**: 25 MLD of effluent generated from the manufacturing area will be collected and pumped to CETP, Dahej at distance of 25 Km from proposed site for further treatment and ultimate disposal to sea. **STP**: DSL will provide Sewage Treatment Plant (STP) to treat the sewage generated from ADM building, Canteen and other common facilities. Treated water will be reused for gardening purpose. Member industries will provide individual STP/Soak pit to treat the sewage and treated sewage will be reuse in own premises.

3.2.14. Land acquisition and R&R issues: GIDC has acquired land (Approx. 517 Hect.) for above said project of Dahej SEZ Limited and balance land (Approx. 176 Hect.) is under acquisition by competent authority. No R&R issues involved.

3.2.15. Employment potential: During the construction phase around 700-1000 nos. of people will be required and preference will be given to local villagers based on their skills. Manpower will be required for Civil Construction, Mechanical erection, Electrification, Piping Works and Associated Amenities. During the operation phase, individual member industries will generate

employment for skilled and unskilled workers. In the absence of details on member industries, it is difficult to assess the employment generation. However, DSL envisages employment opportunities for 5000-7000 persons for various industries proposed IP and SEZ. Moreover, the proposed IP & SEZ will enable at least 2500 persons to have some means of employment indirectly to support the activities of the member industries.

3.2.16. Benefits of the project: There are financial benefits like Revenue generation in central and government, Import and Export of finished Products, etc. and social benefits like Employment Generation in surrounding areas etc. will be done due to proposed project.

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

3.2.18. The EAC, taking into account the submission made by the project proponent had a detailed deliberation in its 294th meeting during 11th – 12th April 2022 and **recommended** the proposal for grant of Terms of Reference (ToR) with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. The entire region is having many highly polluting industries and thus cumulative impact assessment of proposed and existing industries needs to be carried out to understand the effective pollution load in the area and should be detailed out in the EIA report.
- ii. Pollution type and load of each and every industry in the proposed industrial area should be detailed out in the EIA report.
- iii. The planning of Industrial Estate should be based on the criteria mentioned in this Ministry's Technical EIA Guidance Manual for Industrial Estate (2009) prepared by IL&FS as well as CPCB's Zoning Atlas Guidelines for siting industries.
- iv. Feasibility of the Zero Liquid Discharge (ZLD) model need to be explored
- v. Water balance chart be prepared and submitted along with EIA/EMP report.
- vi. Proponent shall ensure the conservation and development of nearby water bodies in the surrounding areas.
- vii. Detailed land use breakup of proposed Industrial area with green belt to be submitted.
- viii. The terrain of the project area has to be detailed with hydrological study and its impact need to be carried out on the catchment and drainage system in core and buffer zones.
- ix. The PP shall not use groundwater without obtaining approval from CGWA/SGWA as the case may be. The project proponent shall obtain necessary permission from Competent Authority to use surface water reservoir.
- x. Proponent shall establish captive treatment, storage, and disposal facility (TSDF) to ensure the effective Solid Waste Management.
- xi. Submit a certificate from local DFO that no forest land is involved in the proposed Industrial Park.
- xii. The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M) dated 25th October, 2017 needs

to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.

Agenda No. 3.3

Development of 4/6 lane Urukunnu-Kadampattukonam Economic Corridor, Inter Corridor, Feeder Routes & Coastal Roads to improve the efficiency of freight movement in India (Lot-3/Andhra Pradesh, Karnataka, Goa & Kerala/Package-3) in the State of Kerala (length 38.3 km) by M/s National Highways Authority of India –Terms of Reference

[Proposal No. IA/KL/NCP/261910/2022 and File No. 10/18/2022-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/ validity Extension given, if any, will be revoked at the risk and cost of the project proponent.

3.3.1 The aforementioned proposal was placed before the EAC during 294th meeting during 11th – 12th April 2022. The project proponent along with the DPR & NABET Consultant M/s Chaitanya Projects Consultancy Pvt. Ltd., GZB, UP made a presentation through Video Conferencing and provided the following information-

3.3.2 The proposed project is for development of 4/6 lane Urukunnu-Kadampattukonam Economic Corridor, Inter Corridor, Feeder Routes & Coastal Roads to improve the efficiency of freight movement in India (Lot-3/Andhra Pradesh, Karnataka, Goa & Kerala/Package-3) in the State of Kerala (length 38.3 km). The proposed Greenfield highway starts (Start Location: 8°59'23.36"N 77°0'36.84"E) from its junction with NH-744 near Urukunnu village, Thenmala, in Kollam district passing near Anchal city and terminating (End Location: 8°47'45.02"N 76°46'9.34"E) at Kadampattukonam with its junction with (NH-66, Mumbai-Kanyakumari) in Trivandrum district in the State of Kerala. Total Length of the project is approx. 38.3 km (202 ha).

3.3.3 The proposed project falls under Schedule 7(f), Highway, Category “A” of EIA Notification 2006. Total estimated civil cost of the project is about Rs. 2741.00 Crores.

3.3.4 Land use /Land cover of the proposed project site is as below:

S. No.	Landuse/Landcover	Area (ha)	Area (%)	Remarks
1	Water Body	2.44	1.21	
2	Plantation	25	12.38	
3	Built Up Area	17.98	8.9	
4	Cropping Area	125.92	62.34	
5	Forest RF	9.36	4.63	
6	Others	21.29	10.54	
	Total	202.00	100.00	

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

S.no.	Landuse/Landcover	Area(ha)	Area (%)	Remarks
1	Water Body	44.35	1.10	
2	Plantation	584.64	14.5	
3	Built Up Area	395.14	9.8	
4	Cropping Area	2596.61	64.4	
5	Forest area RF	199.99	4.96	
6	Others	211.28	5.24	
	Total	4032.00	100.00	

3.3.6 The Proposed Right of Way is 45 m in revenue areas and 30 m in forest areas.

3.3.7 Terrain and topographical features: The entire project road lies in rolling and hilly terrain

3.3.8 Forest Land: The proposed alignment passes through Ayirannalur, Yerrur, Irattur and Ilambarakottumala Reserved Forest at various locations, encompassing a total area of 9.369 ha. Forest diversion proposal is in process.

3.3.9 The proposed road will have the following structures for smooth flow of traffic, pedestrian movements and meeting the hydrologic requirements of the highway. The following structures are proposed namely 3 nos. Major Bridges, 9 nos. Minor Bridges, 63 nos. Culverts, 6 nos. Vehicular underpass, 5 nos. LVUP, 8 nos. SVUP and 21 nos. Vehicular Overpass.

3.3.10 The proposed road shall be constructed as per IRC: SP: 84-2019, IRC: 37-2018, IRC: 58-2011, IRC:112-2011 “Manual of Specifications and Standards for Two/Four laning of Highway with Paved shoulder” design standards. All safety measures will be provided on the alignment as per IRC: SP: 55 and other relevant notification of MoRTH, Government of India.

3.3.11 Tree cutting: About 69500 trees are likely to be affected due to proposed RoW of 45 m. Efforts will be made to minimise the trees losses by restricting tree cutting within the formation width. The tree enumerations (inventories) of affected trees will be prepared along with forest department.

3.3.12 ESZ/National Park/Sanctuary: This project is not part of any protected area under Wildlife (Protection) Act 1972. However, it is 7 km from the protected area of Shendurney Wildlife Sanctuary.

3.3.13 Water bodies/ Impact on Drainage: Kallada River is passing through chainage 23+100 and few water streams are crossing through alignment.

3.3.14 Water requirement: The average water requirements is anticipated at 490 KLD approx. during construction stage and will be extracted from local surface water/ground water sources after permissions. All the necessary permissions will be taken by the contractor at the time of construction

3.3.15 Land acquisition and R&R issues: The land acquisition for the proposed alignment is approximately 202 ha out of which majority is plantation and agricultural land. The land will be acquired as per procedure laid down in RFCTLARR Act, 2013.

3.3.16 Employment details: During the construction of the road project around 150 persons would be employed temporarily for a period of 2 years. However due to construction of toll plaza approx. 20 persons will be employed on permanent basis.

3.3.17 Benefits of the project: The proposed highway with new alignment has been envisaged through an area which shall have the advantage of simultaneous development as well as shall result in a shorter distance to travel. The junctions with existing road will be planned in the form of interchanges and flyover to ensure uninterrupted flow of traffic.

3.3.18 The proposed highway would act as the prime artery for the economic flow to this region. It will enhance economic development, provide employment opportunities to locals, strengthen tourist development, ensure road safety, and provide better transportation facilities and other facilities such as way side amenities. Vehicle operating cost will also be reduced due to improved road quality. The avenue/compensatory plantation shall further improve the air quality of the region.

3.3.19 Details of court cases: No court cases are pending against the proposed project.

3.3.20 During deliberation, EAC observed and noted the following:

- i. *The proposed project includes the alignment with several sharp curvatures.*
- ii. *The either side of the chainage 25 to 28 is a reserve forest and needs underpass for wild-life movement.*
- iii. *The chainage 38 to 40 of the alignment has very sharp curvature.*
- iv. *The alignment may be revised to remove the curvature/sharp bending during the EC submission.*
- v. *Possibility of reducing RoW should be explored considering very high tree cutting involved*

3.3.21 The EAC, taking into account the submission made by the project proponent had a detailed deliberation in its 294th meeting during 11th – 12th April 2022 and **recommended** the proposal for grant of Terms of Reference (ToR) with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. NHAI will design the alignment with least curvature having with necessary structural provisions for safe passage of wildlife and re-alignment for saving of forest patch.
- ii. Apart from land compensation, the loss for crop has also to be compensated.
- iii. Cumulative impact assessment study should be carried out along the entire stretch including the other packages and the current stretch under consideration.
- iv. The proponent shall carry out a detailed traffic flow study to assess inflow of traffic

from adjoining areas like airport/urban cities. The detailed traffic planning studies shall include complete design, drawings and traffic circulation plans (taking into consideration integration with proposed alignment and other state roads etc.). Wherever required adequate connectivity in terms of VUP (vehicle underpass)/ PUP (Pedestrian underpass) needs to be included.

- v. Road safety audit (along with accident/black spots analysis) by any third-party competent organization at all stages namely at detailed design stage, construction stage and pre-opening stage to ensure that the project road has been constructed considering all the elements of road safety.
- vi. Provide compilation of road kill data on the wildlife on the existing roads (national and state highways) in the vicinity of the proposed project. Provide measures to avoid road kills of wildlife by the way of road kill management plan.
- vii. The alignment of road should be such that the cutting of trees is kept at bare minimum and for this the proponent shall obtain permission from the competent authorities. Alignment also should be such that it will avoid cutting old and large and heritage trees if any. All such trees should be geo-tagged, photographed and details be submitted in the EIA –EMP report. PP should explore *possibility of reducing RoW considering very large number of tree cutting involved*
- viii. The proponent shall carry out a comprehensive socio-economic assessment and also impact on biodiversity with emphasis on impact of ongoing land acquisition on the local people living around the proposed alignment. The Social Impact Assessment should have social indicators which can reflect on impact of acquisition on fertile land. The Social Impact Assessment shall take into consideration of key parameters like people's dependency on fertile agricultural land, socio-economic spectrum, impact of the project at local and regional levels.
- ix. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th 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.
- x. In pursuance of Ministry's OM no stated above the project proponent shall add one annexure in the EIA Report indicating all the commitments made by the PP to the public during public hearing and submit it to the Ministry and the EAC.
- xi. The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25th October, 2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.
- xii. Passage for animal movement has to be detailed in the report (if alignment is passing

through Forest area).

- xiii. A comprehensive plan for plantation of three rows of native species, as per IRC guidelines, shall be provided. Such plantation alongside of forest stretch will be over and above the compensatory afforestation. Tree species should be same as per the forest type.
- xiv. Detailed Biodiversity assessment and conservation/mitigation plan be developed by a reputed institute or by a team of expert of national repute.
- xv. Rain water harvesting structures to be constructed at the either sides of the road with special precaution of oil filters and de-silting chambers.

Agenda No. 3.4

Widening and improvement of existing 2-lane to 4/6 lane with paved shoulders from existing km 124.488 (Ch. 122+200) to existing km 223.860 (Ch. 214+535) of Kushalnagar to Mysore section of NH-275 in the state of Karnataka (Total Length – 92.335 km) by M/s National Highways Authority of India - Terms of Reference [Proposal No. IA/KA/NCP/259725/2022 and File No. 10/21/2022-IA.III]

“The EAC noted that the Project Proponent and the consultant submitted the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in PFR/DPR/Form-1/Annexure-III. 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.”

3.4.1. The aforementioned proposal was placed before the EAC during 294th meeting during 11th – 12th April 2022. The project proponent along with the DPR consultant M/s Feedback Infra Pvt. Ltd. made a presentation through Video Conferencing and provided the following information-

3.4.2. The proposed project is for widening and improvement of existing 2-lane to 4/6 lane with paved shoulders from existing km 124.488 (Ch. 122+200) to existing km 223.860 (Ch. 214+535) of Kushalnagar to Mysore section of NH-275 in the state of Karnataka (Total Length – 92.335 km). The Project Road section starts in Kushalnagara at Design Ch. km 122+200 (12°26'19.91"N, 75°54'19.79"E) and ends at Paschima vahini, near Srirangapatna at Design Ch. km 214+535 (12°24'15.71"N, 76°40'47.79"E).

3.4.3. The proposed project falls under Schedule 7(f), Highway, Category “A” of EIA Notification 2006. Total estimated civil cost of the project is about Rs. 3,500 Crores.

3.4.4. Land use /Land cover of the proposed project site is as below:

S. No.	Land use Land cover class	Area Ha.
1	Agricultural Land	395.791
2	Built up	4.671
3	Metal / Non-Metal Roads	26.691
4	Natural Vegetation Area	23.925

5	Open Area/ Barren Land	15.523
6	Plantation Area	41.576
7	Forest Land	41.576
8	Private Vacant Land	6.196
9	Scrub Land	22.029
10	Waterbodies	3.709
Total Area in Ha.		581.916

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

S. No.	Land use/Landcover	Area (ha)	Area (%)	Remarks
1	Agricultural Land	14007	73.4	-
2	Forest Area	1387	7.3	-
3	Waste Land (With and Without Scrub)	2873	15.1	-
4	Road and Highways	453	2.4	-
5	Settlement	347	1.8	-
Total		19067	100.0	

3.4.6. The Proposed Right of Way is 45 m from design chainage km 122+200 to km 214+535 in general and 60m RoW at approaches to the grade separators and interchanges. At few locations Proposed RoW is greater than 60m (viz., Rest Areas, Wayside amenities, and entry/exit toll plazas).

3.4.7. Terrain and topographical features: The project alignment follows majority in plain and partially rolling terrain. The elevation varies from ~679 m above MSL to ~916 m above MSL at different locations

3.4.8. Forest Land Diversion: The proposed alignment involves diversion of about 43.518 Ha of Forest Land.

3.4.9. Tree cutting: Trees (approx.) 18000 No. of trees are coming under proposed RoW. Out of 18000 nos. of trees, 3000 Nos. of tree having girth <30cm (pole crop). which are translocated as per instruction of Forest Department. Approx. 8000 Nos. (Coconut) trees need to be felled. The details tree enumeration for affected trees shall already done by SLAO, NHAI, Mysore and Horticulture Departments. The Tree Compensation Evaluation is also done. The inventory will include tree species, girth and height etc.

3.4.10. ESZ/National Park/Sanctuary: Ranganathittu Bird Sanctuary is located at about 1.16 km distance towards North from Project Road. About 650 m (from Design Chainage km 208+900 to km 209+550) of project stretch passes through the notified Eco Sensitive Zone (MoEF&CC S.O. 3577(E) [10.11.2017]) of Ranganathittu Bird Sanctuary. Eco-sensitive Zone monitoring committee of Ranganathittu Bird Sanctuary has accorded permission for construction of project road with MoM dated 3rd November 2020.

3.4.11. Water bodies/ Impact on Drainage: Pond-10 Nos, Canal-10 Nos. and River -04 Nos.

3.4.12. Water requirement: About 1020 KLD water shall be required for construction phase. Water shall be sourced from surface water bodies through tanker after necessary approval. No groundwater extraction is proposed. However, if potable water is required same shall be extracted after necessary permission from appropriate authority.

3.4.13. Land acquisition and R&R issues: About 581.916 ha (Forest- 43.518 ha + non-Forest: 538.398 ha) of land shall be acquired for the project as per NH Act, 1956 and LARR, 2013.

3.4.14. Employment details: Project shall provide direct employment opportunities for about 2000 persons (including permanent and temporary) based on Ministry of Road Transport & Highways Press Disclosure

3.4.15. Benefits of the project: The proposed highway shall provide multifold benefits such as Reduction of 10% Travel Distance, Travel Time and Cost of Fuel Savings, Reduction in Carbon Monoxide and Carbon Footprints, Faster access and better reach to the nearby Major Market, Faster Transportation of Agricultural Produce, Reduce Vehicle Operating Cost, Reduce Fatal Accidents, Direct and Indirect Employment, and Easy Movement of Industrial Traffic. Tourism in the area will be benefitted from improved access and connectivity and will provide Improved Road Safety.

3.4.16. Details of court cases: No court cases are pending against the proposed project.

3.4.17. The EAC, taking into account the submission made by the project proponent had a detailed deliberation in its 294th meeting during 11th – 12th April 2022 and **recommended** the proposal for grant of Terms of Reference (ToR) with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. NHAI will design the alignment with necessary structural provisions for safe passage of wildlife and re-alignment for saving of forest patch.
- ii. Apart from land compensation, the loss for crop has also to be compensated.
- iii. Cumulative impact assessment study should be carried out along the entire stretch including the other packages and the current stretch under consideration.
- iv. The proponent shall carry out a detailed traffic flow study to assess inflow of traffic from adjoining areas like airport/urban cities. The detailed traffic planning studies shall include complete design, drawings and traffic circulation plans (taking into consideration integration with proposed alignment and other state roads etc.). Wherever required adequate connectivity in terms of VUP (vehicle underpass)/ PUP (Pedestrian underpass) needs to be included.
- v. Road safety audit (along with accident/black spots analysis) by any third-party competent organization at all stages namely at detailed design stage, construction stage and pre-opening stage to ensure that the project road has been constructed considering all the elements of road safety.
- vi. Provide compilation of road kill data on the wildlife on the existing roads (national and state highways) in the vicinity of the proposed project. Provide measures to avoid road kills of wildlife by the way of road kill management plan.

- vii. The alignment of road should be such that the cutting of trees is kept at bare minimum and for this the proponent shall obtain permission from the competent authorities. Alignment also should be such that it will avoid cutting old and large and heritage trees if any. All such trees should be geo-tagged, photographed and details be submitted in the EIA –EMP report.
- viii. The proponent shall carry out a comprehensive socio-economic assessment and also impact on biodiversity with emphasis on impact of ongoing land acquisition on the local people living around the proposed alignment. The Social Impact Assessment should have social indicators which can reflect on impact of acquisition on fertile land. The Social Impact Assessment shall take into consideration of key parameters like people's dependency on fertile agricultural land, socio-economic spectrum, impact of the project at local and regional levels.
- ix. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th 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.
- x. In pursuance of Ministry's OM no stated above the project proponent shall add one annexure in the EIA Report indicating all the commitments made by the PP to the public during public hearing and submit it to the Ministry and the EAC.
- xi. The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25th October, 2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.
- xii. Passage for animal movement has to be detailed in the report (if alignment is passing through Forest area).
- xiii. A comprehensive plan for plantation of three rows of native species, as per IRC guidelines, shall be provided. Such plantation alongside of forest stretch will be over and above the compensatory afforestation. Tree species should be same as per the forest type.
- xiv. Detailed Biodiversity assessment and conservation/mitigation plan be developed by a reputed institute or by a team of expert of national repute.
- xv. Rain water harvesting structures to be constructed at the either sides of the road with special precaution of oil filters and de-silting chambers.

Agenda No. 3.5

Development of LNG storage and re-gasification terminal at village Chhara, Taluka

Kodinar, District Gir Somnath, Gujarat by M/s HPCL Shapoorji Energy Ltd. – Amendments in Environmental Clearance

[Proposal No. IA/GJ/NCP/264417/2022 and File No. 11-1/2014-IA.III]

3.5.1. The aforementioned proposal was placed before the EAC during 294th meeting during 11th – 12th April 2022. The project proponent along with the Environmental Consultant M/s Eco Chem Sales & Services, Surat, Gujarat has made a presentation through Video Conferencing. During deliberation, it was observed that PP has applied for amendment in EC&CRZ clearance letter for inclusion of Temporary Floating Ready Mix Cement Concrete (Floating batching plant) in EC & CRZ clearance letter for legal compliance purpose.

3.5.2. The Committee observed that EIA/EMP report has mentioned about Temporary Floating Ready Mix Cement Concrete (Floating batching plant) in their EIA report in the list of equipment's, however the same has not been clearly mentioned in EC& CRZ letter.

3.5.3. Committee noted that as per CRZ notification 2011, as amended, Temporary Floating Ready Mix Cement Concrete (Floating batching plant) does not require EC/CRZ clearance separately. In case PP require clearance for Temporary Floating Ready Mix Cement Concrete (Floating batching plant), SCZMA recommendation need to be submitted.

3.5.4. The proposal was deferred and PP was suggested to come up next EAC meeting with SCZMA recommendation.

Agenda No. 3.6

Expansion of an operating notified SEZ, with an additional land of 45.86 acre, for Multi-Sectoral Chemical manufacturing facilities located at Plot 5, Vilayat GIDC Estate, Taluka Vagra, Dist Bharuch, Gujarat by M/s Jubilant Infrastructure Limited – Further consideration for Amendment in Environmental Clearance

[Proposal No. IA/GJ/NCP/260879/2022 and File No. 10/24/2021-IA.III]

“The EAC noted that the Project Proponent and the consultant have submitted the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in PFR/DPR/Form-1/Annexure-III. 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.”

3.6.1. The aforementioned proposal was earlier considered in 293rd EAC meeting during 24th - 25th March 2022. The proposal was deferred since; the project proponent/consultant could not attend the meeting due to technical glitch.

3.6.2. At this instance, the aforementioned proposal was further considered in 294th EAC meeting during 11th – 12th April 2022. The project proponent along with the EIA consultant M/s ENKAY ENVIRO Services Pvt. Ltd, Ajmer Road, Jaipur, Rajasthan has made a presentation through Video Conferencing and provided the following information:

3.6.3. The proposed proposal is for amendment in existing Environmental Clearance for Expansion of an operating notified SEZ, with an additional land of 45.86 acre, for Multi-Sectoral Chemical manufacturing facilities located at Plot 5, Vilayat GIDC Estate, Taluka Vagra, Dist Bharuch, Gujarat.

3.6.4. The proposed project falls under 7 (C) (Industrial estates/ parks/ complexes/ areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes) under Category “A” of the schedule of the EIA Notification, 2006. Environmental & CRZ Clearance for the proposed project was granted vide letter no. EC22A031GJ117822 and File No. 10/24/2021-IA.III dated 14.02.2022.

3.6.5. Area(ha)/Length(km)of the proposed project:

Items	Existing	Proposed	Total
Land Area, Acres (Ha.)	264.81 (107.1650)	45.86 (18.5590)	310.67 (125.724)

3.6.6. Investment/Cost of the project (Rs. In Lakh):

Particular	Existing	Proposed	Total
Project cost	20,000 Lakh (200 Cr.)	30,000 Lakh (300 Cr.)	50,000 Lakh (500 Cr.)

3.6.7. Land use/Land cover of project site is as following:

No	Description	Land Area			Remarks, if any
		Existing	Proposed	Total	
		Acres	Acres	Acres	
1	Process Zone	201.293	-26.0083	175.2847	-
2	Non-Process Zone	22.902	0.7083	23.6103	-
3	Infrastructure (road, amenities etc)	6.610	1.746	8.356	-
4	Greenbelt area	34.005	69.414	103.419	Thus, entire green belt area is: 34.005+69.414=103.419 Acre. Out of 69.414 Acres proposed, area of land leased from Vilayat GIDC for green belt would substitute equivalent area of land within the property. An area of about 22.19 acres of green belt in GIDC is allotted.

	Total	264.81	45.86	310.67	-
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3.6.8. The proponent vide a letter dated 09.03.2022 and online application No. IA/GJ/NCP/260879/2022 dated 10th March 2022 has requested the Ministry for amendment in existing EC letter dated 14th February 2022. The required amendment in Project Layout is as following:

(a) Details as below needs to be added regarding the units housed /to be in housed within the Notified SEZ.

Units	Existing (MTPA)	Proposed (MTPA)	Total (MTPA)*
Jubilant Ingrevia Limited (Unit –I) - 5(f)	96462	67190	163652
Jubilant Ingrevia Limited (Unit –II)- 5(f)	32066.	126784	158850
Jubilant Crop Protection Limited 5(b)	32350 (Under Construction)	55450	82840
Jubilant Ingrevia Limited (Unit-IV)- 5 (f)	87500	445800	533300
Jubilant Generics Limited (Unit V) - 5(f)	Applied for EC before the GSEIAA under B2 category for API	2000	2000
New Units Proposed (5f) - Distillery Unit	0	400	400
New Unit Proposed Research and Development with Pilot Plant (5b)	0	100	100
Captive Cogeneration Power Plant (Coal/Gas) Based - 1(d)	30MW	0.0	30MW
Renewable Source of Power(Solar)	0.0	19.0MW	19.0MW

(b) Amendment in Specific Condition in granted EC dated 14.02.2022. Details are given below:

Reference of approved EC	Description as per approved EC	Description as per proposal	Remarks

Specific condition (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 runoff and surface run-off, as plan submitted shall be implemented.	Rainwater harvesting structures shall be constructed in non-process areas to recharge roof top runoff for augmentation of ground water levels, as per CGWA guidelines.	The project being a chemical manufacturing zone, rainwater harvesting for ground water recharge is permissible only in non-process areas, as per CGWA guidelines to prevent ground water contamination.
Specific condition (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.	Rainwater harvesting structures shall be constructed in non-process areas to recharge roof top runoff for augmentation of ground water levels, as per CGWA guidelines	
Specific condition (vi)	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.	The waste water generated from various industrial operations will be treated in CETP and treated water will be disposed deep sea through GIDC Dahej pipeline.	
Specific condition (ix)	Continuous monitoring system be installed by all the member industries and adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/SPCB.	OCEMS shall be installed by the members industries as per CPCB guidelines and will take suitable measures to reduce the ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/SPCB.	

3.6.9. Final configuration after amendment is as following:

Details of configuration as it appears in the EC granted				
Plant / Equipment / Facility	Existing, Configuration	Proposed Configuration	Final configuration after amendment	Remarks
Type of Industries in SEZ	03 nos. of units under 5(f) are operational 01 Pesticide unit CFE granted under construction 01 API unit application for EC filed before Gujarat SEIAA	Increase in land area and for (1d)- Thermal Power plants, 5(b)- Pesticides, 5(f)- Synthetic Organic Chemicals and API's, Distilleries 5(g), TSDF 7(d), CETP 7(h)	(1d), 5(b), 5(f), 5(g) 7(d), 7(h) and increased land area	The application was made for this only. The needful is required.
Project Area	264.81 Acre	45.86 Acre	310.67 Acre	
Water Requirement	3927 KLD	11073 KLD	15000 KLD	
Effluent-Industrial	1150 KLD	5850 KLD	7000 KLD	
CETP	1000 KLD	4000 KLD	5000 KLD	
Domestic Wastewater	75 KLD	285 KLD	360 KLD	
STP	100 KLD	300 KLD	400 KLD	
Hazardous Waste	43.4 MTPD	236.6 MTPD	280 MTPD	
Secured Landfill	Nil	50,000 MT	50,,000 MT	
Captive Co-generation thermal Power Plant (CPP) Coal/Natural Gas	30MW	0.0	30 MW	
Boilers for steam, capacity	63 TPH (1x28 TPH + 1x35 TPH)	237 TPH	300 TPH	
RO PLANT	150 KLD	1000 KLD	1150 KLD	
MEE PLANT	-	500 KLD	500 KLD	
ATFD/VTFD	-	200 KLD	200 KLD	
Thermal Oxidizer (Nos)	NIL	3	3	
D.G. Sets	410 KVA x 1 500 KVA x 4	5000 KVA	7410 KVA	

Project Cost	200 Crore	300 Crore	500 Crore	
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3.6.10. Reason for Amendment: The EC granted for the expansion of an operating notified SEZ under Category 7(C) includes predefined activities as detailed in Form-2 of the EC application. This attracts the provision of the Specific Condition of EIA Notification, 2006. However, the EC granted has not mentioned the configuration of the predefined activities of the units within the SEZ.

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

3.6.12. The EAC, taking into account the submission made by the project proponent had a detailed deliberation in its 294rd meeting during 11th – 12th April 2022 and recommended the proposal for the amendment in Environmental and CRZ Clearance under clause 7(ii) of EIA Notification, 2006, as amended, issued by the Ministry in favor of M/s Jubilant Infrastructure Limited, vide letter no. EC22A031GJ117822 and File No. 10/24/2021-IA.III dated 14.02.2022 for “setting up of SEZ for chemicals in Vilayat GIDC in Taluka Vegra, district Bharuch alongwith captive power plant common ETP, TSDF” as stated above at Para 3.6.8 with the specific conditions, as mentioned below:

- i. ZLD facilities should be explored and implemented wherever possible.
- ii. Continuous discharge of effluent will cause major pollution problem in the sea. The state pollution control dept. will investigate the cumulative impact of pollution problem due to discharge of pollutants on marine system considering large number of industries in the region using common effluent discharge facilities.
- iii. A recommendation letter from GIDC shall be submitted disclosing that discharge will not exceed the existing pollutants and discharge capacity.

Agenda No. 3.7

“Multi Product SEZ” at Mundra, District Kutch, Gujarat by M/s Adani Ports and SEZ Limited – Amendment in specific conditions of Environmental and CRZ Clearance [Proposal No. IA/GJ/NCP/261191/2022 and File No. 10-138/2008-IA.III]

“The EAC noted that the Project Proponent and the consultant have submitted the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in PFR/DPR/Form-1/Annexure-III. 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 considered in 294th EAC meeting during 11th – 12th April 2022. The project proponent M/s Adani Ports and SEZ Limited has made a presentation through Video Conferencing and provided the following information:

3.7.2. The proposed proposal is for amendment in existing Environmental Clearance for “Multi-product SEZ in an area of 6641.2784 ha and CRZ clearance for Desalination, Sea water intake, outfall facility and pipeline, at Mundra by M/s Adani Port and SEZ Ltd.

3.7.3. The proposed project falls under 7 (C) (Industrial estates/ parks/ complexes/ areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes) under Category “A” of the schedule of the EIA Notification, 2006. Environmental & CRZ Clearance for the proposed project was granted vide F.no. 10-138/2008-IA.III and dated 15th July 2014.

3.7.4. The proponent vide a letter dated 12.04.2022 and online application No. IA/GJ/NCP/261191/2022 dated 16th March 2022 has requested the Ministry for amendment in the specific condition of the existing EC letter dated 15th July 2014. The required amendment in Project specific condition is as following:

Specific condition no.	Specific condition	Proposed amendment	Remarks
(x)	PP shall demarcate the CRZ area on land with GPS coordinates in consultation with GCZMA the agency which has done the HTL/LTL demarcation for the area. There shall be no allotment of plot/s in CRZ area to industries. No industrial activity within CRZ area except the port and harbor & the foreshore facilities shall be allowed as committed	CRZ area can be used for carrying out permissible activities either by APSEZ or any Industry through specific permissions and therefore the specific condition no. (x) under EC & CRZ clearance dated 15 th July, 2014 on “No allotment of plots in CRZ area to Industries” needs revision.	<ul style="list-style-type: none"> APSEZ has set up multiproduct SEZ to facilitate Industrial Development by utilizing its area optimally. APSEZ to carry out permissible activities & allot plots to individual industries to carry out permissible activities within CRZ area of SEZ in line with CRZ Notification, 2011 and its amendment till date.
(xi)	Till the approval of action plan for conservation and protection of creeks/mangrove area, the CRZ area within SEZ shall be demarcated as "No Development Zone". PP shall not allow/undertake any development in CRZ area of SEZ.	As Mangrove Conservation Action Plan is now approved, so APSEZ has fully complied with the specific condition no. (xi) under EC & CRZ clearance dated 15th July, 2014 and therefore condition of CRZ area of SEZ as “No Development Zone” needs revision.	<ul style="list-style-type: none"> Individual industries will obtain CRZ clearance from concerned authorities to carry out permissible activities within CRZ area.

3.7.5. Reason for Amendment: The PP stated that Mangrove Conservation Action Plan is now approved, so APSEZ has fully complied with the specific condition no. (xi) under EC & CRZ clearance dated 15th July, 2014 and therefore condition of CRZ area of SEZ as “No Development Zone” needs revision. Moreover, these CRZ areas can be used for carrying out permissible activities either by APSEZ or any Industry through specific permissions and therefore the specific condition no. (x) under EC & CRZ clearance dated 15th July, 2014 on “No allotment of plots in CRZ area to Industries” needs revision. APSEZ has set up

multiproduct SEZ to facilitate Industrial Development by utilizing its area optimally. APSEZ to carry out permissible activities & allot plots to individual industries to carry out permissible activities within CRZ area of SEZ in line with CRZ Notification, 2011 and its amendment till date. Individual industries will obtain CRZ clearance from concerned authorities to carry out permissible activities within CRZ area. Reason for Amendment with all the supporting documents uploaded in subsequent section.

3.7.6. In order to comply with the above specific conditions, APSEZ assigned the task of preparation of the plan to the National Centre for Sustainable Coastal Management (NCSCM) as per direction of MoEFCC. The essential components of the plan were - preparation of bathymetry charts of creeks, demarcation of HTL and CRZ areas, mapping of mangroves in the study area and a conservation management plan for the mangroves and the creeks. NCSCM has carried out the tasks of preparation of bathymetry charts, mapping of mangroves and the integrated plan for conservation of mangroves and creeks.

3.7.7. It may be mentioned that during the EC recommendation M/s APSEZ Ltd. had stated that since the matter is sub-judice before the Supreme Court of India, they will fully abide by the outcomes of the decision of the Hon'ble Supreme Court.

3.7.8. Details of Court cases: Details provided in the Annexure II.

3.7.9. The EAC, taking into account the submission made by the project proponent had a detailed deliberation in its 294th meeting during 11th – 12th April 2022 and **deferred** the proposal for the amendment in Environmental and CRZ Clearance issued by the Ministry in favor of M/s Adani Ports and SEZ Limited, vide F.no. 10-138/2008-IA.III and dated 15th July 2014 following reason:

- i. The matter is under examination by the Ministry. The matter shall be placed before the committee once inputs are received from the Ministry to the Committee.

Agenda No. 3.8

Development of Krishnapatnam North Industrial Node (Area 4,984.1 ha) in Sri Potti Sriramulu (SPSR) Nellore District, Andhra Pradesh by M/s NICDIT Krishnapatnam Industrial City Development Limited – Re-consideration for Environmental and CRZ Clearance

[Proposal No. IA/AP/NCP/110654/2019 and File No. 21-57/2019-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.”

3.8.1. The abovementioned proposal was earlier considered in the 265th meetings of Expert Appraisal Committee held during 23rd and 24th June, 2021. The proposal was recommended for

the grant of Environment and CRZ clearance. However, a clarification was sought by the CRZ Division of the Ministry from the APCZMA regarding the construction of internal roads in CRZ area. The Environment and CRZ clearance was kept on hold for the want of requisite clarification from the APCZMA.

3.8.2. Now, the PP vide letter dated 19.03.2022 has submitted the requisite clarification from the APCZMA. The APCZMA has recommended the proposal for grant of EC / CRZ Clearance vide letter No. 259/CRZ/IND/2020, dated 24th February, 2022.

3.8.3. The EAC, taking into account the submission made by the project proponent has a detailed deliberation in its 294th meeting during 11th – 12th April 2022 and recommended the proposal for grant of Environment and CRZ clearance.

Agenda No. 3.9

Establishment of Devakothikoppa Industrial Area at Devakothikoppa and Siddilipura village, Shivamogga Taluk & District, Karanataka by M/s Karanataka Industrial Areas Development Board (KIADB) – Amendment in Terms of Reference

[Proposal No. IA/KA/NCP/262633/2022 and File No. 21-55/2017-IA.III]

3.9.1 The aforementioned proposal was placed before the EAC in its 294th meeting during 11th – 12th April 2022. During detailed deliberation, the EAC observed that

- i. The validity of ToR, which was issued on 20 Mar 2017 has already been expired.
- ii. About 60 % work has already been completed by the PP

3.9.2 In view of the above, the proposal was **deferred** and EAC suggested the PP to submit the proposal for fresh ToR under violation case. Since, 60 % work has already been completed, EAC also suggested to request the RO for site visit report to assess the current status of the project.

Agenda No. 3.10

Development of Litibeda-Ranchi 4-lane access-controlled Greenfield Highway from Litibeda (Junction of SH-10 in Odisha) to Ranchi (Sithiyo) in the State of Jharkhand under BharatmalaPariyojana (Ch 0+000) to Ch 147+500) [total length - 147.500 km) by M/s National Highways Authority of India – Re-consideration for Terms of Reference Proposal No IA/JH/NCP/186689/2020 File No 10-69/2020-IA.III

3.10.1. The abovementioned proposal was earlier recommended by EAC for granting the Terms of Reference in its 258th meeting during 17th-18th March, 2021 subject to the certain specific conditions. The proposal was further placed before the EAC in its 286th meeting during 18th–19th January, 2022 and it was decided to withhold the proposal for grant of Terms of Reference (ToR) based on the observations of the Chief Wild Life Warden with the specific conditions, as mentioned below-

- i. Considering very high ecological sensitivity of the location and likely impacts of the proposed alignment on elephant movement and further fragmentation of elephant corridor, the committee will make a site visit and decide accordingly.

3.10.2. In view of the above, the EAC (Infra & CRZ) sub-committee conducted a site visit at Ranchi, Jharkhand during 11th - 13th March 2022 and submitted its report (Copy enclosed).

3.10.3. At this instance, the proposal was further placed before EAC in 294th meeting during 11th – 12th April 2022. The Project proponent submitted and presented the site visit report. The EAC, taking into account the submission made by the project proponent, **recommended** the proposal for grant of ToR subject to the fulfillment of all observations and recommendations made by the sub-committee (Report of the committee is enclosed as Annexure –B).

Agenda No. 3.11

Amendment in Environmental and CRZ Clearance for balance work of 4th container terminal and marine container terminal by M/s Jawaharlal Nehru Port Trust, Navi Mumbai, Maharashtra.

[Proposal No. IA/MH/NCP/224762/2021 and File No. 10-32/2018-IA.III]

The proposal was not considered, since no document was circulated by the PP to the committee member.

Following members were present during the 294th EAC (Infra-1) meeting held on 11th – 12th April 2022.

S. No.	Name	Designation	Remarks	
			11 th April 2022	12 th April 2022
1.	Dr. Deepak Arun Apte	Chairman	Present	Present
2.	Sh. S. Jeyakrishnan	Member	Present	Present
3.	Sh. Manmohan Singh Negi	Member	Present	Present
4.	Sh. Sham Wagh	Member	Present	Present
5.	Dr. Mukesh Khare	Member	Absent	Present
6.	Dr. Ashok Kumar Pachauri	Member	Present	Present
7.	Dr. V. K Jain	Member	Absent	Absent
8.	Dr. Manoranjan Hota	Member	Present	Present
9.	Sh. R Debroy	Member	Absent	Absent
10.	Dr. Rajesh Chandra	Member	Absent	Absent
11.	Dr. M. V Ramana Murthy	Member	Present	Present
12.	Dr. Nirmalendu Kumar	Member	Absent	Absent
13.	Dr. Niraj Sharma	Member	Present	Present
15.	Sh. Amardeep Raju	Scientist 'E' & MS, MoEF&CC	Present	Present
16.	Dr. Rajesh Prasad Rastogi	Scientist 'C', MoEF&CC	Present	Present

A Site visit report of EAC (Infra-1 & CRZ) sub-committee, Ministry of Environment, Forest & Climate Change, New Delhi-India for a proposed project “Development of Litibeda-Ranchi 4-lane access-controlled Greenfield Highway from Litibeda (Junction of SH-10 in Odisha) to Ranchi (Sithiy) in the State of Jharkhand under Bharatmala Pariyojana (Ch 0+000 to Ch 147+500)” by M/s National Highway Authority of India (NHAI)

The proposed project is for Development of Litibeda-Ranchi 4-Lane access-controlled Greenfield Highway from Litibeda (Junction of SH-10 (Odisha)) to Ranchi (Sithiy) in the State of Jharkhand under Bharatmala Pariyojana. The proposed alignment starts at Litibeda (Design Km 0+000) from Intersection of SH 10 and ends at Ch. 147+500 on Ranchi Ring Road.

2. The abovementioned proposal was earlier placed before the EAC during its 249th meeting on 14th December 2020 and 258th meeting on 17th -18th March, 2021. The Terms of Reference (ToR) was granted vide letter dated 15.04.2021 subject to “*Approval of alignment by the State Chief Wildlife Warden (CWLW) and Project Elephant (PE) Division of the Ministry of Environment, Forest & Climate Change (MoEFCC). Any modification in alignment or any alternate alignment suggested by CWLW and approved by the PE division of MoEFCC will be considered final for the purpose of EIA study*” (copy enclosed as **Anx-I**).

3. The CWLW, Jharkhand *vide* his letter dated 18.08.2021 addressed to IG, Forest, had taken a view that “the project impact area happens to be already in the grip of high intensity of human elephant conflict incidents primarily owing to acute fragmentation of elephant habitat and thus the proposed alignment is not advisable” (Copy enclosed as **Anx-II**).

4. Based on the comments received from CWLW, Jharkhand as above, the Ministry *vide* letter dated 16.09.2021 (Copy enclosed as **Anx-III**) addressed to the additional chief secretary (ACS), Department of Forest, Environment & Climate Change, Jharkhand communicated that “the PE Division has requested to consider their comments with regards to elephant conservation in the country before considering this proposal or taking any decision in this matter. However, no alternative alignment has been suggested by CWLW for the same.

5. Accordingly, comments were sought from RO, NHAI, Ranchi by PCCF, Jharkhand *vide* letter dated 12.11.2021. Subsequently, DFO visited site and identified total 32 locations for construction of elephant underpass for 118 km stretch fall in Jharkhand and 29 km fall in Odisha. Chainage wise details of the elephant underpass has been communicated to CWLW by NHAI RO, Ranchi *vide* letter dated 09.12.2021.

6. As regards finalization of Provision in the EMP as per the wildlife conservation plan approved by the CWLW, NHAI had received direction from CWLW *vide* letter dated 01 Dec 2021 (Copy enclosed as **Anx-IV**) that the services of Wildlife Institute of India (WII) may be utilized by the project proponent to systematically plan structural mitigation measures and other non-structural interventions necessary to mitigate the impact of the said highway on elephant habitat as well as human elephant conflict situations.

7. In view of the above facts, the proposal was further placed before EAC in its 286th meeting during 18th – 19th January, 2022 and it was decided to withhold the proposal for grant of Terms of Reference (ToR) based on the above-mentioned observations of the CWLW. Further, considering very high ecological sensitivity of the location and likely impacts of the proposed alignment on elephant movement and further fragmentation of elephant corridor, the EAC in its 286th meeting had decided to make a site visit before taking its final decision (Copy of MoM enclosed as **Anx-V**).

8. Accordingly, *vide* an office order no. 10-69/2020-IA.III [E-157874] dated 9th March, 2022, a sub-committee of EAC (Infra & CRZ), Ministry of Environment, Forests & Climate Change, was constituted (Copy enclosed as **Anx-VI**).

9. The EAC (Infra & CRZ) sub-committee conducted a site visit at Ranchi, Jharkhand during 11th - 13th March 2022 to ascertain the interventions and impacts for “Development of Litibeda-Ranchi 4-lane access-controlled Greenfield Highway from Litibeda (Junction of SH-10 in Odisha) to Ranchi (Sithiyu) in the State of Jharkhand”. The list of participants attended during the meeting / site visit is given at **Annexure-A**.

10. A meeting was held on 11th March 2022 at the Forest and Environment Department, Jharkhand, Ranchi in the presence of PCCF & HoFF, PCCF & CWLW, NHAI Officials and DPR consultants. Sh. Ajay Kumar Rastogi, PCCF & HoFF, Govt. of Jharkhand welcomed EAC members & NHAI officials and deliberated the key issue on proposed Greenfield alignment. He deliberated that the development of Infrastructure is essential but it should not be at the cost of our environment and its biodiversity. We must think about our Environment along with safeguard of natural flora and fauna for sustainable development. He has reiterated the issue raised by earlier PCCF & CWLW regarding the issues of Elephant movement and their confliction with human settlement and improvement of existing road, which is almost parallel to the proposed road. Moreover, PCCF & Chief Wildlife warden requested NHAI to brief about proposed alignment vis-a-vis options submitted with MoEF&CC.

11. The project proponent M/s National Highway Authority of India (NHAI) along with DPR consultant M/s M/s URS Scott Wilson India Pvt Ltd and M/s CE testing Company Pvt Ltd has given a power-point presentation before the Sub-

committee on 11th March 2022 about the proposed project and inter-alia presented a brief on the project to the sub-Committee as following:

- i. The proposed project falls under 7(f), Category-A as per EIA notification 2006. Total investment/cost of the project is Rs 3015.06 Crore.
- ii. Total Length of the Proposed Project is 147.500 Km. About 880.11 ha land (Govt./Pvt. Land 853.49 Ha + Forest Land 26.62 Ha) acquisition will be required for project implementation as per Land Acquisition Act, 1956. The width of proposed Right of way (PROW) is 60 m. At location of interchanges, highway amenities, toll plaza and truck parking, extra land has been proposed as per the actual design requirement.
- iii. The terrain of the proposed alignment is plain (flat) land and is predominantly an agricultural land (91.2%) followed by built-up area (3.14%), Govt land (1.51%) and Forest/tree cover (4.15%).
- iv. The proposed Greenfield highway does not cross over Main Canal network at any locations. It is crossings over minor canals and natural drains. Construction of bridges and culverts has been proposed to prevent diversion of these minor canal and natural drains. Seven main water bodies will be impacted due to the proposed highway.
- v. Total water demand for the project is 4532176 KL. No ground water will be extracted. If required, ground water extraction will be done after obtaining NoC from the CGWA/ State Ground Water Department.
- vi. The Proposed project will involve diversion of about 26.62 ha of forest land. About 80000 trees are proposed to be felled in the forest and non-forest area. Prior permission would be taken from the concern authority before tree felling/cutting. There is no protected area within 10 km boundary of the PROW. The proposed project is 3.150 km away from the boundary of ESZ of Palkot Wildlife Sanctuary.
- vii. The socioeconomic survey will be undertaken on sample representative of the project influence area and population. The sample households would be selected from various socio-economic groups of the clusters/ settlements.
- viii. The Proposed Road will not only improve the mobility in between Jharkhand and Odisha, it will also improve the connectivity among other states like Chhattisgarh, Bihar, Uttar Pradesh and West Bengal. The mobility between industries in Jharkahnd (Jamshedpur, Patratu, Bokaro, Dhanbad) and Odisha (Rourkela, Jharsuguda, Sambalpur, Angul) will

increase. The proposed alignment will reduce travel length by 98 km (40%) and travel time by 4.5 hr. i.e. 70% (From 6.5 hr. to 2 hr.) from Ranchi (Jharkhand) to Litibeda (In Odisha) and thus will serve as life line between Jharkhand & Odisha.

12. During the meeting, it was stated by the Forest officials that the proposed alignment has several elephant prone area. Elephants are coming from one landscape to reach another landscape through villages and forest/non-forest area, which causes animal human conflict. Majority of conflict is observed during the crop season.

13. Since, the development of new proposed alignment may aggravate human-animal conflict, the PCCF & CWLW Sh. Ashish Rawat proposed his views that NHAI may widen/improve the already existing parallel road to the proposed road upto Kamdara and further improvement of the existing State Highway passing through Kalebira, Simdega upto Jharkhand/Odisha border. He also suggested to explore the widening of the existing NH/SH passing through Khunti, Torpa, Kamdara up to Jharkhand/Odisha border.

14. CGM (T) cum RO Ranchi informed that the NHAI has already explored the option for the widening of the existing SH/NH starting from Ranchi Ring road and ends at Kereya Jharkhand/Odisha border. The improvement of existing road to 4 lanes will involve several numbers of bypasses to avoid the thickly populated areas and also involves large number of realignments to improve the poor geometry of the existing road as per the provision of Access Controlled Expressway with design speed of 100-120 km/h for Economic Corridor under Bharatmala Pariyojana.

15. The RO, NHAI also deliberated that the proposed road is an access controlled expressway wherein the access to the adjoining resident may not be allowed inside the carriageway as per Traffic Control Act, 2002 and its subsequent amendments thereafter keeping in mind of safety aspect and the access of the local is also not permissible as the proposed road is a toll road.

16. Moreover, the EAC member suggested NHAI to explore two more options along with the options submitted with MoEF&CC for comparing the most viable alignment considering the wildlife issue in mind.

17. After detailed presentation and discussions held on 11th March 2022, the Sub-committee visited the project site on 12th March 2022 with sub-committee members, Forest officials, NHAI officials and DPR consultants.

18. During the site visit, it was observed that the existing MDR is built for connectivity of the local/remote villagers with 5.5 m carriageway and 1-1.5 m earthen shoulder with embankment height 0.5 to 0.6 m. This road is constructed for four wheelers, two wheelers and bullock cart, not for freight/carriages. It was also observed that there is a good plantation on either side of the road which have already attained their natural growth and good health with girth size more than

120 cm. Moreover, there is built up area with village market almost at the interval of 2-3 km or passing through forest area. The construction for broadening of single track to double track of Railway line is under progress which is parallel to proposed road and existing MDR, wherein Railway has not taken any attention regarding safe passages of the elephant.

19. In the way of site visit, we met with DFO, Khunti, who welcomed to all the committee members and apprised the movement of elephants in and around the area. DFO showed the elephant movement map considering mid-point of the villages under his jurisdiction. It was informed that the elephant movement map was prepared in consultation with the villagers and appearance/movement of stray elephants. Accordingly, DFO Khunti suggested 9 locations under Karra forest range for underpass/passage structure.

20. The committee members also met with DFO Simdega, who briefed the behaviour of elephant under his jurisdiction. It was informed that Simdega is a district town with good number of population along with government and private establishments. There are two resident populations under his jurisdiction. There is a movement of elephant from Kereya to Siharjor & Domotoli to Durilari Village. He also gave some data (2020-21) of casualties in his area due to Elephant movement as shown in the below table.

क्र० सं०	क्षति के प्रकार	क्षति की सं०	अम्युक्ति
1	2	3	4
1	मानव मृत्यु	07	
	अपंग	01	
2	घायल व्यक्ति	10	
3	फसलों की क्षति	583	(331.09 हे०)
4	पालतू पशु क्षति	01	
5	मकान क्षति	382	
6	भण्डारित अनाज की क्षति	181	(341.55 क्वीटल)
	कुल योग :-	1165	

Accordingly, he has suggested for underpass/passage structures for the elephant at 13 locations. It was deliberated that the improvement and widening of existing alignment will be very difficult due to problem of land acquisition and displacement of people & its property residing along existing NH/SH and only option is to bypass entire Simdega town. The bypass for Simdega town involves entirely forest land with canopy density 0.5 and above. All these trees are well matured and good girth size.

21. During the site visit, it was observed that that widening and improvement

of existing NH/SH from Kamdara to Ranchi Ring road will require entire displacement of adjoining habitats and will involve diversion of forest land. There is marginal agricultural/barren land along the existing NH/SH. The existing road has very poor geometry which involves construction of bypasses and realignment in majority of the stretch. Only 15-20 % of the existing ROW of 10-15 m may be utilised for construction of Access controlled road.

22. Further, a meeting was held on 13th March, 2022 with PCCF & CWLW alongwith forest & NHAI officials and DPR consultants. NHAI briefed the suggestions of PCCF & CWLW and EAC members. NHAI also prepared elephant crossing map as per the record provided by the concerned DFOs i.e. DFO Khunti, Gumla & Simdega (copy enclosed as **Anx-B**).

23. NHAI submitted that improvement and widening of access controlled 4-lane expandable to 6 lane road through the existing MDR & NH/SH from Ranchi Ring road to JH/OR border will be a challenge for State Govt for displacement of either side habitats and their resettlement as per RFCTLARR Act, 2013 and under NH act, 1956. Moreover, the issue for connectivity of the locals require for construction of such kind of road for their movement as per the population and traffic patterns of the adjoining villages. NHAI apprised that the improvement and widening of Access Controlled 4 lane expandable to 6 lane road through the existing MDR & NH/SH from Ranchi Ring road to Jharkhand/Odisha border involves large forest area and will require felling of large no of trees. It also involves construction of several bypasses and realignments. The existing road will be dismantled completely except in bypasses and realignment portion for construction of subgrade, GSB, WMM, DBM, BC for carrying capacity of 100 msa with embankment height of 1.5 m above the HFL including cutting and filling of undulated and rolling terrain. NHAI planned to provide structures at 27 locations for safe passages of elephant as per WII guidelines.

24. Following two additional alignment options was provided by the NHAI as given below in Table 1, where Option-4- is widening of existing NH/SH road passing through Khunti, Torpa, Kamdara, Kolebira, simdega, kereya, Birmitrapura, etc. and Option-5 is widening of existing MDR alignment from Ranchi to Kamdara, wideing of existing NH from Kamdara to Kolebira and widening of existing Village road from Kolebira to Kulumara connecting further to Kereya.

Table 1: The comparative study presented by NHAI for all Alignment Options is as under:

Particulars	Existing Route	Option-1	Option-2	Option-3 (Recommended option)	Option-4 (Improvement of existing NH/SH)	Option-5 (Improvement of existing MDR/Village road)
Alignment Route	Litibeda-	Litibeda	Litibeda-	Litibeda-	Litibeda-	Litibeda-

Particulars	Existing Route	Option-1	Option-2	Option-3 (Recommended option)	Option-4 (Improvement of existing NH/SH)	Option-5 (Improvement of existing MDR/Village road)
	Gopapali-Birmitrapur- Joram-Simdega-Kolebira-Jamtoli-Kamdara-Torpa-Khunti-Ranchi Ring Road	- Joram-Muriya-Kolebira - Kamdara-Torpa-Khunti-Ranchi Ring Road	Kereya-Lomboi-Keyondpani-Dalmadih-Torpa-Khunti-Ranchi Ring Road	Kereya-Lomboi-Keyondpani - Dalmadih-Kamdara-Jariya-Ranchi Ring Road	Kereya-Joram-Kurrung-Kolebira-Kamdara-Torpa-Khunti-Ranchi Ring Road	Kereya-Kulamara-Beldega-Kolebira-Kamdara-Jariya-Ranchi Ring Road
Total Design Length (Km)	247	165.2	153.4	147.5	178.7	158.1
Plain Terrain (Km)	215	138.6	111.4	110.9	144.6	129.6
Hilly/Rolling Terrain (Km)	32	36.6	42	36.6	34.1	28.5
Length along Existing road (Km)	247	15.1	3.4	-	12.9	21.3
Bypass/Realignment /Green Field (Km)	NA	150.1	150.0	147.5	165.81	136.8
Eco-Sensitive Zone of Wildlife Sanctuary	Within Eco-Sensitive Zone (25 km length)	Within Eco-Sensitive Zone (25 km length)	2.200 km distance from boundary of Eco-Sensitive Zone	3.150 km away from the boundary of Eco-Sensitive Zone	Within Eco-Sensitive Zone (25 km length)	Within Eco-Sensitive Zone (25 km length)
Reserve Forest/ Protected Forest (Ha)	-	76	80	60	67	112
Tree cutting (approx)	-	87000	93000	80000	91000	115000
Connectivity issue due to Access control road	-	Nearby villages will get affected more	Nearby villages will get affected more than	Alignment is not disturbing existing route. Therefore,	Nearby villages will be completely disconnect	Nearby villages get affected more than Option-1, 2 & 3

Particulars	Existing Route	Option-1	Option-2	Option-3 (Recommended option)	Option-4 (Improvement of existing NH/SH)	Option-5 (Improvement of existing MDR/Village road)
		than Option-3	Option-3	no issue.	ed.	
Traffic diversion during construction	-	Issue of traffic diversion will arise in part length	Issue of traffic diversion will arise in part length	No issue	Difficulty in traffic diversion.	Huge Difficulty in traffic diversion, as exiting alignment is only 5.5 m wide
Land Cost (in Cr.)	-	1365	757	430	1436	925
Civil Construction cost (In Cr.)	-	4130	3835	3687	4467	3952

25. PCCF & CWLW suggested for a realignment of the proposed alignment from 101+000 to 10+900 and improvement of Jaldega road from Kulumara to Kolebera. Chairman EAC also suggested to explore realignment of proposed design chainage 74+500 to 81+000 to avoid bifurcating the forest patches of Kolebira range.

26. Committee members and PCCF & CWLW also discussed the references of State Govt and Project Elephant Division of MoEF&CC for their consideration regarding the safe passages for elephant and reduction of human animal conflict. The ex PCCF & CWLW and Project Elephant Division, MoEF&CC agreed for proposed Greenfield alignment subject to finalisation of mitigation measures by Wildlife Institute of India, Dehradun to systematically plan structural mitigation measures viz location extent of underpass, overpass, elevated road, etc alongwith other non-structural intervention necessary to mitigate the impact of proposed highway on elephant habitat as well as human animal conflict situation in case if there is no viable alternative.

Observation and Recommendations:

In the course of site visit, the sub-committee observed and recommended the following:

- i. The proposed alignment has several elephant prone areas. Elephants are coming from one landscape to reach another landscape through villages and forest/non-forest area, which causes animal human conflict.
- ii. The improvement of existing road to 4 lanes will involve several numbers of bypasses to avoid the densely populated areas and also involves large number of realignments to improve the poor geometry of the existing road as per the provision of Access Controlled Expressway with design speed of 100-120 km/h for Economic Corridor.
- iii. The existing MDR is built for connectivity of the local/remote villagers with 5.5 m carriageway and 1-1.5 m earthen shoulder with embankment height 0.5 to 0.6 m. There is either a rich plantation (with girth size more than 120 cm) and built-up area with village market almost at the interval of 2-3 km on either side of the road or passing through forest area.
- iv. In consultation with the villagers, an elephant movement map was prepared by DFO Khunti who pointed out 9 locations for elephant movement under Karra forest range.
- v. There is a movement of elephant from Kereya to Siharjor & Domotoli to Durilari village along the Simdega region. DFO Simdega suggested for underpass/passage structures for the elephant at 13 locations in the Simdega area.
- vi. It was observed that the improvement/widening of existing alignment in the Simdega area will be very difficult due to land acquisition issues and displacement of peoples and their property residing along existing NH/SH and only option is to bypass the entire Simdega town.
- vii. The existing road has very poor geometry which will involves construction of bypasses and realignment in majority of the stretch. Only 15-20 % of the existing ROW of 10-15 m may be utilized for construction of access-controlled road.
- viii. Widening of access controlled 4-lanes expandable to 6-lanes road through the existing MDR & NH/SH from Ranchi Ring Road to JH/OR border will be a challenge for State Govt. for displacement of either side habitats and their resettlement.
- ix. If the proposed alignment has to happen, it will require major over-bridges at several locations that may stretch to several kilometers to avoid disruption in the elephant movement. Small underpasses will be of no use

considering very large movement of elephants and intense human-elephant conflict. NHAI thus should provide chainage wise details of design to develop entire elevated corridor for the stretches of intense elephant movement and human-elephant conflict areas.

- x. Realign the proposed alignment from chainage 101+000 to 10+900 and improvement of Jaldega road from Kulumara to Kolebera may be done.
- xi. Realignment of proposed design chainage 74+500 to 81+000 should be done to avoid bifurcating the forest patches of Kolebira range.
- xii. Alignment must be designed so as to avoid cutting of natural stone features which is characteristics of the region.
- xiii. It will require a dedicated corpus budget provision given by NHAI to the state forest department to deal with possibility of increased human-elephant conflict.

List of participants

A sub-committee of the following members participated in the visit at Ranchi, Jharkhand.

S. No.	Name	Designation
01.	Dr. Deepak Apte	Chairman of the EAC (Infra-1)
02.	Shri S Jeyakrishnan	EAC (Infra-1) member
03.	Sh. Manmohan Singh Negi	EAC (Infra-1) member
04.	Dr. Rajesh Prasad Rastogi	Sci 'C', MoEFCC (Infra-1)

Following representatives from Department of Forest, Govt of Jharkhnd were present during the meeting/visit

S. No.	Name	Designation
01.	Sh. Ajay Kumar Rastogi	PCCF & HoFF, Govt. of Jharkhand
02.	Sh. Ashish Rawat	PCCF & CWLW, Govt. of Jharkhand
03.	Sh. Arvind Kumar Gupta	DFO Simdega Forest Division
04.	Sh. Jagishwar Paswan	RFO Kalebira, Simdega Range
05.	Sh. Srikant Verma	DFO Gumla Forest Division
06.	Sh. John Robert Tirki	RFO Gumla Range
07.	Sh. Kuldeep Meena	DFO Khunti Forest Division
08.	Sh. Surendra Prasad	RFO Karra forest Range, Khunti

Following representatives and consultants from NHAI (PP) side were present during the visit

S. No.	Name	Designation
01.	Sh. S. K. Mishra	CGM (T) cum RO Ranchi, Mob no: 8290523230
02.	Sh. B. Mukopadhaya	Environment Division, NHAI HQ
03.	Sh. Rajeev Ranjan	Project Director-Gumla, 9431800237
04.	Sh. Vishal Kumar	DY. Manager(T), 7488515925
DPR Consultant-1: M/s URS Scott Wilson India Pvt Ltd		
05.	Sh. S. Mondal	Project Co-ordinator
06.	Sh. Fazal	Environment expert
DPR Consultant-2: M/s CE testing Company Pvt Ltd		
07.	Sh. Abhishek Dey	Project Co-ordinator
08.	Sh. Manas Bhattacharya	
09.	Sh. Pranab Bhattacharya	









